

INTERNATIONAL LIVESTOCK RESEARCH INSTITUTE

ILRI

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Invitation to Bid

Supply and Installation of Livestock Manure Biogas Digesters for Household Cooking

Ref No: - ILRI-AA/SC/011/26

July 2026

Request for Quotation for Installation of Eleven Livestock Manure Biogas Digesters for Household Cooking in Oromia/Sheger and Wolaita Zones, Ethiopia

The International Livestock Research Institute requests quotations from qualified individuals, firms, or teams for the design, supply, installation, commissioning, and after-sales support of eleven household biogas digesters using livestock manure for cooking in Oromia/Sheger and Wolaita Zone, Ethiopia.

The selected supplier will provide a complete working biogas system at each site, including the digester, gas piping, safety fittings, a modern, efficient biogas stove, a bio-slurry composting pit, user training, commissioning, and one year of after-sales service.

Item	Requirement
Client	International Livestock Research Institute
Assignment	Supply, installation, commissioning, and training for household-scale livestock manure biogas digesters
Locations	Selected farms in Oromia, Sheger, and Wolaita Zone, Ethiopia. Final site list will be provided by ILRI.
Main use	Household cooking using biogas produced from livestock manure
Quantity	Ten complete 8 m ³ biogas digester systems (Wolaita Zones) and one 12 m ³ biogas digester (Oromia/Sheger)
Bidder type	Individual, firm, or team with a qualified mason or technician
Submission deadline	31 st July 2026
Submission email	ilriettender@cgiar.org
Quotation validity	At least 60 days from the submission date

Instructions for Submission of Proposals:

Bidders must submit their comprehensive Technical and Financial Proposals electronically to the secure email account ilriettender@cgiar.org. Ensure that you write "**Supply and Installation of Livestock Manure Biogas Digesters for Household Cooking**" in the **subject line** without any modifications.

Submission of Questions regarding the ITB:

Questions regarding the ITB should be submitted in writing to ILRIEthiopiaProcurement@CGIAR.ORG no later than July 24, 2026, and ILRI will send answers to questions to all registered parties.

1. Technical requirements

The supplier shall provide complete 8 m³ and 12 m³ livestock manure biogas digester systems that meet or exceed the following requirements.

Ref	Area	Minimum requirement
1.1	Number and size	Ten complete household biogas digesters, each with a nominal capacity of 8 m ³ . One complete 12 m ³ household biogas digester.
1.2	Feedstock	Designed to operate on livestock manure mixed with water using the accepted loading practice for household biogas systems.
1.3	Design standard	The system shall follow the latest certified biogas model design suitable for rural household cooking in Ethiopia. The bidder shall attach the certificate for the named technician or mason.
1.4	Construction quality	All civil works shall use suitable cement, sand, aggregate, bricks, blocks, pipes, valves, and fittings that are durable and suitable for local conditions.
1.5	Gas storage and piping	The system shall include safe gas piping from the digester to the kitchen, pressure control where needed, valves, a water trap, and any fittings required for safe operation.
1.6	Biogas stove and chaff cutter	Each household shall receive a modern and efficient biogas stove suitable for household cooking. The stove shall be installed and tested during commissioning. For the 12 m ³ digester, an additional chaff cutter that runs on biogas shall be included, installed, and tested during commissioning.
1.7	Bio slurry management	Each site shall include a composting pit or a suitable bio-slurry management structure to support the safe handling and use of digester effluent.
1.8	Digital biogas meter	Preference will be given to bidders that include a reliable digital biogas meter for each digester or provide it as a clearly priced option. The meter should record gas use or production in a practical way for field monitoring.

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Ref	Area	Minimum requirement
1.9	Safety	The supplier shall include safety fittings and conduct leak testing before handover. The system shall be safe for household users and livestock in the surrounding area.
1.10	Commissioning	Commissioning shall include checking slurry flow, gas line integrity, stove and chaff cutter performance, demonstration of biogas cooking at each site, and training of owners to operate and do basic troubleshooting.

2. Scope of work

The supplier shall carry out all activities needed to deliver working household biogas systems. The scope includes the following tasks.

1. Review the final list of selected sites in Oromia Region/Sheger and Wolaita Zone, and confirm site readiness with ILRI or its field partners.
2. Assess each household site for suitable digester placement, manure availability, water access, kitchen location, safety, and drainage.
3. Prepare a site-specific installation plan for each household before construction begins.
4. Supply all materials, tools, equipment, fittings, stoves, safety components, and other items needed for a complete system.
5. Construct and install ten 8m³ and one 12m³ livestock manure biogas digesters using the approved design and good workmanship.
6. Install the gas line, valve, water trap, stove, and all other fittings needed for safe cooking.
7. Construct a composting pit or suitable bio-slurry management structure for each household.
8. Install digital biogas meters and chaff cutter where included in the quotation or selected by ILRI as an optional item.
9. Test each system for leaks, safety, gas flow, stove performance, and basic operating readiness.
10. Train household users and project staff on feeding the digester, daily operation, safety, simple maintenance, troubleshooting, and bio-slurry use.
11. Demonstrate biogas cooking and chaff cutting for each installed system before final acceptance.
12. Provide handover documentation, user guidance, training users, site photos, completion checklist, and after-sales service plan.

3. Bidder eligibility and experience requirements

Bidders may participate as an individual, firm, or team. Each bid must name the lead biogas technician or mason responsible for the installation work.

Requirement	Evidence to be submitted	Status
Qualified biogas technician or mason	Copy of certificate showing training in the latest biogas model design or equivalent recognized household biogas design training	Mandatory
Minimum experience	Evidence of at least five years of practical experience in household or farm-scale biogas digester installation	Mandatory
Past installations	List of completed biogas digesters with client names, location, size, date, and contact details where available	Mandatory
Client testimony	At least one client testimonial, completion letter, or reference confirming the quality of past biogas installation work	Mandatory
Field team	Names and roles of masons, technicians, plumbers, trainers, and a supervisor who will support the work	Mandatory
Legal eligibility	Business registration or identification details, tax documents where applicable, and the right to provide services in Ethiopia	Mandatory
Safety and user training experience	Evidence that the bidder has trained households or communities on biogas operation, safety, and bio-slurry use	Preferred

4. Deliverables

Deliverable	Description	Timing
Site assessment report	Brief report confirming site readiness, manure availability, water access, proposed digester location, and any site risks	Before installation
Installation plan	Workplan and schedule for installing eleven digesters	Before installation
Installed systems	Ten complete 8 m ³ and one 12 m ³ livestock manure biogas digesters with piping, safety fittings, stove, and bio slurry composting pit	During installation
Digital meter option	Digital biogas meter installed, where included in the awarded offer or selected by ILRI	During installation

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Deliverable	Description	Timing
Commissioning checklist	Leak test, gas flow check, stove and chaff cutter test, safety check, and user acceptance for each site	At commissioning
Training report	Training attendance sheet, topics covered, training photos, and summary of user feedback	Before final payment
Cooking demonstration	Evidence that each system can support biogas cooking, documented through a checklist and photos	Before final payment
After-sales service plan	One-year support plan with contacts, response time, and planned site visits	At handover

5. Training and handover requirements

The supplier shall provide practical training at the household level and for project staff. Training must be completed before final payment. Training shall cover at least the following topics.

- Daily feeding of livestock manure and water into the digester.
- Safe operation of the biogas stove and gas line.
- Simple maintenance, leak checking, and routine troubleshooting.
- Actions to take if gas flow reduces or if users smell gas.
- Safe handling, composting, and use of bio-slurry as organic fertilizer.
- Basic record keeping for digester feeding, cooking use, and maintenance.
- Use and care of the digital biogas meter where installed.

6. Warranty and after-sales service

The supplier shall provide one year of after-sales service from the date of final acceptance. The after-sales service shall include the following items.

- Repair of workmanship defects identified during the warranty period.
- Remote support by phone for household users and ILRI field staff.
- At least two follow-up site visits during the one-year support period unless ILRI agrees otherwise.
- Support for stove, gas line, valve, and water trap troubleshooting.
- Advice on maintaining proper digester feeding and bio-slurry handling.
- Clear response time for urgent safety-related issues.

7. Commercial conditions

Area	Requirement
Quotation currency	Bidders shall quote in Ethiopian Birr
Price basis	The quotation shall include all costs for materials, transport to sites, labor, tools, supervision, installation, stove, chaff cutter, bio slurry pit, training, commissioning, and after-sales service.
Optional digital meter	If not included in the base price, the bidder shall provide a separate price for supplying and installing a digital biogas meter for each digester.
Taxes	Bidders shall clearly state applicable taxes and any assumptions.
Delivery and installation period	Bidders shall propose a realistic delivery and installation schedule for all ten systems.
Quotation validity	Minimum 60 days from submission date.
Site access	ILRI or its partners will support site coordination. The supplier remains responsible for planning field logistics.
Acceptance	Final acceptance will be based on completed construction, leak testing, household training, and demonstrated biogas cooking and chaff cutting.

8. Proposed payment schedule

The proposed payment schedule is linked to verifiable delivery milestones. Bidders may comment on the schedule, but acceptance of the final 20% payment condition is mandatory.

Milestone	Payment share	Condition for payment
Contract signing and approved work plan	50 %	Signed contract, agreed site list, approved workplan, confirmed mobilization plan, and advance Guarantee
Installation completed and systems tested	30 %	All digesters constructed, gas lines and stoves installed, leak testing completed, and commissioning checklist submitted

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Milestone	Payment share	Condition for payment
Training, biogas produced, and cooking and chaff cutting demonstration completed	20 %	Final payment upon completion of household training, safety briefing, bio slurry use training, and successful biogas cooking and chaff cutting demonstration at the installed systems

9. Submission requirements

Quotations should include the following documents.

13. Signed quotation letter and total price for ten complete 8 m³ digesters and one complete 12 m³ digester.
14. Technical proposal explaining the proposed digester design, materials, construction method, safety features, stove, bio slurry pit, training plan, and after-sales service plan.
15. Completed technical compliance sheet against the requirements in this RFQ.
16. Copy of certificate for the named biogas technician or mason in the latest biogas model design.
17. Evidence of at least five years of biogas digester installation experience.
18. Client testimonials, references, or completion letters from previous biogas installation work.
19. Staffing plan showing the named lead technician or mason and supporting team members.
20. Detailed financial quotation using the format in this RFQ.
21. Implementation schedule for installing all ten systems.
22. Warranty and one-year after-sales service plan.
23. Separate price for digital biogas meters and chaff cutter if not included in the base quotation.

Quotations should be submitted electronically to ilriettender@cgiar.org by 31st July 2026.

Ensure that you write "**Supply and Installation of Livestock Manure Biogas Digesters for Household Cooking**" in the **subject line** without any modifications.

10. Mandatory pass criteria

Bids that do not meet the mandatory criteria below may be rejected before technical and financial scoring.

No.	Mandatory criterion	Pass or Fail
1	Bidder is an eligible individual, firm, or team able to work in Ethiopia	
2	Named lead technician or mason has a valid certificate in the latest biogas model design or equivalent recognized biogas training	
3	Bidder demonstrates at least five years of relevant biogas digester installation experience	
4	Bidder provides client testimony, completion letters, or references for previous biogas installation work	
5	Quotation covers complete system supply, installation, stove, bio slurry pit, training, commissioning, and one year after-sales service	
6	Bidder accepts the final 20 % payment after training and demonstrating biogas cooking	

11. Evaluation criteria

Quotations that meet the mandatory criteria will be evaluated using a 70% technical and 30% financial scoring approach.

Evaluation area	Weight	Assessment focus
Technical design and quality of the proposed 8 m ³ and 12 m ³ digester system	25	Suitability of design, materials, construction method, safety, durability, and fit for livestock manure-based cooking
Completeness of the system and accessories	15	Inclusion of stove, chaff cutter, piping, valves, water trap, bio slurry composting pit, tools, commissioning checks, and optional digital biogas meter
Experience, certification, and client testimony	15	Quality of technician certificate, years of experience, number of previous installations, and strength of testimonials
Implementation plan and training approach	10	Realistic field workplan, site coordination approach, household training plan, and safety briefing
Warranty and after-sales service	5	One-year support plan, response time, follow-up visits, and availability for troubleshooting
Technical score	70	Only bidders meeting the mandatory pass criteria will receive a technical score
Financial score	30	The lowest evaluated responsive price receives a full financial score. Other bidders are scored proportionally.
Total score	100	Technical score plus financial score

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Financial score formula: lowest evaluated price divided by the bidder's evaluated price, multiplied by 30.

12. Financial quotation format

Bidders should provide a clear cost breakdown using the format below.

Cost item	Unit	Quantity	Unit cost	Total cost	Notes
8 m ³ biogas digester construction materials (Wolita Zone)	Digester	10			Include all civil materials
12 m ³ biogas digester construction materials (Oromia/Sheger)	Digester	1			Include all civil materials
Labor for construction and installation	Digester	11			Include mason and technician costs
Gas piping, valves, water trap, and safety fittings	Set	11			Complete gas line to the kitchen
Modern efficient biogas stove	Unit	11			Installed and tested
Chaff cutter runs on biogas	Unit	1			Installed and tested
Bio-slurry composting pit or management structure	Unit	11			At each household
Digital biogas meter	Unit	11			Show as included or optional
Transport and field logistics	Lot	1			For Sheger and Wolaita sites
Training and commissioning	Lot	1			Household training and cooking demonstration
One year after sales service	Lot	1			Include planned follow-up visits
Taxes and other costs	Lot	1			State assumptions
Grand total					

13. Technical compliance sheet

Bidders shall complete this sheet and attach supporting documents where required.

No.	Requirement	Complies Yes or No	Bidder response
1	Ten 8 m ³ and one 12 m ³ livestock manure biogas digesters		
2	Latest certified biogas model design suitable for rural household cooking		Attach the design description and certificate
3	Named lead biogas technician or mason with a certificate		Attach certificate
4	At least five years of installation experience		Attach CV and project list
5	Client testimony or completion letters		Attach at least one reference
6	Complete gas piping, valves, water trap, and safety fittings		Describe included items
7	Modern efficient biogas stove for each household and one chaff cutter for the 12 m ³ digester unit		Provide a model and specification
8	Bio-slurry composting pit or a suitable management structure at each site		Describe structure
9	Training on operation, maintenance, safety, and bio-slurry use		Attach the training plan
10	Leak testing and cooking demonstration before handover		Attach the checklist format
11	One year after sales service		Attach support plan
12	Digital biogas meter included or separately priced		State included or optional price

14. Acceptance and handover

Each system will be accepted only after ILRI or its representative confirms that construction is complete, gas lines and fittings are safe, the stove works properly, household users have been trained, and biogas cooking has been demonstrated. Final payment will not be released until these conditions are met.