



Supply, Training and Installation of Prepaid meter system to Piped Water Schemes in Bugiri, Butaleja and Kaabong districts

General Description of the Country Programme

GOAL is an Irish international humanitarian organization currently working in 13 countries in emergency and development contexts across the world. First operational in Uganda in the late 70's, GOAL Uganda's country Programme is focused on long-term development in health and livelihoods with a strategic focus on the north and east of Uganda, where socio-economic growth lags significantly behind the rest of the country. We have a coherent and innovative country Programme that uses a resilience and systems approach throughout to increase incomes, employment, food security and diversity, increase social capital and improve health. GOAL works on a district-focused approach and uses a mixture of direct implementation and partnerships with local civil society organizations, private sector partners and District Local Governments to give effect to our mission.

Overview of GOAL Uganda WASH Programme

GOAL has been implementing WASH programs in Uganda since 2003 transitioning from an emergency approach, through crisis recovery to a development WASH program, with an increasing focus on achieving sustainable impact using a systems approach. Geographically, GOAL Uganda's WASH program has been implemented in Northern Uganda (Agago), Karamoja (Abim, Kaabong), and Eastern Uganda (Butaleja, Bugiri and Namayingo). GOAL works directly with communities and through partnerships and collaboration with civil society organizations, UWASNET, the private sector and in close coordination with district local governments of Bugiri, Namayingo, Butaleja and Kaabong, Regional Government structures (Technical Support Units and Umbrella of Water and Sanitation) and the national government of Uganda.¹ The WASH Programme directly contributes to **Goal 2: People have Resilient Health** of our country strategy, aligned with the GOAL Global Strategy. GOAL Uganda's WASH programmatic approach among other thematic areas includes safe water supply through rehabilitation and construction of water points and piped water schemes. We continue to explore other contextualized WASH technological options suitable to reach even those living in hard-to-reach areas.

In 2024-26, GOAL will continue the construction of water supply points in rural areas of our districts of operation. Our work in water supply focuses on new borehole drilling, borehole rehabilitation, mini piped water schemes (or community tap stands) and medium-sized piped water schemes. After completion of our water projects, these are handed over to the individual districts or the responsible Umbrella Authority of water and sanitation for management. All our piped water schemes will be handed over to the Umbrella Authority of water and sanitation for post construction management in line with the Government policy. This TOR relates to the installation of pre-paid water meters (PPMs) for the collection of water user fees at the piped water collection points.

¹ Ministry of Water and Environment, Ministry of Health, Ministry of Education and Sports. These are the ministries with the mandate to deliver and regulate WASH services to and for the people of Uganda.

Scope of the Terms of Reference (TOR) for the Supply, Installation, and Training on Pre-Paid Meters for Community Tap Stands and Piped-Water Schemes

The proposed project requires a qualified supplier/contractor to supply, install and commission approx. 69 pre-paid meters (PPMs) each with a dispensing hub and able to contain pressures of up to 120 meters (12bars). The project timeline runs from early 2025 to June 2026. These PPM installations will be distributed across various project locations as follows: approx. 30 in Bugiri District, 24 in Butaleja District and 15 in Kaabong District. All installation sites shall have adequate design for drainage whereas each installation in Kaabong will require the construction of a kiosk for secure housing of the PPM equipment.

The successful supplier/contractor of the PPMs should keep in mind that the installation will proceed in two or more phases to align with the completion schedules of individual project locations. Your pricing should take into consideration these operational possibilities.

The supplier/contractor will also be responsible for training key personnel, including up to five staff members from each of the Eastern and Karamoja Umbrellas who will be involved in managing/maintaining the PPMs. These staff will include at least one engineer and one commercial officer from each regional Umbrella as well as the operator for each installed system. The training should cover installation procedures, dashboard functionality, use of data and the operation and maintenance of the PPMs.

Essential Technical Requirements

The prepaid water metering system must conform to the following specifications. However, bidders are encouraged to propose superior or alternative designs and specifications that are financially competitive and meet the critical requirements of pre-payment fee collection, ease of use and maintenance, remote monitoring, durability, security, and compatibility with off-grid (low solar power) energy sources.

Dispenser unit

A system designed with a separate dispensing unit for water sales may be accepted however, GOAL Uganda shall prefer designs with the shop hub & dispensing systems embedded in one unit and installed at one location – the dispensing area. The supplier shall provide evidence justifying a design that deviates from the above, which is preferred. Specifically:

- The unit should be designed to fit securely and function effectively on public stand posts.
- Bidders must provide detailed technical specifications for the proposed stand post construction.
- The proposed stand posts should have a proven track record of use in other locations, demonstrating user-friendliness and resilience to vandalism.
- For Kaabong district, prepaid meters (PPMs) will be housed in secure kiosks, while all installations must have adequate consideration for drainage to ensure no water spills and remains visible on the site.
- The dispensing unit should be able to contain pressures of upto 12 bars.

Remote Monitoring

- The system must include remotely controlled pre-payment technology.
- Each meter dispensing unit should:
 - Dispense a pre-determined volume of water matched to standard water collection containers (e.g., 10 or 20 liters), or a user controlled measured volume.
 - Be activated using a pre-paid token or card.
 - Be linked to a web-based monitoring system via a GSM phone network for real-time data and monitoring.
 - It should allow for onsite data transmission say by Bluetooth, during periods of poor network.

Shop Unit for Payment

- The system should be configured with ease of access to credit top-up facilities e.g a vendor token, mobile money services etc.
- The shop unit should allow for multiple tariff settings, enabling both time-based and volume-based charging options for different customer categories.

Centralized Management

- The system must support centralized management of all 69 PPMs and be scalable to accommodate additional PPMs installed in the future.

Other Requirements

- Central Monitoring and Reporting
- Both the dispenser and shop units must be integrated with a central database capable of real-time monitoring. The database should provide key statistics, including:
 - Operational status of each shop unit/PPM.
 - Total number of registered and active water users.
 - Daily water consumption and corresponding revenue.
- Resistant to weather conditions and protected against vandalism:
 - Be robust enough to withstand adverse weather conditions.
 - Incorporate sufficient security features to deter vandalism and unauthorized access.
- Training and Follow-up support:

The supplier must provide training for technical personnel from GOAL, the Umbrella Authorities, and end-users. The training should cover:

- Installation procedures.
- System operation and maintenance.
- Troubleshooting and data management.
- The supplier shall provide remote monitoring support within the period of the contract and warrant as may be required. Physical visits may be arranged based on need and within agreed terms.
- **Maintenance and Warranty:**
 - The supplier/installer must provide a minimum of one-year maintenance warranty.
 - Technical support should be available either remotely or on-site as required, with timely responses to service needs.
 - Spare parts to cover 5 years of maintenance and online support must be included in the maintenance offering. These spare parts shall include but not limited to the Flow control valves and flow sensors. All batteries supplied shall have their terminals adequately protected against moisture, water leaks within the system and rain.
- **Warranties and Guarantees:**
 - The proposal must clearly state all warranties and guarantees offered for the equipment and services provided.

Award Criteria (In order of Importance)

1. Quality/Conforming to technical requirements.
2. Financial Proposal (All submission will be taken as final offer).
3. Availability of product/delivery Time.

Time Frame

This assignment will align with GOAL's two-year sWASH 9 project timeline, running from August 2024 to July 2026. The prospective supplier/installer must take note of the following key requirements:

1. **Phased Installation:**
 - a. The installation of approximately 69 prepaid meters (PPMs) will be implemented progressively over the project period. The installations shall be made in 3 phases across the project locations. GU shall notify the prospective contractor(s) once a specific phase is due and the suppliers are required to accommodate the associated costs while pricing/ developing rates for this procurement.

The projected phases:

Phase	Location	Project	Qty	Cumulative Qty	Planned period
1	Bugiri	Muwayo	15	15	Oct-25
	Butaleja	2 CTS	6	21	Oct-25
	Kaabong	2 CTS	6	27	Oct-25

	Bugiri	Busolo ext	15	42	Oct-25
2	Butaleja	Halanga	15	57	Dec-25
	Butaleja	1 CTS	3	60	Dec-25
3	Kaabong	Kakamar	6	66	Mar-26
	Kaabong	1 CTS	3	69	Mar-26

- b. All installations must be completed at least three months before the project end timeline to allow for timely donor reporting.

2. Payment Schedule:

- a. Payments will be structured in alignment with the completion of each batch of installed meters.
- b. A portion of the payment will be retained as a defect liability to address any potential issues during the warranty period.

This timeline and payment structure aim to ensure seamless implementation and accountability throughout the project lifecycle.

Remuneration (Technical and Financial Offer) The service provider/firm is required to submit a comprehensive proposal that includes:

1. Technical Proposal:

- a. Detailed information about the prepaid metering system (PPM) to be supplied and installed, including:
 - i. Technical specifications and drawings.
 - ii. Manufacturer details.
 - iii. A clear response to all the technical and functional requirements outlined above.

2. Financial Offer:

- a. A detailed cost breakdown that includes:
 - i. The cost per installed PPM and its accessories.
 - ii. Training fees for technical personnel and end-users.
 - iii. Any reimbursable fees or miscellaneous expenses.
 - iv. All applicable Government of Uganda taxes, such as VAT and WHT.

Payment Terms:

- GOAL will adopt an admeasurement contract, with payments based on the actual number of PPMs installed.
- The total number of PPMs indicated (69) serves as a pricing guide and may vary; the final quantity could exceed or fall below this number.
- Final payments will reflect the number of successfully installed and functional PPMs at the agreed unit price.

Please ensure you complete the financial offer using this template (Example purposes only)

Item s	Description	Unit	Quantity	Rate	Amount
1	Supply and installation of a PPM with one dispensing hub, and meets all the detailed specifications.	Nr	69		
2	Construction of 15 water kiosks to house the PPMs in Kaabong District	Nr	15		
3	Construction of tap stands and installation of PPM (attach drawings and specifications), including demonstrating the application of tokens for collection of water	Nr	69		
4	Training of upto 15-staff of the Umbrella Authority in the installation, dashboard and user data and operation and maintenance of the Piped Water Supply Prepaid meters. At least one operator for each installed PPM at community level shall be trained to operate the PPM.	Item	1		
5	Software license for 5 years (If this applies).	Item	1		
	Subtotal				
	Add VAT (18%)				
	Grand total				