

Terms of Reference for a Service Provider of a Wastewater Treatment Plant (WWTP) using Community-Scale Biogas Digester: 5m³ Biogas Digester System for Bogor City, Indonesia

[Urban Low Emission Development Strategies Phase II \(Urban-LEDS II\)](#)

March 22, 2021

1. About the Urban-LEDS II Project

Accelerating climate action through the promotion of Urban Low Emission Development Strategies (Urban-LEDS II)

UN-Habitat and ICLEI-Local Governments for Sustainability are jointly implementing the Urban-LEDS II project: Accelerating Climate Action Through the Promotion of Urban Low Emission Development Strategies in more than 60 cities worldwide in the Urban-LEDS II project, using a multilevel governance approach to urban climate action.

Through the Urban-LEDS II project, the local governments of selected cities are guided to create community-scale Urban Low Emissions Development Strategies (Urban LEADS) that also address climate resilience. These will be aligned to and ideally inform the Nationally Determined Contributions (NDCs) and National Adaptation Plans (NAPs), and implementation of these plans will start in the project lifetime.

Further, the local governments will be supported to develop pilot projects and finance models for their Urban-LEDS implementation. The overall Urban-LEDS II project aims to strengthen cooperation and information sharing across national and local governments, offering an integrated Measuring, Reporting and Verification (MRV) concept and guidance on multilevel governance, to support all levels of government to better understand the contribution of local level developments to support achieving national and global climate and sustainability goals. The project runs from April 2017 until September 2021.

Taking into consideration the results of project activities, a small-scale demonstration project shall be implemented by the Urban-LEDS II project in one of its model cities, namely Bogor City. The demonstration project aims to support the delivery of the City's Climate Action Plan, while also contributing to the reduction of greenhouse gas (GHG) emissions specifically in the waste sector. Further, the demonstration project also seeks to support the establishment of a robust body of data in the sector and promote research studies resulting from the proof of the concept, with the objectives of ensuring project sustainability and continuing support for the climate action plan.

Further, the demonstration project aims to support the establishment of a robust body of data in the sector and promote further research studies resulting from the proof of the concept, with the objectives of ensuring project sustainability and continuing support for the climate action plan.

In particular, the demonstration project will enable the beneficiary community to effectively carry out a proper wastewater treatment plant (WWTP). The methane gas captured from the WWTP will substitute liquefied petroleum gas (LPG) consumption for household cooking. Therefore, the Urban-LEDS II project seeks to **hire an accredited service provider of a community-scale biogas digester system to support the overall local implementation of the demonstration project.**

2. Terms of Reference for the Service Provider

The project requires the service of a community-scale biogas digester technology service provider to undertake wastewater and location survey along with the analysis, detailed design, procurement of components, installation, testing, commissioning of a five (5) m³ biogas digester system, and capacity building training with material (Dos and Don'ts list, Visual charts, etc.), Technical Handbook, O&M Manual for the beneficiary community as well as the personnel-in-charge of operations and maintenance. The services rendered shall ensure that appropriate unit scale and installation are adopted with due consideration to factors such as the amount and type of collected solid waste, installation location, and safety measures.

2.1. Scope of Work

The following activities will need to be undertaken to help meet the objectives of the project.

<p>Detailed design, structural engineering, and safety assessment</p>	<ul style="list-style-type: none"> • On-site assessment of the civil structural integrity of the building where the community-scale biogas digester system will be installed and identify the safe distance from waste sources (i.e., from households, waste-disposal point) so that the methane gas can be distributed to at least 5-10 beneficiary households. • Detailed engineering design including chemical, thermal, energy, and civil works for the installation of a biogas digester system for Bogor City and ICLEI review. • Service providers that can provide methane gas analysis are preferable or advantages. • Providers supplying any biogas digester system sourced outside of Indonesia are required to provide a permit letter in terms of installing and operating the biogas digester from the relevant Indonesian Government Agencies, as well as proof that the spare parts are available locally. Please see sections 3 and 4 for the list of qualifications and required permits and documents. • Preferably, but not required, conduct composition analysis of methane gas captured
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Procurement of unit components and other materials, fabrication, set up, and installation	<ul style="list-style-type: none"> • Procurement and fabrication of 5 m³ biogas digester system are not limited to the following aspects: <ul style="list-style-type: none"> - 50 m³ digester tank/reactor along with pipes and pipe network - Flow meter - Biogas stove - Any other relevant components needed to ensure the facility's operability and functionalities - Provisions of spare parts and components • All activities associated with the structure, such as procurement, erection, installation, and commissioning of the 5 m³ biogas digester system in the project site. • In case there are any changes in the above components, consultation and approval from ICLEI and the city should be carried out first before proceeding with the purchasing material.
Operation & Maintenance (including warranty period)	<ul style="list-style-type: none"> • Monitoring and regular maintenance of the facility for at least three (3) months after completion of set-up and installation. • The service provider also assumes liability for the manufacturer warranties of the respective system components/parts. • Quality control inspection test and trial run shall be conducted with the oversight of a dedicated representative of the local government organization (ideally Public Works and Spatial Planning Department of Bogor City).
Capacity building training for the personnel in charge	<ul style="list-style-type: none"> • Conduct capacity building training for personnel in charge of maintenance of facilities on proper use, maintenance of the technology, repairs, and damage management to ensure the facility's overall optimum efficiency and maximize lifecycle. • Develop and provide operations manual to personnel in charge, outlining technical steps and guidance to operate, maintain, and repair the technology, and other relevant mechanisms. • Establish coordination mechanisms (i.e., focal persons) to facilitate on-site and remote assistance in the operation and troubleshooting of the technology after installation and testing period.

2.2. Deliverables and time frames

A maximum of **five (5) months** is estimated to complete the deliverables as stated below. The following table lists the deliverables and their respective delivery date.

Deliverables	Indicative Timeline
Detailed engineering design and structural safety assessment	April 2021

Procurement of unit components and other materials, fabrication, set-up, and installation	May – June 2021
Testing and commissioning	June – September 2021
Development and handover of operations manual and delivery of capacity building training for personnel-in-charge of operations and maintenance	September 2021

3. Service Provider Eligibility

The service provider must provide evidence of:

- Viable community-scale biogas digester system with strict compliance to relevant national/international regulations and standards;
- Necessary documentation of accreditation from relevant government authorities for the installation of community-scale biogas digester system in Indonesia;
- Prior experience in completed supply, installation, testing, commissioning, and handing over of the community-scale biogas digester system;
- Use of environment-friendly, cost-effective, and genuine equipment and materials from reputable equipment/component suppliers that conform with available and appropriate national and international standards;
- Safety construction solutions and overall aesthetics consideration in the design and implementation.

Additionally, advantageous criteria for prospective service provider include:

- Prior work experience with the community in Indonesia;
- Flexibility and a shared vision for the project outcome are essential since the work will be undertaken in close cooperation with the project team members.

4. Proposal Requirements and General Conditions

4.1. Proposal Requirement

The following information must be provided in the proposal:

1. A detailed system design technical proposal taking into consideration the minimum requirements outlined in this Terms of Reference (ToR). The technical proposal must also provide descriptions of the system's design specifications, approaches to achieve optimal wastewater reduction, and co-benefits of end-products while maintaining environmental safeguards (e.g., pollution prevention).
2. A work plan with the corresponding timeline and financial proposal/bid duly signed by the bidder.
3. The estimated budget in the proposed financial proposal is up to IDR 150,000,000



The following information must be provided together in the proposal:

- Letter of Interest addressed to Country Manager Yayasan ICLEI Local Governments for Sustainability Indonesia;
- Certified copy of valid business registration certificate with respective competency required for community-scale biogas digester system design and installation;
- Certified copy of respective Value-added tax (VAT) registration certificate, and other relevant financial and registration documents required for the organization to operate in Indonesia.
- A portfolio of projects previously undertaken including information on the Beneficiary, Capacity of Installation, Contract Value, Date of Commencement, Date of Commissioning, Contact Details (portfolio of similar projects are preferred).
- Details of methods, tools, and equipment available to perform the work considering the key indicators given in ToR.
- A detailed curriculum vitae (CV) of technical personnel to be engaged in this project.
- The bidder shall provide original documents for cross verification if and when requested by ICLEI Indonesia Office and ICLEI Southeast Asia.

4.2. General Conditions

The following conditions shall apply to this project contract:

- The service provider is not allowed to subcontract the entirety or a part of this project to any other firms.
- The quotation shall be inclusive of all costs including taxes associated with the project. Furthermore, the service provider shall adhere to the following requirements:
 - The price quoted shall be fixed and firm and not be subjected to any escalation or variation. The price should also be inclusive of all transportation, communication, per diem, and installation expenses including all required materials to complete tasks and pay for duties, taxes, and insurance.
 - Bill of materials for the community-scale biogas digester system as indicated should be provided along with the price bid.
 - ICLEI Indonesia Office/ICLEI Southeast Asia reserves the right to increase or reduce the final size and the respective components of the community-scale biogas digester system at the rate/cost quoted by the bidder.
 - All or any accessories/consumables/items required for satisfactory commissioning of work shall be deemed to be included in the contract and shall be provided by the bidder without extra charges.
- It should be noted that the project is being implemented by ICLEI in partnership with Bogor City Government. Hence, instructions to bidders will be given by ICLEI Indonesia Office/ICLEI Southeast Asia in consultation with the officials of Bogor City Government in Indonesia. This also applies in the conduct of structural safety inspection before, during, and after construction/installation.

- Once the system is installed, commissioned, and operated successfully for three (3) months, this will be legally handed over to Bogor City Government in Indonesia as the final beneficiary of the system.
- Bidders shall submit bids that satisfy every condition outlined in this Terms of Reference (ToR), failure to do so will make the tender liable to be rejected.
- Bidders shall submit bid proposals that satisfy every condition outlined in this Terms of Reference (ToR). Proposals with incomplete requirements will not be considered.
- Kindly note that ICLEI Indonesia Office/ICLEI Southeast reserves the right to award and not to award the contract to any of the bidders.

5. Reporting Requirements and Management

- The service provider will report to Ms. Rika Lumban Gaol, Project Officer for Urban-LEDS II Project of Yayasan ICLEI Indonesia, and the activities in Bogor City, Indonesia will be implemented in close collaboration with Mr. Adhia Tegar, Project Assistant for Urban-LEDS II Project of Yayasan ICLEI Indonesia and Ms. Kristianne Jemi Santos, Local Government Associate of ICLEI Southeast Asia Secretariat.
- Fieldworks for installing, commissioning, testing, and operation monitoring.
- Regular meetings/calls to report on progress on specific tasks and deliverables will be required.
- Payments to the service provider will be contingent on the timely submissions of deliverables listed in this Term of Reference.

6. Terms of Payment

- 30% of the contract value. On submission of the final design report and work plan for procurement, installation, commissioning and O&M
- 50% of the contract value. Successful completion of on-site installation and commissioning of the 5 m³ biogas digester system in the project site (including all balance of system components).
- 20% of the contract value. (a). Submission of performance report of biogas digester system after continuous operation for 3-4 months; and (b). Training of selected personnel for operation and maintenance.

7. Closing Date for Submission

Please send all materials (proposal and supporting documents) in one PDF document via email with the subject **“Urban-LEDS II: Wastewater Treatment Plant (WWTP) using Community-Scale Biogas Digester System”** to iclei-indonesia@iclei.org no later than **April 7, 2021 (Wednesday)**. For any queries related to this call for bids, please contact Yayasan ICLEI Indonesia via iclei-indonesia@iclei.org.

Please use English for all communications. Only successful candidates will be contacted. Due to the volume of applications being received, our office would not be able to entertain phone calls. For more information about ICLEI Southeast Asia Secretariat and ICLEI Indonesia Office, visit <http://icleiseas.org/>.