

Terms of Reference for the design and delivery of the Uganda Biogas and Electric Cooking Program (UBEP) eCooking Subsidy Program

1. Background of the UBEP eCooking Subsidy Program

In Uganda, traditional biomass primarily wood and charcoal remain the dominant source of cooking energy, with over 90% of households depending on it. This heavy reliance contributes to deforestation and indoor air pollution resulting in serious health risks, particularly for women and children, who are most exposed to smoke during cooking. Recognizing the urgency to shift to cleaner alternatives, the Government of Uganda, through the Ministry of Energy and Mineral Development (MEMD), launched the Uganda Biogas and Electric Cooking Project (UBEP) in 2025 with support from the African Development Bank (AfDB). UBEP aims to expand access to clean cooking by investing in biogas plants and electric cooking appliances, consolidating existing efforts into a unified program that supports Uganda's Vision 2040, NDPIV and updated Nationally Determined Contributions (NDCs).

UBEP directly contributes to several Sustainable Development Goals including improving health (SDG 3), promoting gender equality (SDG 5), expanding access to modern energy (SDG 7), mitigating climate change (SDG 13), and protecting ecosystems (SDG 15). It also aligns with the African Union's Agenda 2063 and AfDB's Uganda Country Strategy Paper (2022–2026), which prioritizes sustainable infrastructure for industrial growth. The project supports the African Development Bank's broader strategies, including the New Deal on Energy for Africa, Mission 300, the Ten-Year Strategy (2024–2033), and the Climate Change and Green Growth Action Plan.

In this regard, the Government of Uganda (GoU) invites interested firms to apply for a consultancy assignment to support the implementation of the Subsidy Program for electric cooking appliances under the Uganda Biogas and Electric Cooking Project (UBEP).

The subsidy program aims to accelerate the adoption of clean cooking technologies by supporting the deployment of up to 77,000 energy-efficient electric cooking (eCooking) appliances across major urban centers in Uganda. This will be achieved through a competitive procurement process to solicit qualified suppliers, combined with targeted subsidy mechanisms that reduce retail prices by up to 50%, thereby improving affordability and enabling more households to transition from traditional biomass fuels to cleaner, energy-efficient cooking solutions. In addition, the assignment will generate practical evidence and lessons to inform GoU efforts to streamline and strengthen subsidy policy instruments in the clean cooking sector, in line with national goals.

The subsidy program targets two customer tiers, with a focus on low-income urban households that rely heavily on charcoal but have medium to high electricity access. Target areas include the Greater Kampala Metropolitan Area (GKMA), Jinja, Mbale, Masaka, Mbarara, Fort Portal, Gulu, and Arua. The selected consulting firm will be responsible for designing and implementing the UBEP eCooking Subsidy Program using a Results-Based Financing (RBF) approach. The firm will play a critical role in ensuring the program's effectiveness,

transparency, and sustainability by bringing in technical expertise in RBF mechanisms, clean cooking market dynamics, financial modeling, competitive procurement strategies, and performance-based disbursement systems. By engaging the private sector, the firm will also help drive market expansion, increase supplier participation, and support consumer adoption strategies ultimately contributing to Uganda's broader electrification and clean cooking goals.

2. Objectives of the assignment

The objectives of the assignment are:

- To conduct pre-program viability and validation assessment for the design of the UBEP eCooking Subsidy Program.
- To design the UBEP eCooking Subsidy Program – with an incentive structure that maximizes additionality and sustainability
- To support implementation of the UBEP eCooking Subsidy Program in collaboration with selected private sector providers.

Aiming at:

- Increasing the adoption of eCooking solutions to at least 77,000 male and female headed households and women owned enterprises, and reduce reliance on biomass fuels and improve health and environmental outcomes.
- Addressing supply chain gaps, affordability barriers, and consumer awareness by involving the private sector to stimulate the eCooking market.
- Ensuring the long-term sustainability of eCooking solutions through effective program design, stakeholder engagement, and monitoring.
- Structuring a phased rollout that leverages real time market data and feedback to consider adjustment to the verification protocols, subsidy levels and/or targeting.

3. Program Scope

Under the supervision of MEMD, the consulting firm will implement the following tasks:

SCOPE	ACTIVITIES	DELIVERABLES
<p>Pre-program viability assessment.</p>	<p>Work with MEMD to conduct market and feasibility Assessment in the identified areas, which will consist of (but not limited to):</p> <ul style="list-style-type: none"> ○ Market research to identify key market failures in the supply of electric cooking appliances, existing gaps, and potential barriers. This must include <i>Historical Sales Data Review</i>: Assess past eCooking appliance sales to understand market maturity. ○ A comprehensive assessment of target areas, household income, vulnerability and energy-access characteristics, and other potential barriers to adoption. This should also include gender-disaggregated data on household and enterprise energy use. ○ Stakeholder mapping and engagement planning.. ○ Explore Consumer Willingness-to-Pay: Conduct surveys in the selected areas to gauge the demand and affordability of electric cooking appliances and financing preferences. ○ Explore best bidding mechanism (fixed incentives or reverse auction) considering the local supply chain conditions to ensure no market disadvantages for smaller, national companies. 	<p>Pre-program viability assessment Report with:</p> <ul style="list-style-type: none"> ○ Detailed findings on Household/enterprise cooking behavior, end user financing and energy affordability. ○ Identification of target customer tiers /beneficiaries. ○ Supply chain constraints and gaps (clarity on the targeted market failures the Subsidy is correcting). ○ Stakeholder mapping and Engagement Plan detailing stakeholder roles, engagement, timelines, training needs and expected contributions. ○ Proposed procurement/bidding mechanism.
	<p>Conduct eCooking technology viability assessment with MEMD: Evaluate the viability of the selected electric cooking technologies (in this case induction stoves and electric pressure cookers) for the local context, considering supply chain limitations, affordability, user needs and grid capacity. Provide recommendations for integration of the IoT devices in the appliances.</p>	<p>Technology Recommendations note: Assessment report of viability of the selected electric cooking solutions, and recommendations for integration of the IoT devices.</p>

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<p>UBEP eCooking Subsidy Program Design</p>	<p>Design of UBEP eCooking Subsidy Program: using the inputs from the Pre-program viability assessment Report, develop the subsidy program that includes (but not limited to):</p> <ul style="list-style-type: none"> • Program implementation timelines. • Program Performance Indicators (PPIs): aligned with the main project objectives, such as sales targets to households/enterprises and reduction of GHG emission. • Implementation pilot areas and scaling up areas. • The Incentive Structure shall be targeted to maximize additionality and sustainability, including differentiated/rightly-sized incentives informed by the demand and affordability gap analysis. • Supplier Eligibility and Compliance: Establish guidelines for supplier participation, including financial and operational criteria. • Multi-Tiered Incentive Disbursement Structure: establish tiered and targeted incentives based on, geographic area, and consumer segment. Define payment triggers (how payments will be distributed at different milestones). • Design Program Monitoring and Evaluation Framework: to track program performance indicators (PPIs). • Carbon financing Opportunities and monitoring: With MEMD establish mechanisms for integrating carbon financing to enhance program sustainability. <ul style="list-style-type: none"> ○ <i>Carbon Credit Integration:</i> Pro the program to carbon credit markets. ○ <i>MRV (Monitoring, Reporting & Verification) Framework:</i> Establish a methodology for tracking carbon reductions linked to the shift from biomass cooking. 	<p>Final UBEP eCooking Subsidy Program Design Document: Outline of the program structure and operational manual, including incentive mechanisms, implementation areas (pilot and scaling up), eligibility criteria, payment mechanism, opportunities for carbon credits and project performance indicators and implementation timelines.</p> <p>UBEP eCooking Subsidy Program M&E framework document.</p>

SCOPE	ACTIVITIES	DELIVERABLES
<p>Implement UBEP eCooking Subsidy Program</p>	<p>Implement the program in the phased-out approach, starting with the pilot areas. Implement the following:</p> <ul style="list-style-type: none"> • Conduct Capacity Building and Trainings: Develop and conduct training for the identified program implementers, including MEMD staff, and other partners. • Establish partnerships with the identified appliance suppliers. • With the selected firm to conduct awareness campaigns, assist in: <ul style="list-style-type: none"> ○ Community Engagement in target areas to educate the public about the benefits of eCooking (in collaboration with appliance suppliers to tap into the established demand). ○ Demonstrations and Pilot Events: Organize cooking demonstrations to show ease of use, and effectiveness, and to debunk common misconceptions. • Ensure integration of IoT device/smart metering solutions in the eCooking appliances to track real-time appliance usage and GHG emission reductions. Specifically. <ul style="list-style-type: none"> ○ Real-time cooking data (usage time, kWh consumption). ○ GPS location (for supply chain monitoring). ○ Appliance performance data (functionality, faults, and repair needs). • Subsidy and Incentive Distribution: <ul style="list-style-type: none"> ○ Conduct eligibility Assessment to verify households eligible for subsidies or incentives based on established criteria, such as income levels and location (urban versus peri-urban Uganda). ○ Voucher or Subsidy Roll-Out: With the selected suppliers implement a mechanism for distributing RBF subsidies, e.g. digital vouchers or installment-based subsidies. 	<ul style="list-style-type: none"> • Training workshop reports for program implementers and partners. • Partnership agreements/contracts with the appliance suppliers. • Community engagement plans and Demonstration event reports • Household eligibility assessment criteria and process • IoT device/smart metering integration in the eCooking appliances. • Voucher or subsidy distribution mechanism and reports • Incentive tracking and disbursement system and reports • Supply chain management plan and reports • Technical support guidelines and procedures • Stocking & Logistics plan and reports

SCOPE	ACTIVITIES	DELIVERABLES
	<ul style="list-style-type: none"> ○ Incentive Tracking and Disbursement: with the appliance suppliers track results to determine when and how incentives are disbursed based on predefined PPIs. ● Supply Chain Management and Support: <ul style="list-style-type: none"> ○ <i>Support suppliers to establish Stocking & Logistics Plan</i> to ensure eCooking technologies are consistently available in the targeted areas and suppliers respond to demand promptly. ○ <i>Establish Supplier Performance Monitoring:</i> Set up tracking mechanisms for supply chain efficiency and after-sales service. Ensure suppliers provide Technical Support to consumers: ensure suppliers are handling technology maintenance issues, troubleshooting, and providing user guidance. ○ Establish After-Sales Service Requirements for the appliance suppliers, <ul style="list-style-type: none"> ▪ Ensure warranty mechanisms are in place. ▪ With suppliers provide a dedicated customer support helpline to handle user inquiries, complaints, and repair requests, and track user satisfaction. ● Explore establishment of women-Led Distribution Networks: Encourage female participation in appliance distribution and awareness campaigns. ● End-User Training and Support: Prepare sessions for the public where suppliers conduct workshops or home visits to train users on how to use and maintain electric cooking appliances to ensure they can maximize the appliances' benefits. ● Risk Management Measures: Identify potential risks such as affordability constraints, supply chain disruptions, and grid reliability, provide strategies to mitigate them. 	<ul style="list-style-type: none"> ● User training materials and curriculum ● Customer service guidelines and procedures ● Suppliers warranty mechanisms. ● User satisfaction surveys and reports ● Established women-led distribution networks. ● Risk management reports. ● Post program-Scaling up Plan and Long-Term Sustainability Strategy

SCOPE	ACTIVITIES	DELIVERABLES
	<ul style="list-style-type: none"> • Develop Scaling up Plan and Long-Term Sustainability Strategy: Develop a roadmap for the post-subsidy program phase for future MEMD eCooking projects. 	
Support in independent verification exercises.	<p>Provide Independent Verification Agency (IVA) as well as support with the payment/reimbursement processes:</p> <ul style="list-style-type: none"> • Support in auditing and validation of sales data from suppliers and assist in field inspections before reimbursements. • Support in periodic Verification & Reimbursement Cycle: Align incentive disbursement with a structured reporting schedule. • Conduct IoT-Based Data Collection: establish a Digital Monitoring Dashboard/database: IoT-based tracking of cooking hours, fuel displacement, and GHG reduction. • Verify appliance installation and active usage. • Ensure compliance of suppliers and other stakeholders with program requirements. 	<ul style="list-style-type: none"> • Sales data and field inspection/verification reports • Digital Monitoring Dashboard/database for IoT-based tracking. • Supplier compliance reports

4. Qualifications and experience.

The qualifications required for this assignment are as follow:

- Minimum of 5 years of proven experience in designing and implementing RBF or similar performance-based financing programs, ideally within the energy or clean cooking sector.
- Demonstrated experience in the clean cooking and/or renewable energy sectors, with a preference for projects in sub-Saharan Africa or similar contexts. Experience in East Africa and in particular Uganda will be an added advantage. Demonstrated experience with eCooking solutions and knowledge of the specific challenges and opportunities in promoting electric cooking adoption in Uganda or East Africa.
- Expertise in program structuring, stakeholder engagement, and monitoring and evaluation of RBF programs with emphasis in household energy needs assessments, market assessments, and impact evaluations to inform program design and adjustments. Ability to conduct on-ground assessments, coordinate with local stakeholders, and manage local subcontractors or partners if key.
- Policy and Regulatory Expertise: Experience in aligning clean cooking initiatives with national policies and securing fiscal incentives (e.g., tax exemptions, reduced import duties).
- The firm must demonstrate the financial stability necessary to carry out a large-scale project and capacity for fund management in line with RBF mechanisms. Proven track record in managing multifaceted projects with multiple stakeholders in a structured and time-bound environment.
- Preference for firms with an existing presence in Uganda or demonstrated experience working with Ugandan government agencies, local NGOs, or communities. Proof of compliance with legal and regulatory requirements in Uganda, including relevant certifications, licenses, and approvals for conducting consultancy work in the country. Firms must be in good standing, with no record of default or misconduct in previous projects.
- Experience in capacity building for local organizations, government agencies, or the private sector, including training on clean cooking technologies and/or implementation of RBF mechanisms.
- Demonstrated commitment to gender inclusivity and social inclusion in past projects, particularly in energy or clean cooking programs. Capacity to integrate strategies that ensure equitable access to electric cooking solutions across genders and marginalized groups.

- Track record of using data-driven approaches for decision-making and innovative solutions in program delivery. Demonstrated ability to design adaptable RBF mechanisms that respond to changing market dynamics and user needs.

5. Duration of Assignment

The assignment will commence at completion of the selection process and upon contract signing. The contract with the selected firm, expected to start in 1st April 2026, will last for a period of three (3) years. A precise work program will be agreed upon with MEMD and Program Implementation Unit on commencement of the assignment.

6. Exclusivity

The appointment of the firm and the acceptance of such appointment will constitute an engagement of the firm to provide the Beneficiary with the services referred to in the Scope of Works on an exclusive basis.

7. Confidentiality

Any information provided by AfDB, other financiers, project sponsors, or by any other source concerning any AfDB project or activity will be considered confidential and proprietary in nature and should not (except as required by law) be disclosed by the Consultant to any third party.