KENYA ELECTRIC COOKING MARKET DEVELOPMENT INITIATIVE (KEMDI)

STAKEHOLDER ENGAGEMENT PLAN

Addendum to the Project Appraisal Report
Last Mile Connectivity Project III

Kenya Electric Cooking Market Development Initiative (KEMDI)

April 2025

BASIC INFORMATION

1. Country and Project Name: **Addendum to the Project Appraisal Report** **Last Mile Connectivity Project III** **Component 6: Kenya Electric Cooking Market Development Initiative (KEMDI)**
2. Project Development Objective: To increase access to clean and efficient cooking solutions and thereby promote gender equity and reduce the reliance on traditional biomass for cooking
3. Expected Project Benefits: i. Demand stimulation leading to increased unit sales ii. Better health for families,
4. Identified Project Risks: Initial slow uptake of the appliances due to preconceived ideas on cost of electricity and safety.
Recipient: Government of Kenya – Ministry of Energy
Responsible Government/Country Agency for ESMF Implementation: Ministry of Energy -Kenya Power and Lighting Company Limited (KPLC)
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Total Project Cost: USD 4.4 million
Date: 2 April 2025

LIST OF ACRONYMS

ABD	African Development Bank
ADF	African Development Fund
AFDB	African Development Bank Group
CACF	Canada – African Development
CWA	Climate Action Window
CSO	Civil Society Organization
DOHSS	Directorate of Health & Safety Services
EPCs	Electric Pressure Cookers
EPRA	Energy and Petroleum Regulatory
ESIA	Environmental & social Impact Assessment
ESMF	Environmental and Social Management Framework
ESS	Environmental and social standards
FPIC	Free Prior Informed Consent
GoK	Government of Kenya
ICP	Informed Consultation and Participation
KEMDI	Kenya Electric Cooking (eCooking) Market Development Initiative
KPLC	Kenya Power & Lighting Company Ltd
LMCP	Last Mile Electricity Connectivity Project
LPG	Liquefied Petroleum Gas
MoEP	Ministry of Energy and Petroleum
MECS	Modern Energy Cooking Services
NEMA	National Environment Management Authority
NGO	Non-Governmental Organization
PAPs	Project Affected Persons
SEF	Stakeholder Engagement Framework
SEP	Stakeholder Engagement Plan
SEforALL	Sustainable Energy for All

EXECUTIVE SUMMARY

In November 2023, the Board of Directors of the African Development Bank ("Bank" or "ADB") approved the third phase of the Last Mile Electricity Connectivity Project (herein referred to as "LMCP III"), an infrastructure development intervention aiming to increase access to adequate, affordable, and reliable electricity for households and public institutions as well as micro, small and medium-sized enterprises (MSMEs).The LMCP III has the following components:

- Component 1: System reinforcements, which involves the construction of 13 substations to improve the reliability of the MV electricity supply in 16 counties.
- Component 2: Grid extensions and last-mile connections, which involves the construction of medium and low voltage lines for grid densifications to provide electricity to 150,047 connections comprising households, social infrastructure amenities, and MSMEs, in 45 counties excluding Nairobi and Mombasa.
- Component 3: Project administration and management to ensure a successful implementation of the project
- Component 4: Institutional support and capacity building, which includes provision of technical assistance to the State Department of Energy (under the Ministry of Energy and Petroleum), consultancy services to undertake feasibility studies for strengthening the distribution network and expand electricity access for productive use, and capacity building for Kenya Power and Lighting Company (KPLC), the State Department of Energy and the National Treasury
- Component 5: Implementation of Environmental and Social Management Framework (ESMF) and Resettlement Policy Framework (RPF), which covers the costs associated with both the wayleaves and related activities including compensation and/or resettlement of Project Affected Persons (PAPs).

Clean cooking is one of the Bank's strategic focuses, identified as a priority area in the Bank's Ten-Year Strategy (2024-2033). In May 2024, during the Summit on Clean Cooking in Africa, the Bank committed USD 2 billion over the next ten years to advance clean cooking solutions across the continent. This substantial investment is aimed at preventing the annual loss of approximately 600,000 lives—mainly women and children—who suffer from the harmful effects of secondary smoke resulting from the incomplete combustion of biomass, fuelwood, and charcoal. Despite improved access to electricity in recent years, there is little progress to adopt clean cooking in Kenya, with most households still cooking over open fires and basic stoves. Using charcoal, wood, agricultural waste, and animal dung as fuel affects the lives of millions of people - mostly women and children - as they inhale toxic fumes and smoke while cooking.

The Government of Kenya (GoK) has recognized the urgent need to address climate change, with a particular emphasis on prioritizing adaptation measures. This commitment is reflected in the increased emphasis on formulating comprehensive climate change policies, plans, and actions. Notably, Kenya has developed the National Program for Accelerated Forestry and Rangelands Restoration, the Kenya National Adaptation Plan (NAP) 2015-2030, and the National Climate Change Response Strategy (NCCRS), which proposes the establishment of a dedicated Climate Change Secretariat within the Ministry of Environment and Mineral Resources. Kenya's NAP, which is among the first in Africa and globally by a developing nation, aligns with the 2010 Constitution of Kenya and the Kenyan Vision 2030, emphasizing forest preservation and agriculture's pivotal role in national development for a sustainable future.

The KEMDI was developed in collaboration with the Ministry of Energy and Petroleum and KPLC, with initial discussions held at the Clean Cooking Forum in Accra in 2022. Subsequently, the Bank has engaged in multiple meetings with KPLC to conduct deeper discussions on KEMDI's design and implementation. KPLC has established a solid track record and extensive experience in eCooking initiatives. In December 2022, KPLC established two eCooking committees, the Steering Committee and the Technical Committee—to manage the sector's rapid growth, allowing for active engagement in eCooking forums and strategic preparation for increased demand. To boost awareness, KPLC operates the Pika na Power Demonstration Center in Nairobi and, in 2022/23, funded the refurbishment of three additional centers in Mombasa, Nakuru, and Kisumu for over 16 million Kenyan Shillings. These centers offer e-product classes, cooking demonstrations, and tastings. KPLC also uses expos and events for customer outreach and converts a vehicle into a Mobile Demonstration Kitchen, to reach underserved communities. Banking halls are being transformed into eCooking showrooms, with an initial investment of 5 million Kenyan Shillings, in partnership with stakeholders. Additionally, KPLC collects data on institutional eCooking for large-scale projects and supports the Clean Cooking Association of Kenya with financial and in-kind contributions, underscoring its commitment to eCooking expansion in Kenya.

KEMDI aligns directly with United Nations Sustainable Development Goal (SDG) 7, ensuring access to affordable, sustainable, and modern energy for all, and SDG 13, combating climate change and SDG 15, by protecting terrestrial ecosystems and sustainably managing forests. By reducing reliance on fossil fuels and unsustainable biomass use, it contributes to the African Union Agenda 2063's aim of promoting environmentally sustainable and climate-resilient economies and enhancing citizens' well-being. KEMDI, aligns closely with the Bank's 2024-2028 Country Strategy Paper (CSP) for Kenya. KEMDI is particularly well-suited to Pillar I, which focuses on investing in hard infrastructure and advancing policy and institutional reforms to drive industrial development and enhance value addition in MSMEs.

Finally, with KPLC as the executing agency for LMCP III, KEMDI stands to gain significantly from the established Project Management Unit (PMU), which will streamline implementation, monitoring, and evaluation. The PMU's experience and KPLC's strong stakeholder networks ensure smooth integration and coordination, enabling efficient resource allocation and oversight. This structure reduces administrative burdens and strengthens the likelihood of KEMDI's success within the broader LMCP III.

The purpose of this SEP is to define a program for stakeholder engagement, including public information disclosure and consultation throughout the entire project cycle. This SEP outlines the ways in which the KEMDI will communicate with stakeholders and includes a mechanism by which stakeholders can raise concerns, provide feedback, or make complaints about the project and any activities related to the project. It particularly emphasize the methods of engaging groups considered most vulnerable and that area at risk of being left out of the project's benefits.

The SEP has provided necessary policy and legal framework to guide the implementation of all stakeholders' engagement activities. The Plan has also identified and analyzed aa the necessary stakeholders that might affect the project both positively and negatively and affected parties. Gender and social inclusion considerations will be undertaken throughout the project implementation to ensure that views of venerable groups are taken aboard. SEP has also provided a summary of the stakeholder's engagement related activities undertaken during the project.

Stakeholders for the Project have been identified in accordance with Kenyan Law and AFDB standards at failing in various levels as described into the following categories: At the national level stakeholders include the Ministries of Energy and Petroleum, Ministry of Environment, KPLC, EPRA, NEMA, KEBS, Ministry of Finance and other relevant Ministries and state departments. At the county level the project will target the department of Energy and Environment, County NEMA Office While at the community level, the affected parties will be the

marketers and suppliers of the appliances, users or buyers including Women, chefs of establishments that are targeted. Other groups may include saccos, women groups among others.

The engagement of various identified stakeholders will involve a few strategies which will include channels for information disclosure that have been provided in the SEP to ensure easy flow of information to stakeholders at all levels. Some of the channels for information disclosure will include public meetings, print, online, and electronic media among others. The documents will also be disclosed on the Kplc website. The AFDB will also disclose the documents at their website.

A comprehensive Grievance Redress Mechanism (GRM) has been provided in the SEP. The GRM provides a platform for Project Affected Persons (PAP) to lodge complaints or concerns, without costs and with assurance of a timely and satisfactory resolution of the issues.

SEP has provided an approach to risk management whereby all sensitive issues in relation to information on the project is managed. The project will provide all the information to stakeholders at all levels and ensure that all queries are responded to without delays. The implementation of the SEP will be monitored to ensure it effectiveness, quality and relevance.

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1 INTRODUCTION

1.1 Background

Kenya has set an ambitious target to achieve universal access to clean cooking by 2028, and one strategic avenue to attain this objective is to increase access to clean and efficient cooking solutions and thereby promote gender equity and reduce the reliance on traditional biomass (fuelwood and charcoal) for cooking. This approach also promotes environmental sustainability and improves health outcomes. The project supports investments in biogas and electric cooking technologies, alongside comprehensive awareness campaigns and capacity-building initiatives designed to foster behavioral change and encourage safe and sustainable cooking practices.

Cooking practices in Kenya are predominantly reliant on solid biomass fuels, with an estimated 67% of households depending on them. Firewood constitutes 55.1% of this usage, while charcoal accounts for 11.6%. Rural areas bear the highest concentration of biomass fuel users, representing approximately 84% of this demographic. In contrast, liquefied petroleum gas (LPG) is used by only 24% of the population, mainly in urban regions, with paraffin and charcoal each accounting for 17.7% of primary cooking fuel sources. The continuous use of wood fuel in traditional cookstoves is unsustainable, intensifying pressure on biomass resources, promoting deforestation, and escalating greenhouse gas (GHG) emissions. These emissions, in turn, exacerbate household air pollution (HAP), which contributes to premature mortality rates, especially among women and children.

The transition to electric cooking, therefore, has the potential to generate significant revenues for KPLC, while reducing costs for Kenyan households over the long term and driving major environmental and health improvement. The Kenyan Ministry of Health attributed 23,000 premature deaths in 2019 to IAP, with a much higher morbidity rate. Continued reliance on traditional biomass energy strains agricultural land in many Kenyan communities, leading to soil degradation, deforestation, and even desertification. Additionally, this reliance contributes to food insecurity. Women and girls also bear a disproportionate burden due to biomass cooking, facing increased exposure to cooking smoke and the challenges of fuel collection. This impacts their educational and economic opportunity

Kenya’s forests are vital for water catchment, carbon sequestration, and supplying essential resources like food, fuel, and medicine to nearly 80% of households within three kilometers of forest boundaries. Additionally, approximately 70% of urban and peri-urban residents depend on charcoal for their energy needs, contributing to high wood fuel demand that drives deforestation, land degradation, and watershed depletion. Forest cover in Kenya remains limited, at just 4.22 million hectares, or less than 10% of the total land area. Climate change intensifies these pressures, threatening biodiversity and diminishing forests' ability to provide essential ecosystem services. Drought compounds these challenges, heightening forest fire risks and encouraging deforestation for agriculture, livestock grazing, and charcoal production. The agricultural sector, a cornerstone of Kenya’s economy, faces similar environmental challenges. Climate change and degradation have led to reduced agricultural output, food insecurity, water scarcity, and unpredictable weather, deepening poverty in rural communities and accelerating rural-urban migration. Reducing the demand for fuelwood and charcoal is crucial to preserving the adaptation

benefits ecosystems offer local communities, including biodiversity, increased forest biomass, and improved seed abundance.

The Government of Kenya has set an ambitious target to achieve universal access to clean cooking by 2028, motivated by the pressing need to expedite the transition to cleaner cooking solutions and mitigate the adverse impacts of traditional fuel use. This goal aligns with Kenya's international commitments, including its Nationally Determined Contribution (NDC) under the UNFCCC Paris Agreement, the Sustainable Development Goals (SDGs), and the Sustainable Energy for All (SEforALL) initiative. Furthermore, it is integrated within Kenya's Vision 2030, a strategic blueprint aimed at transforming the nation into a newly industrializing, middle-income economy by 2030, thereby enhancing the quality of life for all Kenyans.

Kenya has achieved remarkable progress in electrification, increasing its coverage from 19% to 75% within a decade, with over 90% of grid electricity derived from renewable sources, including geothermal, hydro, wind, and solar. Key initiatives, such as the Last Mile Connectivity Project (LMCP) and the Kenya Electricity Expansion Project (KEEP), have been instrumental in rapidly expanding access by extending the grid into rural areas and intensifying grid connections within urban informal settlements. Despite these advancements, many of the newly connected consumers exhibit very low electricity demand, resulting in limited additional revenue for the utility and offering minimal practical benefits to the consumers themselves.

KPLC serves one of the largest customer bases among African electric utilities, having grown from 2.3 million customers in 2013 to over 9 million today. This extensive reach now provides more than three-quarters of the Kenyan population with grid-based electricity access. In 2022, renewable energy sources supplied approximately 87% of the electricity distributed through the grid, establishing KPLC as one of the world's greenest utilities with a low grid emission factor. This renewable energy foundation creates an advantageous platform for greenhouse gas abatement projects, supporting a shift from traditional cooking fuels to electric cooking powered by green electricity. Despite the considerable potential for electric cooking (eCooking) and interest from both government and private sector stakeholders, nationwide adoption of electricity as a primary cooking fuel remains low (~0.2%). While the rapid expansion in access has addressed the last-mile distribution challenge for electric cooking, obstacles remain regarding appliances, including supply chain limitations, price fluctuations, high upfront costs, and the lack of appliances customized for local cooking preferences.

ECooking is increasingly recognized and integrated into Kenya's national energy planning framework. Kenya recently published Africa's first National eCooking Strategy, aligning its clean cooking and electrification policies to support widespread adoption. The draft strategy proposes fiscal incentives, such as tax waivers on appliances and incentives for local production within Special Economic Zones (SEZs), to stimulate the eCooking market. The supply chain for energy-efficient eCooking appliances, particularly Electric Pressure Cookers (EPCs), is rapidly expanding across Kenya. EPCs are well-suited to Kenyan cuisine, offering up to 80% energy savings and reducing cooking time by 50%, particularly for energy-intensive dishes like beans and tripe. Over the past two years, EPC sales have seen considerable growth, alongside rising interest in other energy-efficient eCooking devices such as air fryers and induction stoves. Multiple Results-Based Financing (RBF) programs, including the Kenya Off-Grid Solar Access

Project (KOSAP) and the Modern Cooking Facility for Africa (MCFA), are actively supporting the uptake of eCooking appliances, fostering a transition towards cleaner and more efficient cooking methods in Kenya.

KPLC is dedicated to advancing consumer education on electric cooking (eCooking) in Kenya, emphasizing the value of partnerships with aligned organizations. Key funding partners in this initiative have included Modern Energy Cooking Services (MECS) and UK (Partnering for Accelerated Climate Transitions) PACT through Loughborough University. MECS has supported capacity-building initiatives by covering travel and accommodation costs for regional forums, including sessions in Rwanda and Ghana. UK PACT, in collaboration with Loughborough University, allocated 30 million Kenyan Shillings to support 12 eCooking-related projects in 2022/2023. These projects, most of which are now in the reporting phase, address critical areas of eCooking development, such as consumer awareness, appliance performance comparisons, feedback mechanisms, financing options, and outreach in urban informal settlements. Although KPLC has not directly received funding from additional agencies, it has actively participated in external capacity-building programs to further support eCooking adoption in Kenya.

The GoK has recognized the urgent need to address climate change, with a particular emphasis on prioritizing adaptation measures. This commitment is reflected in the increased emphasis on formulating comprehensive climate change policies, plans, and actions. Notably, Kenya has developed the National Program for Accelerated Forestry and Rangelands Restoration, the Kenya National Adaptation Plan (NAP) 2015-2030, and the National Climate Change Response Strategy (NCCRS), which proposes the establishment of a dedicated Climate Change Secretariat within the Ministry of Environment and Mineral Resources. Kenya's NAP, which is among the first in Africa and globally by a developing nation, aligns with the 2010 Constitution of Kenya and the Kenyan Vision 2030, emphasizing forest preservation and agriculture's pivotal role in national development for a sustainable future.

1.2 Project Overview

The Kenya Electric Cooking Market Development Initiative (KEMDI) is one the six (6) components of the Last Mile Connectivity 111 that is geared to scaling up the electric cooking (eCooking) market in Kenya, targeting an increase in users from 49,000 to 500,000 over the next three years. The financing is from the ADF-16 Climate Action Window (CAW) and aims at fostering eCooking uptake in peri-urban areas, thus enhancing the impacts of LMCP III. The CAW grant will support the total project cost of USD 4.4 million, including 68% in foreign currency and 32% in local currency.

1.3 Project Development Objective

The Kenya Electric Cooking Market Development Project ("The Project") aims to increase access to clean and efficient cooking solutions and thereby promote gender equity and reduce the reliance on traditional

biomass (fuelwood and charcoal) for cooking. This approach also promotes environmental sustainability and improves health outcomes. The project supports investments in biogas and electric cooking technologies, alongside comprehensive awareness campaigns and capacity-building initiatives designed to foster behavioral change and encourage safe and sustainable cooking practices.

Reducing unsustainable fuelwood harvesting is essential for ecosystem health, climate resilience, and household savings. By promoting clean cooking solutions, the project will help to preserve forests, reduce indoor pollution, greenhouse gas emissions, and health risks, and advance gender equity and socio-economic benefits. The outcomes will be measured and tracked through a results framework and a monitoring system.

Project Components

The Project is structured into three main components aligned with KPLC's objectives of promoting eCooking adoption, enhancing awareness, driving behavioral change in eCooking practices, and strengthening KPLC's capacity to implement large-scale electric cooking projects. The components are: i) Support for the growth of electric cooking appliances; ii) Awareness and capacity building; iii) Project Implementation

Component 1 – Support for the growth of eCooking appliances (USD 3.5 million): This component targets urban centers in Kenya with high urbanization, significant charcoal use and high levels of electricity connections. The project also targets high income households using liquefied petroleum gas (LPG) and some electric cooking appliances already. The overall objective is to make eCooking appliances more affordable and closer to the price of other modern cooking solutions such as LPG to increase adoption in both tiers. These appliances include energy-efficient electric pressure cookers (EPCs), induction stoves, and air fryers.

Sub-component 1.1 – Investment in eCooking appliances (USD 3 million): To achieve this, the component aims to facilitate the widespread adoption of clean cooking technologies by facilitating the deployment of up to 47,000 energy-efficient electric cooking (eCooking) appliances in Kenya's major urban centers namely Machakos, Kajiado and Kiambu. By addressing the critical barrier of high upfront costs, the initiative seeks to make eCooking appliances more accessible to urban households, enhancing energy efficiency and reducing reliance on traditional biomass fuels. This sub-component adopts a competitive procurement process to reduce the retail price of eCooking appliances, typically priced at up to USD 120, thereby enhancing their affordability and accessibility for a wider range of consumers. The project aims to reduce consumer costs by up to 50%, bringing high-quality, energy-efficient appliances within reach of more households. The end-user support embedded in this initiative ensures that urban consumers, often constrained by financial limitations, can transition to cleaner cooking solutions without undue economic strain.

Sub-component 1.2 – Encouraging adoption of eCooking with incentive mechanisms (USD 0.5 million): All KPLC customers who purchase eCooking devices under KEMDI will be registered, allowing the utility

to monitor their electricity usage. This registration will enable KPLC to implement an incentive mechanism designed to promote the adoption of eCooking appliances among grid-connected consumers. Through this automated system, KPLC will reward consumers based on their eCooking-related electricity consumption. Prepaid customers will receive additional electricity tokens, while postpaid customers will earn electricity credits proportional to their increased usage of eCooking appliances. KPLC has already piloted this innovative system, showcasing how utilities can effectively incentivize a transition to clean and efficient electric cooking solutions. By accelerating the adoption of eCooking technologies, this project aims to enhance energy efficiency and reduce reliance on traditional cooking methods, contributing to improved environmental and health outcomes.

Component 2 – Awareness raising and Capacity Building (USD 0.7 million): Awareness programs are essential to educate consumers and communities about the benefits of electric cooking and help dispel myths and misconceptions about electric cooking, addressing concerns related to affordability and reliability. Through increased awareness, KPLC can encourage more households to adopt electric cooking technologies, thereby increasing the overall demand for electricity and supporting its growth. Capacity building will contribute to the sustainability and viability of the KEMDI, by building the capacity of consumers to make the most out of their electric cooking appliances, optimizing energy efficiency and reducing operational costs.

Sub-component 2.1 – Awareness campaigns (USD 0.6 million): Promotion of KEMDI is required to ensure high adoption rates. These awareness programs will be led by KPLC and implemented through on-the ground demonstrations, online marketing campaigns, local radio, television and print media. These campaigns will be implemented jointly by KPLC staff and suppliers.

Sub-component 2.2 – Capacity building (USD 0.1 million): Trainings will be conducted on best practices on clean cooking appliances, carbon markets, and effective stakeholder engagement. These training sessions will be conducted for KPLC representatives, the eCooking committee, and the project management unit. The training will consist of field demonstrations and workshops. All training materials will be shared with KPLC's executive management.

Component 3 – Project Management (USD 0.2 million): This component will cover KEMDI administration costs. KPLC will designate a Project Lead responsible for overseeing day-to-day project activities. The Project Lead will integrate into existing LMCP III Project Implementation Team (PIT), comprising a (i) Coordinator, (ii) Electrical Engineer, (iii) an Accountant, (iv) a Procurement Specialist, (v) an Environmental Safeguards Officer, (vi) a Social Officer, (vii) Gender Expert, and (viii) Monitoring and Evaluation Officer. Additionally, the KEMDI Project Lead will receive support from KPLC's eCooking committee, ensuring comprehensive oversight and coordination of project activities.

1.4 Project scope

The project aims to reach up to 47,000 households across three counties—Kajiado, Kiambu, and Machakos—where KPLC has already initiated eCooking marketing efforts. Following the model of the

eCooking Demonstration Centre at Electricity House in Nairobi, KPLC recently launched regional demonstration centers in Mombasa, Nakuru, and Kisumu. These urban hubs represent a substantial addressable market with extensive urban and peri-urban populations connected to stable grid infrastructure capable of supporting increased demand.

KPLC stands to gain additional revenue from increased electricity sales while enhancing its capacity to implement eCooking demand stimulation initiatives. Appliance distributors are expected to benefit through higher sales volumes, strengthened partnerships with KPLC, and financial support for expanding their supply chains. Additionally, household cooks, primarily women, will experience reduced labor and health improvements due to decreased indoor air pollution.

The KEMDI has opted for electric cooking appliances, which offer substantial advantages compared to other clean cooking technologies like LPG and improved cookstoves. These advantages encompass environmental sustainability, the absence of indoor air pollution, consistent cooking performance, enhanced safety, convenience, and adaptability. Electric cooking also presents the opportunity to harness renewable energy sources, involves minimal maintenance, and reduces reliance on traditional fuels, making it a cleaner, more dependable, and user-friendly choice that benefits both the environment and the well-being of households and communities.

1.5 eCooking and its Benefits

This project will support a transition from low-efficiency baseline stoves to cleaner, higher-efficiency improved stoves. It is designed to target interventions that include the rollout of improved cooking technologies such as electric cooking appliances, alongside robust consumer awareness and training initiatives. These measures aim to promote cleaner cooking practices, reduce tree cutting, and alleviate pressures on Kenya's forests. By decreasing the demand for wood fuel, these interventions will accelerate natural forest regeneration, enhance biodiversity protection, and preserve vital ecosystem services.

Transitioning households from traditional biomass cookstoves to electric cooking solutions under the project offers a host of climate and development benefits. This transition curtails deforestation, conserves forest ecosystems, and enhances indoor air quality and public health, particularly for women and children, by eliminating harmful emissions from biomass burning. Furthermore, the energy efficiency of these appliances fosters economic opportunities by freeing time for income-generating activities, contributing to household stability and Kenya's broader climate adaptation and green growth agenda. These targeted interventions align with Kenya's commitment to sustainable development while addressing climate vulnerability and promoting inclusive economic progress.

To accomplish this objective, cleaner household cooking appliances and fuels will be promoted. However, the pilot project is focusing on the provision of electric pressure cooker in four counties namely, Kajiado, Machakos and Kiambu. The electric pressure cooker (EPC) uses electricity to quickly cook food under pressure. By sealing in steam, it raises the boiling point of the water inside, allowing food to cook more quickly at a higher temperature. This is currently an appliance that uses the least cost and time to cook most of the local foods. EPCs are equipped with features such as adjustable pressure levels, multiple

cooking modes (e.g., sauté, steam, slow cook), and programmable timers, which can be beneficial for cooking Kenyan cuisine.

EPCs are becoming increasingly popular in Kenya as more households are becoming aware of them, and their availability in retail outlets has expanded. EPCs available in Kenya typically have a capacity range of four to eight liters. The most expensive brands of EPCs include Moulinex, Sayona, Von, Tefal and Nutricook, while more affordable brands include Dessini, TLAC, and Lyons. The initial investment in an EPC can be offset by potential savings on cooking time, energy usage, and fuel costs.

E-cooking technologies offers numerous advantages, ranging from energy efficiency and environmental sustainability to convenience and versatility in the kitchen. These modern appliances often consume less energy compared to traditional cooking methods, helping households save on fuel costs while reducing their carbon footprint. Additionally, e-cooking technologies enable precise temperature control, faster cooking times, and cleaner cooking environments, enhancing the overall cooking experience. There is a wide variety of e-cooking technologies available in the Kenyan market. These products range from task-specific, like an electric kettle that solely heats water, to the more versatile, like induction cookers, which can simmer, boil, fry, and sauté.

A standout feature of Electric Pressure cooker is their ability to cook food faster compared to traditional cooking methods. This is achieved through insulation, high temperature, and pressure, which significantly accelerates the cooking process while reducing heat loss. EPCs use about one-fifth of the energy of a hotplate to cook over 90% of foods. EPC capacity ranges from 2 liters (L) to 20L, while models most used in the household range between 4L to 10L.

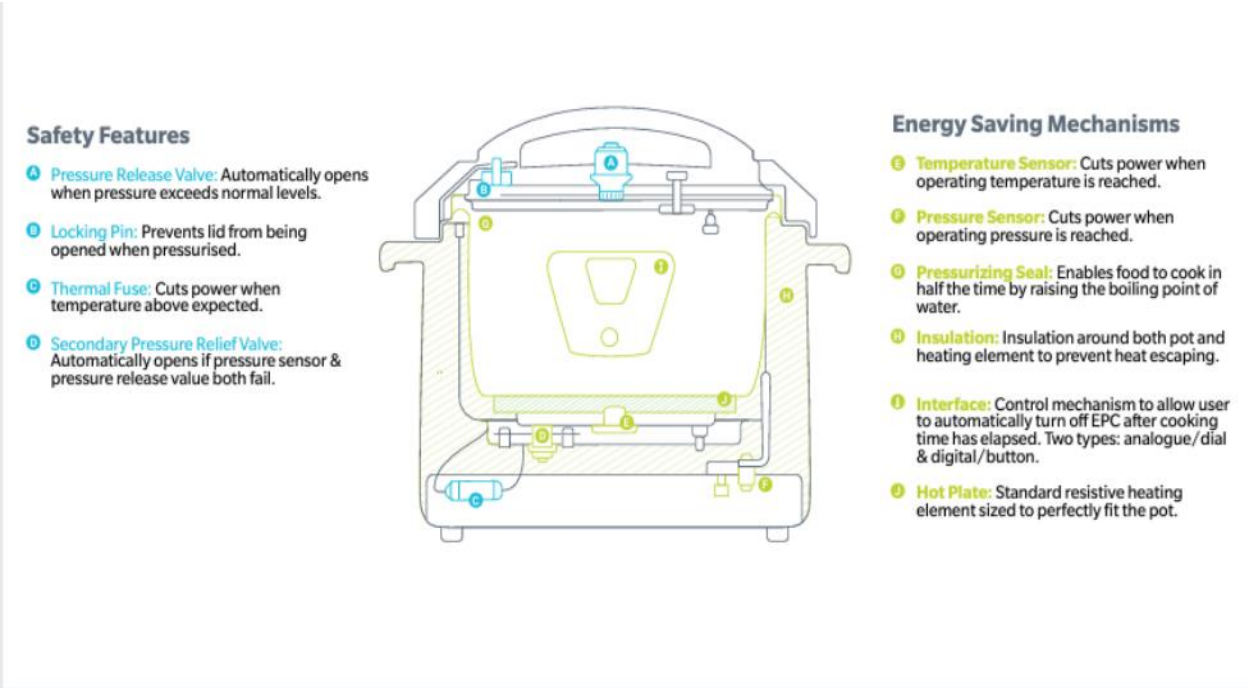


Figure 1: KEY SAFETY AND ENERGY SAVING MECHANISMS OF AN ELECTRIC PRESSUR E -COOKER

Electric cooking (e-cooking) has many benefits, including improved health, reduced environmental impact, and energy savings.

1) An opportunity for low carbon development pathway in Kenya
2) Improved cookstoves does not offer adequate solution to the health and environmental concerns of biomass and as such the EPC is a good alternative
3) LPG is increasingly becoming unsafe and expensive
4) E-cooking doesn't produce smoke, which can improve the health of cooks
5) Preserves nutrients: Using lower temperatures retains vitamins, minerals, and antioxidants in food
6) Promotes gut health: Techniques like fermenting and pickling introduce probiotics, which are good for gut health
7) Reduced environmental degradation: E-cooking can be a viable alternative to biomass cooking, which can contribute to deforestation and climate change
8) Reduced air pollution exposures: E-cooking can reduce exposure to air pollution
9) Energy saving e-cooking can save money on energy costs
10) Most of the environmental and social risks will be mitigated through the development of a comprehensive environmental and social management plan with feasible and practical mitigation and management measures.

2.0 Legislative and Policy Requirements

Kenyan Policies and Legislation policy and Institutional Framework

This Stakeholder Engagement Framework considers the existing national regulatory framework as well as the AfDB policies. The public consultation and stakeholder engagement activities in this SEP will conform with both National and International Legal Instruments as described below.

Table 1: Kenya Policies and Legislation

2.1 Kenya Policies and Legislation Policy, Legal & Institutional Framework	Relevance	Application to Program Activities
Article 1 (2) of Constitution of Kenya, 2010	All sovereign power belongs to the people of Kenya. People may exercise their sovereignty directly or through their elected representatives	KPLC will adhere to the Constitutional requirements of public participation in all its interventions by ensuring that the public have access to project information in a culturally appropriate way, feedback to the public is responded to in a timely manner, any concerns or grievances are addressed and ensure that targeted beneficiaries, have equitable access to program benefits and opportunities while ensuring inclusion of the vulnerable individuals and groups and are effectively consulted on program interventions.
Article 10(2) a, b and c	The national values and principles of governance include democracy and participation of the people; inclusiveness; good governance; integrity; transparency and accountability	
Article 27	The Constitution guarantees equality and non-discrimination. Hence, public participation should ensure equality and non-discrimination	

Article 33	Public participation should respect the freedom of expression of all participants	
Article 35	The Constitution guarantees the right to access information by citizens	
Article 174 (c)	Objects of devolution are; to give powers of self-governance to the people and enhance their participation in the exercise of such powers in decision making	
Article 174 (d)	Communities have the right to manage their own affairs and to further their development	
Article 184 (1)	National legislation shall provide for the governance and management of urban areas and cities and shall provide for the participation of residents in the governance of urban areas and cities	
Article 232 (1) (d)	The values and principles of public service include the involvement of the people in the process of policy making and (f) transparency and provision to the public of timely and accurate information	

	urban areas and cities. The second schedule of the act provides for the rights for, and participation by residents in affairs of their city or urban areas	

The Public Participation Policy, 2023	The GoK has developed this Public Participation Policy as the country's overarching framework for public participation. In this policy, public participation is conceptualized as the process by which citizens, as individuals, groups, or communities (also known as stakeholders), take part in the conduct of public affairs, interact with the state and other non- state actors to influence decisions, policies, programs, legislation and provide oversight in service delivery, development and other matters concerning their governance and public interest, either directly or through freely chosen representatives. The main objective of the policy is to provide the framework for the management and coordination of public participation in Kenya for the fulfilment of the constitutional requirement on citizen engagement in development and governance processes in the country. Public bodies in Kenya will comply with this policy as a constitutional requirement	The SEP developed for KPLC is to provide the framework for the management and coordination of public participation in the engagements for the fulfilment of the Constitutional requirement of stakeholder engagement in its processes. KEMDI will comply with this policy requirement.
Access to Information Act, 2016	It allows citizens to seek information "… required for the exercise or protection of any right or fundamental freedom…" The duty to provide such information is borne by the state, public bodies and private bodies which should include those seeking to implement development projects. The Act prohibits the charging of fees for provision of information except for the cost of making copies and, only where necessary	Program information will be shared and disclosed in line with the provisions of this Act.

2.2 AFDB Safeguard Requirements.

The African Development Bank (AfDB) has established guidelines and requirements for stakeholder consultation, participation, and disclosure to ensure that its projects are implemented in a socially responsible and transparent manner. Environmental and Social Operational Safeguard 1 on Environmental and Social Assessment: States that the borrower or client shall be responsible for carrying out and providing evidence of meaningful consultation (i.e. consultation that is free, prior and informed) with communities likely to be affected by environmental and social impacts, and with other

local stakeholders. The key focus of meaningful consultation is inclusivity; namely, the approach taken needs to ensure that all groups (including those that are disadvantaged or vulnerable) are embraced within the consultation process on equal terms, and that all groups are given the capacity to express their views with the knowledge that these views will be properly considered.

OS 10 also states that the borrower shall be responsible for ensuring the satisfaction of broad community support. The Bank requires that stakeholder engagement starts at an early stage during project preparation and that it should continue throughout. The results of such engagement should be adequately reflected in project design, as well as in the preparation of project documentation. In all cases, consultation should be carried out after, or in conjunction with, the release of environmental and social information.

Once all stakeholders are identified, the borrower should develop and implement a Stakeholder Engagement Plan (SEP) that is proportionate to the project risks, impacts and development stage, and that is tailored to the characteristics and interests of the affected communities.

The SEP will describe measures to allow the effective consultation and participation of all affected communities, a description of any consultations that have already taken place, and a definition of the reporting procedures. A Grievance Mechanism should also be developed by the borrower, and it will detail the procedures that a project will establish for managing complaints and grievances.

The Borrower will disclose project information to allow stakeholders to understand the risks and impacts of the project, and potential opportunities. The Borrower will provide stakeholders with access to the following information, as early as possible before the Bank proceeds to project appraisal, and in a timeframe that enables meaningful consultations with stakeholders on project design:

a) The purpose, nature and scale of the project.
b) The duration of proposed project activities.
c) Potential risks and impacts of the project on local communities, and the proposals for mitigating these, highlighting potential risks and impacts that might disproportionately affect vulnerable and disadvantaged groups and describing the differentiated measures taken to avoid and minimize these.
d) The proposed stakeholder engagement process highlighting the ways in which stakeholders can participate.
e) The location where the disclosed information is available for review;
f) The time and venue of any proposed public consultation meetings, and the process by which meetings will be notified, summarized, and reported; and
g) The process and means by which grievances can be raised and will be addressed.

3.0 Objectives of Stakeholder Engagement Plan

The SEP seeks to define a technically and culturally appropriate approach to consultation and disclosure. The goal of this SEP is to improve and facilitate decision making and create an atmosphere of understanding that actively involves project-affected people and other stakeholders in a timely manner, and that these groups are provided with sufficient opportunity to voice their opinions and concerns that may influence Project decisions. The SEP is a useful tool for managing communications between KPLC and their stakeholders.
The Key Objectives of the SEP can be summarized as follows:

- Identify key stakeholders that are affected, and/or able to influence the Project and its activities.
- Provide timely and appropriate information prior to and during construction to enable informed participation in the project and definition of appropriate mitigation measures
- Disclose the impacts of the project and proposed mitigation measures
- Facilitate open and continuous communication and consultation between various groups including construction contractors, stakeholders, and the general public
- Establish formal grievance/resolution mechanisms.
- Provide guidance for stakeholder engagement such that it meets the standards of International Best Practice.

The overall objective of this SEP is to define a program for stakeholder engagement, including public information disclosure and consultation throughout the entire project cycle. The SEP outlines the ways in which the Kenya Power Lighting Company will communicate with stakeholders and includes a mechanism by which people can raise concerns, provide feedback, or make complaints about the project and any activities related to the project. The SEP specifically emphasizes methods to engage groups considered most vulnerable and that are at risk of being left out of project benefits.

The SEPs will be live documents and will be amended to ensure consultation is conducted, always, in a comprehensive, independent and transparent manner.

4.0 Project Environmental and Social Safeguards Issues that require Stakeholders engagement

4.1.1 Environmental

The implementation of CAW-financed activities shall adhere to the Bank's Integrated Safeguards System (ISS) compliance requirements as outlined in the PAR.

Electric cooking appliances produce no indoor air pollutants, thereby enhancing indoor air quality and diminishing health hazards. By decreasing reliance on biomass fuels for cooking, the project assists communities in adapting to potential scarcities of biomass resources resulting from shifting climate conditions or deforestation. The project also yields other environmental and social benefits, including a reduction in carbon emissions, diminished unsustainable wood harvesting, time savings for women, and reduced cooking costs for households.

The standard household connections already installed by KPLC have the necessary capacity to

support energy- efficient cooking appliances, and the transmission/distribution system developed through the LMCP III and other projects can accommodate the widespread adoption of eCooking in most parts of the country. However, in specific instances, some households may require wiring upgrades to safely support eCooking beyond the meter. Therefore, a mechanism for assessing and, if necessary, upgrading household wiring for customers obtaining new eCooking appliances will be integrated into this program. In the future, when these appliances reach the end of their 5-10 year lifespan, some components like pots, heating elements, and lids can be reused. Efforts are also underway to establish sustainable and accessible eWaste recycling and disposal systems in Kenya. It's worth noting that most appliances sold under this program will be simple alternating current (AC) appliances without battery storage, simplifying the disposal process.

4.1.2 Involuntary Resettlement

There are no physical or economic displacements by the Program as the project activities will be implemented within the context of individual households.

4.2 Social Safeguards

4.2.1 Climate Change and Green Growth Rationale

Kenya, situated in the vulnerable Greater Horn of Africa region, grapples with the impacts of climate change, aggravated by its extensive arid and semi-arid landmass and inadequate infrastructure. The 2021 Global Climate Risk Index for climate vulnerability and highly sensitive countries to climate change ranked Kenya 25/180. Droughts and floods, major climate hazards, incur significant economic losses, estimated at 3% of GDP, making livelihoods and economic activities highly susceptible to climate fluctuations. Forests serve as crucial carbon sinks, mitigating climate change by absorbing carbon dioxide and storing it as biomass and in forest soils. Recognized as invaluable national assets, forests in Kenya offer economic, environmental, social, and cultural benefits. They also form the cornerstone of the tourism sector, providing habitats for wildlife and grazing areas during dry seasons, crucial for supporting wildlife populations.

The objective of the Program is to reduce reliance on unsustainable fuelwood and charcoal for cooking, acknowledging their contribution to deforestation and the resulting negative effects on ecosystems and livelihoods. As wood fuel remains the main energy source for households and small enterprises, deforestation disrupts ecosystems, leading to changes in rainfall patterns, a drier climate, species loss, and reduced well-being for communities reliant on forests. Moreover, deforestation undermines forests' ability to sequester carbon naturally, worsening climate change impacts.

Specific activities to support this community-focused adaptation and resilience are the provision of improved cooking technologies, including electric cooking appliances; and providing awareness and training to consumers. This project aims to integrate clean cooking practices into communities by reducing tree cutting and fuelwood collection, thereby promoting sustainable adaptation strategies. By encouraging households to adopt cleaner cookstoves that consume less fuel, clean cooking solutions will alleviate pressure on forests, preserving biodiversity and vital ecosystem services such as carbon sequestration, water regulation, and soil conservation. This reduction in wood fuel demand not only protects species habitats but also facilitates natural forest regeneration processes like tree growth, seed dispersal, and germination, leading to faster ecosystem recovery. Ultimately,

promoting sustainable cooking practices contributes to the overall well-being of the environment and its inhabitants.

Transitioning Kenyan households from traditional biomass cookstoves to electric pressure cookers through the KEMDI offers several climate adaptation benefits. By reducing the demand for traditional biomass fuels like firewood and crop residues, this transition contributes to reduced deforestation, preserving forests critical for climate resilience. Furthermore, electric pressure cookers produce no indoor air pollution, improving indoor air quality and public health, especially for women and children. This health improvement enhances resilience in the face of changing climate conditions. Additionally, electric pressure cookers are more energy-efficient, reducing energy waste and greenhouse gas emissions, aligning with climate adaptation goals. Diversifying energy sources by incorporating electricity into household energy use makes households more resilient to fuel-related supply chain shocks. It also enhances household efficiency, freeing up time for income-generating activities, contributing to economic stability and climate resilience. Lastly, improved cooking efficiency with electric pressure cookers can reduce food preparation time and potentially minimize food waste, contributing to food security

4.2.2 Poverty reduction, Inclusiveness and Job Creation

Electric cooking used to be a privilege for urban elites, but technological advancements and innovative business models have democratized eCooking for middle income consumers. Grid densification has extended electricity access into informal settlements, almost achieving universal coverage in urban areas. Continuous investments in generation, transmission, and distribution infrastructure have improved supply reliability. Additionally, energy- efficient eCooking appliances have significantly reduced electricity consumption, making the cost of cooking with electricity competitive or even more affordable than other popular cooking fuels. Despite these advantages, the upfront cost of these appliances remains a hurdle for low- and middle-income consumers. To address this challenge, various private sector companies have introduced creative consumer financing models, including PayGo and collaborations with women's savings groups. These models allow customers to pay for the appliance gradually using the savings they accrue from reduced cooking fuel expenses, making eCooking accessible to a broader range of income groups.

Several companies have recently initiated production and assembly of eCooking appliances in Kenya, signifying the strong potential to localize the appliance value chain within the country. This aligns with Kenya's Vision 2030 goal of becoming a regional hub for manufacturing and innovation. Notably, this development is expected to generate significant employment opportunities in sales, marketing, and after-sales services for eCooking appliances. However, the widespread adoption of eCooking may lead to the displacement of jobs within the charcoal value chain. While some jobs can be transitioned more easily, such as retraining ICS (improved cookstove) sales agents to become appliance distributors, charcoal production serves as a vital source of livelihood for rural households.

4.2.3 Opportunities for Building Resilience

According to the 2020 Kenya Country Resilience and Fragility Assessment (CRFA), Kenya is

vulnerable to the effects of climate change and environmental degradation which cost its economy approximately 2.6% of GDP, annually. Flash floods, drought, land degradation and locust infestation were among the notable shocks in 2020, with implications on poverty alleviation and food security. Kenya's normative framework for building resilience to climate change is robust. Effective implementation of its National Adaptation Plan, and Green Economy Strategy and Implementation Plan are critical for protecting lives and livelihoods and preserving the environment for present and future generations.

The distribution of electric cooking appliances can support economic resilience by reducing households' dependence on expensive cooking fuels like charcoal or kerosene. Through subsidizing the initial costs of these devices, the project enhances the affordability of electric cooking, thus fostering household savings and contributing to economic stability. Simultaneously, the reduction in indoor air pollution, a direct outcome of electric cooking, promotes environmental resilience by mitigating health risks linked to poor indoor air quality. This can potentially lead to reduced healthcare expenses and an overall improvement in community well-being. The positive impact on health further lessens the burden on the healthcare system, reinforcing societal resilience.

Additionally, electric cooking appliances exhibit greater reliability making households more resilient to fuel supply disruptions brought about by extreme weather events like storms or flooding. This heightened energy security fortifies resilience against climate-related risks. Furthermore, the inclusion of awareness campaigns and capacity- building initiatives equips communities with valuable insights into the advantages of electric cooking. Informed communities are better prepared to adopt new technologies and practices, nurturing social cohesion and augmenting resilience within the community fabric.

4.2.4 Gender Equality and Women's Empowerment Promotion

Women are often the primary cooks in households, bear the greatest burden when using polluting fuels for cooking. Adopting modern energy-efficient appliances has the potential to improve women's health outcomes by reducing indoor air pollution and alleviating the physical strain of fuel collection, preparation, fire management, and slow cooking. Automated appliances like the EPC not only shorten cooking times but also enable multitasking, granting women more leisure, educational, or productive opportunities and enhancing their freedom. Modelling indicates that if 40% of Kenya's charcoal users switched to eCooking, it could save 191 million hours of women's time annually, equivalent to 272 hours per cook per year.

Gender integration is a core component of the program across its three facets. The KEMDI actively promotes the empowerment of women throughout the value chain, involving them as changemakers, not just passive beneficiaries. Gender balance and female leadership will be prioritized from the pre-feasibility study to project implementation, including the selection of companies for the Results-Based Financing (RBF) program. Local companies will prioritize gender-responsive business models, such as Bidhaa Sasa, collaborating directly with women's savings groups to showcase and support innovative products relevant to rural women. Burn Manufacturing, for instance, boasts a workforce in their modern cookstove factory that is over 50% female, further advancing gender inclusivity.

5.0 Stakeholder Identification

5.1 Stakeholder preliminary and Mapping

A robust process of stakeholder identification and analysis, involving an assessment of different groups and interests in the community, is essential to determine potential supporters and partners, as well as those who may oppose the project. Further, developers may wish to consider consulting women separately, as they may have unique knowledge clean cooking, as well as an understanding of their rights.

It is highly recommended to create a database of stakeholders with contact information of specific individuals and office holders. Leaders should include descriptions of the section or sub-section of the community that they represent. Where possible, document the spatial extent of a community leader's jurisdiction. Ensure that the database is regularly updated with any new stakeholders, individuals, contact information, etc. All stakeholders in the database should also be disaggregated by gender.

This section of the document identifies the interested parties (i.e. stakeholders and others affected) at local and county stakeholders could also be individuals and organizations that may be directly or indirectly affected by the project either in a positive or negative way, who wish to express their views.

To develop an effective SEP, it is necessary to determine who the stakeholders are and understand their needs and expectations for engagement, and their priorities and objectives in relation to the Project. This information is then used to tailor engagement to each type of stakeholder. As part of this process, it is particularly important to identify individuals and groups who may find it more difficult to participate and those who may be differentially or disproportionately affected by the project because of their marginalized or vulnerable status.

All the stakeholders identified will be presented in the table below in a culturally appropriate format. It involves interactions between identified groups of people and provides stakeholders with an opportunity to raise their concerns and opinions and ensure that this information is taken into consideration when making project decisions.

The direct beneficiaries of KEMDI include various stakeholders. KPLC stands to gain additional revenue from increased electricity unit sales, and they will also boost their capacity for executing eCooking demand stimulation programs. Appliance distribution companies are expected to benefit through additional sales, fostering stronger working relationships with KPLC, and receiving financial support to expand their supply chain. Meanwhile, cooks in participating households, primarily women, will experience reduced drudgery and improved health due to a reduction in indoor air pollution

5.2 Categorization of Stakeholders

Table 2:Categorization of Stakeholders

Stakeholder	Role	Level of interest	Level of Impact	Level of Influence
National Level				
EPRA	Setting off the Electricity tariff Recognizes electricity use more generally but no specificity one cooking yet – current electricity tariff structure not designed around e Cooking	Medium	Medium	Moderate
MOEP	To scale up solar home systems, Mini grids and clean cooking as a way of enhancing socioeconomic development of the community Set up programs that support e- cooking	High	High	High
KPLC/ REREC	Quality and reliability of electricity Support program in dissemination of benefits of e cooking	High	High	High
Ministry of Environment	Reducing health risks Support in the carbon credits Markets	High	High	High
Ministry of Planning and Finance	Ease tax refunds	Low	High	Low
Private Sectors Suppliers	Provision of the EPC	High	High	High
KEBS	To ensure quality products are available.	HighI	High	High
NEMA	To guide on the disposal of the used Appliances	High	High	High
Regional Level/County level				
County Commissioner	Support program in dissemination of benefits of e cooking	High	medium	medium
County Department Energy and Environment	Support program in dissemination of benefits of e cooking	High	High	High
Local Level				
Project Beneficiaries including Targeted Buyers Women Groups, Saccos, church groups, etc	Understand the usage EPC To purchase and promote the use of the EPC	High	High	High

6.0 Stakeholder Engagement Strategy

6.1 Project Design and SEP preparation Phase

Public consultation is a regulatory requirement by EMCA 1999 (EIA/EA Regulations 2015) and donors 'safeguards for new projects by which the public's input on matters affecting them is sought regarding the project. Its main objectives are improving efficiency, transparency and public involvement in the proposed projects that enhances the compliance of the environmental laws and policies regarding the implementation of the projects. A key factor that exists in all successful project development and implementation is meaningful participation by all stakeholders.

The more active involvement of the local level people in the planning and management processes, the greater the likelihood that resource use and protection problems will be resolved as well as the likelihood of development opportunities occurring in a balanced manner that benefit most communities affected by the project. As per the National and AfDB requirements, the borrower or client is responsible for conducting and providing evidence of meaningful consultation (i.e., consultation that is free, prior and informed) with communities likely to be affected by environmental and social impacts, and with local stakeholders, and also for ensuring broad community support.

Kenya Power will undertake its consultation with reference to the updated AfDB IESIA Guidance Notes on consultation, participation and broad community support, which also provide guidance on affected communities' involvement in the process of project planning, implementation and monitoring. Consultation is based on stakeholder analysis and is preceded by disclosure of adequate project information and environmental and social information to ensure that participants are fully informed. This process will begin at an early stage during project preparation and continues as needed. It will be conducted in a timely manner in the context of key project preparation steps, in an appropriate language, and in an accessible place. The results of the consultation will be adequately reflected in the project design and in the project documentation.

Specifically, the objectives of public participation included:

Documentation of stakeholders' opinions/views and concerns on the Project.

Obtaining local and traditional knowledge that may be useful for Project planning and implementation.

Seeking acceptability of Project alternatives, mitigation measures and trade-offs.

Ensuring that important impacts are not overlooked, and that benefits are optimised.

Minimizing possible future conflict through the early identification of contentious issues.

Providing an opportunity for the public to influence the designs and implementation in a positive manner; Improving transparency and accountability in decision-making.

Increasing public confidence in the Project.

In terms of participatory processes, the development of KEMDI came through an ongoing dialogue between the Bank and KPLC. In October 2022, initial discussions took place at the Clean Cooking Forum

in Accra in 2022, which lead to a series of preparation missions held in Nairobi with KPLC and other stakeholders. Subsequently, the AfDB met with KPLC during an identification mission in June 2023 to discuss the potential to include an electric cooking (eCooking) component as part of Kenya's Last Mile Connectivity Project Phase III, which was approved by the AfDB's Board of Directors in late 2023, and references envisaged support for eCooking during 2024 (subject to availability of financing from the Climate Action Window).

During appraisal, the Bank ran a more in-depth participatory process where the detailed objectives of the project was shared with the Ministry of Energy and Petroleum and other stakeholders in the clean cooking community.

Kenya Power and it partners have undertaken stakeholder engagement forums in Nairobi, Kajiado, Nyeri, Muranga and Kisumu. One of the engagement was carried out by CLASP engaged by African Development Bank to conduct 11 in -depth consultations with Kenyan e-cooking market stakeholders with wide range of market players, from industry leaders, to donor organizations ,technical experts and KPLC representatives. Key findings were that there is strong political will in Kenya to advance the e-cooking market, Existing e-cooking technologies are appropriate for the Kenya market and are increasingly, EPCs and induction stoves are the most impactful e-cooking technologies, Internet of Things (IoT)-enabled EPC products are increasingly common and the number of e-cooking suppliers and distributors active in the market has increased.

Despite recent growth, many stakeholders identified a similar set of barriers to market growth, including: upfront and operational costs of e-cooking products, with the latter driven by current electricity tariffs, cost of customer acquisition, power quality in rural settings, maintenance & and repairability service limitations, lack of standardization with e-cooking technology categories; and absence of financing that is required to lower prices and enable long-term growth. A detailed report of the stakeholder report together with the list of attendance is attached in the Annex,

Further Kplc has continued to carry out engagement with various stakeholders including targeted markets through the Pika na Power Mobile Kitchen at Nyeri Golf Club, Local Markets in Mukuyu and Maragwa in Maranga County, Kisumu Town and its enviros and during the cleaning cooking week in Kajiado County. This is supported by partners who showcase the appliances and can answer questions related thereof. Observations from these forums though most of the people who came revealed that they had been connected they still used firewood to cook. They did not have the capacity to buy eCooking appliances but were willing to do so through the women Chamas; There were a few villages that only accommodated women from abused marriages and these were very needy and willing to transition to any-cooking method that would save them money and time.

Other findings were that the myth that cooking with electricity is expensive is real and customers need to experience to believe. The middle class is quick to adopt to eCooking once the message is received and the satisfaction level is high. Therefore, there is need for awareness creation for all sectors of the community in the country. Reports of the stakeholders are attached herewith in the Annex.

6:2 Project Implementation and Operation Phase

Below table presents the scope and duration of planned stakeholder engagement initiatives

Table 3: Stakeholder engagement program

Stakeholder Engagement theme	Stakeholders Involved	Responsible party	Duration of Initiatives	Frequency of structured meeting/ consultation
Sharing project safeguard documents –	Representatives from, government agencies, KPLC, vulnerable/indigenous groups, PAPs, suppliers	KPLC PIT Coordinator / ESHS	Pre- launch	Once
Sensitization of the eCooking appliances		KPLC PIT Coordinator	Pre- launch	Once
Health Safety	Targeted market	KPLC PIT Coordinator ESHS Electrical Engineer	Pre- launch	Once
Corporate Communication Programs	All stakeholders	KPLC PIT Coordinator	During use of the eCooking appliances	Half-yearly
ESHS sensitization and awareness	Buyers, General public	KPLC PIT Coordinator ESHS	During use of the eCooking appliances	Biannual
Post Purchase concerns/complaints	Buyers, General public	KPLC PIT Coordinator	Operations	Anytime

7.0 Information Disclosure

KPLC will convene meetings with all stakeholders to consult on project safeguard instruments. the consultations is to be carried out with various stakeholders' including different state ministries, Counties, both NGOs and other interested agencies. There are a variety of engagement techniques and methods used to build relationships, gather information, consult and disseminate project information to stakeholders. When selecting an appropriate consultation technique, culturally appropriate consultation methods, and the purpose for engaging with a stakeholder group should be considered. The table below

provides a list of different methods to disseminate information on the project and describes the application of these methods mostly used in this project.

Table 4:Methods and techniques for information dissemination

Engagement Technique	Appropriate application of the technique
Correspondances (Phone, Emails/ text / instant message)	● Distribute project information to Government officials, NGOs, UN Agencies, Local Government, and organizations/agencies ● Invite and inform stakeholders about consultation meetings and follow-up meetings
One-on-one interviews/meetings	● Seeking and soliciting views and opinions from stakeholders ● Enable stakeholders to speak freely about sensitive issues ● Build personal relationships with various stakeholders ● Record interviews/meetings
Formal meetings	● Present the Project information to a group of stakeholders ● Allow group to comment – opinions and views ● Build impersonal relation with high level stakeholders ● Disseminate technical information ● Record discussion, comments/questions raised and responses
Public meetings	● Present project information to a large audience of stakeholders or to a particular community using either PowerPoint presentations, posters, video or project information documents, oral presentations ● Allow the group to provide their views and opinions ● Build relationship with the communities, especially those impacted ● Distribute non-technical information ● Facilitate meetings with presentations, PowerPoint, posters etc. ● Record discussions, comments, questions raised and responses
Focus group meetings	● Present Project information to a group of stakeholders ● Allow stakeholders to provide their views on targeted baseline information ● Build relationships with communities ● Record responses
Project leaflet	● Brief project information to provide regular updates ● Site specific project information.
Roundtable discussions	● Use prepared questions or gather preliminary questions to facilitate group discussions ● Each person is given equal right to participate ● Record responses
Workshops	● Present project information to a group of stakeholders ● Use participatory exercises to facilitate group discussions, brainstorm issues, analyses information, and develop recommendations and strategies ● Record responses

Table 5:Stakeholder engagement methods and timings

S/NO	Stakeholder	Engagement Methods	Timings
1	Project Beneficiaries	● Correspondence by phone/email/Text/Instant message ● Interviews ● Print media ● Radio and television ● Website and social media ● Public meetings ● Workshops ● Survey ● Grievance Redress ● Site visits	● Implementation Phase ● Monitoring and Evaluation Phase ● Operation phase
2	County Governments	● Correspondence by phone/email/Text/Instant message ● One-on-one interviews ● Formal meetings ● Roundtable discussions	● Design Phase ● Implementation Phase ● Monitoring and Evaluation Phase
3	Ministry of Energy	● Correspondence by phone/email/Text/Instant message ● One-on-one interviews ● Formal meetings ● Roundtable discussions	● Design Phase ● Implementation Phase ● Monitoring and Evaluation Phase ● operation phase
4	Supplier	● Correspondence by phone/email/Text/Instant message ● One-on-one interviews ● Formal meetings ● Roundtable discussions ● Site visits	● Design Phase ● Implementation Phase ● Monitoring and Evaluation Phase
5	Targeted buyers	● Correspondence by phone/email/Text/Instant message ● Interviews ● Print media ● Radio and television ● Website and social media ● Public meetings ● Workshops ● Survey ● Grievance Redress ● Site visits	● Design Phase ● Implementation Phase ● Monitoring and Evaluation Phase
6	AFBD Bank	● Correspondence by phone/email/Text/Instant message ● One-on-one interviews ● Formal meetings ● Roundtable discussions	● Design Phase ● Implementation Phase ● Monitoring and Evaluation Phase
7	NEMA	● Correspondence by phone/email/Text/Instant message ● One-on-one interviews ● Formal meetings ● Roundtable discussions	● Design Phase ● Implementation Phase
8	Private sector	● Correspondence by phone/email/Text/Instant message ● One-on-one interview ● Print media ● Radio and television ● Website and social media ● Public meetings ● Workshops	● Design Phase ● Implementation Phase

8.0 SEP Organizational Setup and Institutional Responsibilities

The management, coordination and implementation of the SEP and its integral tasks will be the responsibility of dedicated PIT for KPLC, and the roles and responsibilities of the organizations are presented below.

8.1 KPLC

The KEMDI will now be merged with the Kenya Last Mile Connectivity Program Phase III (LMCP III) and the grant recipient will be the Republic of Kenya through the National Treasury (NT). The NT will on-grant the proceeds to KPLC, which operates under the Ministry of Energy and Petroleum (MoEP). KPLC, as the Implementing Agency, will be responsible for executing the project activities, including fiduciary and implementation functions, ensuring outputs are fit-for-purpose, and delivering them within the stipulated timeframe and budget.

8.2 Project implementation Team

KPLC has in place a dedicated PIT to oversee the day-to-day activities of the LMCP III. The KEMDI will not include a separate PIT, and instead KPLC has designated a Project Lead to coordinate project outputs, monitor interventions, and ensure efficient use of resources. The PIT will comprise: (i) Coordinator, (ii) Electrical Engineer, (iii) Accountant, (iv) a Procurement Specialist, (v)an Environmental Safeguards Officer, (vi) a Social Officer, (vii) Gender Expert, and (viii) Monitoring and Evaluation Officer. The project will retain the support mechanisms critical to its success, including KPLC's Technical eCooking Committee and the eCooking Management Committee.

8.3 AFDB

The Bank, through KEMDI, is dedicated to supporting Kenya's pursuit of universal clean cooking access, aiming to reduce dependence on unsustainable biomass while addressing climate change impacts. In a pivotal move at COP28 in December 2023, the Bank's President pledged to allocate 20% of approved annual lending for energy specifically to advance clean cooking solutions, emphasizing the AfDB's commitment to addressing clean cooking challenges and promoting sustainable energy practices. Further the Bank engaged a consultant to conduct a pre-feasibility study for the development and implementation of KEMDI. This study involved stakeholder consultations, supply chain analysis, and the formulation of costing and pricing recommendations, strengthening the foundation for the project's financial estimates.

9.0 Grievance Redress Mechanism

Grievance Redress Mechanisms (GRM) defines institutions, instruments, methods, and processes established by an entity to receive and address complaints and/or grievances raised by the project stakeholders. GRMs are intended to be accessible, collaborative, expeditious, and effective in resolving concerns through dialogue, joint fact-finding, negotiation, and problem solving. GRMs provide a system for managing project level complaints to ensure they are identified early, mitigated, and addressed where legal action is not yet warranted, enables project improvements to prevent further complaints and discourages referring matters to a tribunal/court for resolution. By design, GRMs are intended to complement, not replace, formal legal channels for managing grievances.

The stakeholder engagement process will ensure that the affected parties are adequately informed of the grievance redress procedure. The GRM for this Program has the following objectives:

i. Provide the stakeholders with an effective platform to seek redress or resolve any dispute that may arise during implementation of the Program;
ii. Ensure that appropriate and mutually acceptable redress mechanisms are identified and implemented to the satisfaction of complainants; and
iii. Reduce the need for using judicial proceedings.

The types of grievances stakeholders may raise include, but are not limited to:

- Negative impacts on communities, which may include, but not be limited to financial loss, physical harm and nuisance from use of EPC
- Health and safety risks;
- Negative impacts on the environment; and
- Unacceptable behavior by supplier and their employees.

9 Process

As the GRM works within existing legal and cultural frameworks, it is recognized that the GRM will comprise community level, project/County level, state level and state judiciary level redress mechanisms. The details of each of those components are described as follows.

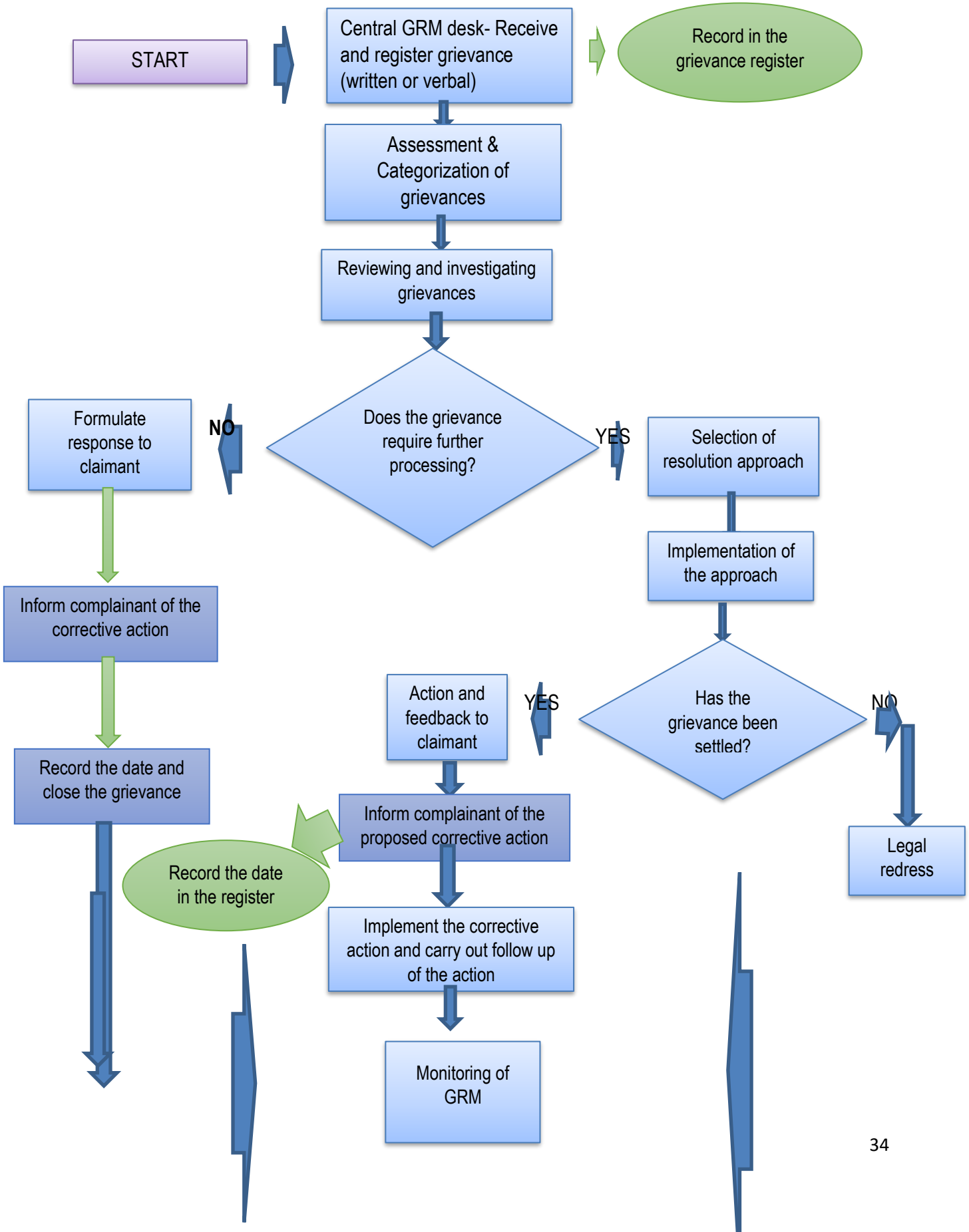
The project level process will not impede affected persons access to the legal system. At any time, the complainant may take the matter to the appropriate legal or judicial authority as per the laws of Government of Kenya

Table 6:GRM process

Process	Description	Time Frame	Other Information
Grievance submission	Face to face; phone; letter, e-mail; recorded during public/community Interaction. Anonymous claims	1 Day	KPLC hotline no. / contacts 95551 or *977#
Grievance assessment and log	Grievance significance assessed and recorded or logged (i.e. in a log book)	3-6 Days	Significance criteria: Level 1 –one off event; Level 2 – complaint is widespread or repeated; Level 3- any complaint (one off or repeated) that indicates breach of law or policy or ESMF provisions
Grievance is acknowledged	Acknowledgement of grievance through appropriate medium	3-5 Days	Email, letter, call.
Development of response	Grievance assigned to appropriate party for resolution Response development with input from management/ relevant stakeholders	4-10 Days	Response would take the form of meeting with aggrieved person/s, investigations and resolution agreed.
Response communication	Redress action approved as appropriate	5-10 Days	Resolution delivered
Implementation of response	Redress action implemented and update of progress on resolution communicated to complainant	5-10 Days	Progress of implementation
Grievance closure	Grievance Closure	3-10 days	Grievance Closure report

Note: the complainant has the right to seek legal redress but are advised to exhaust the local/agreed grievance redress mechanism first.

THE GRIEVANCE REDRESS MECHANISM PROCESS FLOW DIAGRAM



10 Monitoring, Reporting and Feedback Mechanisms

The monitoring and reporting framework for the project includes detailed key performance indicators outlined in Annex 2. KPLC will oversee data collection and analysis, supported by an M&E specialist with expertise in clean cooking, integrated into the PIT. Quarterly and annual performance reports, including environmental and social compliance updates, will be prepared by the PIU. To ensure robust evaluation, the Bank will conduct bi-annual supervision missions, a mid-term review, and prepare a Project Completion Report (PCR) at the project's conclusion, utilizing additional monitoring tools like Energy and Petroleum Regulatory (EPRA) reports.

The Program provides the opportunity to stakeholders, especially Project PAPs to monitor certain performance aspects and provide feedback. The Stakeholder Engagement Plan will be periodically revised and updated as necessary during Program implementation to ensure the information presented herein is consistent, the most recent and identified methods of engagement remain appropriate and effective in relation to Program implementation. Any major changes to Program-related interventions and schedule will be duly reflected in the SEP.

Monthly reports on grievances, enquiries, incidents, status of implementation of associated corrective/preventative actions, will be collated by the KPLC. The monthly reports will provide a mechanism for assessing the number and nature of complaints, requests for information, and the Program's ability of addressing such in a timely and effective manner. Information on public engagement activities undertaken by the Program during its life cycle may be conveyed to the stakeholders in two possible ways:

i. Publication of annual reports on Program stakeholder engagements
ii. Monitored Key Performance Indicators (KPIs)

The project will use a variety of methods and tools for monitoring and evaluation. They will include review of project documents and progress reports, stakeholder interviews and group, discussions, feedback surveys, site visits. The PIU will coordinate and facilitate documentation of the monitoring and evaluation results and outcomes including the maintenance of records of all consultations and meetings conducted with stakeholders, types of information disclosed, issues and concerns raised at consultations/meetings, public comments/feedback received for disclosed documents, informal feedback, decisions made, and reporting back to the stakeholders. The following monitoring framework in Table 7 provides a set of indicators that could guide the monitoring processes.

Table 7:Monitoring Reporting and Timeframe

No.	Monitoring indicators	Method	Timeframe
1)	No. of affected parties, other stakeholders and vulnerable groups engaged in SEP implementation	Review of reports on consultations and progress reports	Annually
2)	Type of information shared/disclosed	Review of information material shared and their content	Annually

3)	Type of methods used for information dissemination and their effectiveness	Review of communication methods used observations and feedback interviews and consultations with information recipients	Annually
4)	Accessibility to information and language used for communication	Records of persons who sought information; observations and feedback interviews and FGDs	Annually
		with stakeholders, feedback survey (annual)	
5)	Level of awareness among affected parties, other stakeholders and vulnerable groups on project implementation procedures and potential impacts	Focus group discussions and individual interviews with a cross-section, feedback survey (annual)	Bi-annually
6)	No. consultations conducted with affected parties, other stakeholders, and vulnerable groups	Review of reports on consultations by project and its partners	Bi-annually
7)	Type of issues/concerns raised and discussed at consultative meetings	Review of reports on consultations	Annually
8)	Type of decisions made based on consultation outcomes	Review of progress reports	Annually
9)	Feedback sessions conducted with affected parties, other stakeholders, and vulnerable groups to report on the decisions made	Review of progress reports, and focus group discussions and individual interviews with a cross-section	Annually
10)	Level of satisfaction among the PAP ,other stakeholders and vulnerable groups on the consultative process and its outcomes	Feedback surveys, focus group discussions and individual interviews with a cross-section	Annually
11)	No. grievances/complaints received and resolved	Review of progress reports and GRM database	Annually
12)	Level of efficiency and responsiveness of the GRM	Review of the records of GRC meetings and decisions made	Annually
13)	Level of satisfaction among affected parties, other stakeholders, and vulnerable groups on the overall performance of GRM	Focus group discussions, feedback surveys and individual interviews with a cross-section of parties who reported grievances	Annually

Reporting to stakeholders.

The results of the stakeholder engagement activities including results and outcomes of monitoring and evaluation of SEP implementation will be reported back to the stakeholders through website and/or formal communications.

Reporting to the AFDB Bank.

KPLC will collate all monitoring and evaluation results and produce bi-annual reports to be submitted to the AFDB Bank. The SEP monitoring will be part of the project monitoring reports submitted to the AFDB Bank.

11: Budget for SEP Implementation

The KPLC will be responsible for the implementation of the SEP. The budget for the SEP is estimated to be around Ksh 22 million included in the costing table under the operational expenses of the Program. KPLC will review this plan every six months to determine if any changes to stakeholder categories or engagement activities are required. The budget will be revised accordingly. The finances required for the implementation of the stakeholder engagement plan will be included in the overall project budget. The budget lines will include training, workshops, meetings, GRM implementation and field.

Table 8: Budget

Stakeholder Engagement Activities	**Period**	**KSH**
Communication materials (leaflets, posters, adverts)	Within the 1st quarter	1,000,000
Review of the Stakeholder Engagement Plan (SEP)	Bi-annually	2,500,000
Travel expenses of staff on stakeholder engagements	Quarterly	12, 000,000
Training focal peoples on SEP per County	Once	500,000
Office equipment and tools, communications	Once	1,000,000
Program press conferences (twice per year)	Twice a year	1,000,000
Training (social issues, outreach, GRM) for PIU	Bi-annually	1,500,000
Hotline to receive complaints and grievances related to the Program (TA and Airtime)	Per County	400,000
Subtotal		**19,900,000**
Contingency	10%	1,990,000
Total		**21,890,000** **Call 22,000,000**

REFERENCES

1. Kenya National Electric Cooking Strategy (KNECS)
2. CLASP Study: Scaling E-Cooking in Kenya: Results-Based Financing Design Recommendations
3. Addendum to the Project Appraisal Report - Kenya Electric Cooking Market Development Initiative (KEMDI)

ANNEXES

Annex 1: Letters of Intent

Classification: Internal

Annex IV: AfDB Letter of Intent

AFRICAN DEVELOPMENT BANK GROUP

Letter of Intent

Ref: PERN/IOM/MP/NO/2024/02/0030
Date: 16 February 2024

TO : **Climate Action Window Secretariat**

THROUGH: **Daniel SCHROTH**
Director, PERN

FROM : **Monojeet PAL**
Manager, PERN.2

SUBJECT : **Letter of Intent:** Climate Action Window submission for Kenya Electric Cooking (eCooking) Market Development Program

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We are writing to formally submit a proposal on behalf of the Renewable Energy and Energy Efficiency Department (PERN) for the consideration of the ADF-16 Climate Action Window, as we seek support for the Kenya eCooking Market Development Program (KEMDP).

The KEMDP has been designed in close collaboration with Kenya Power Lighting Company (KPLC) to both encourage KPLC customers to adopt electric cooking appliances and reduce the initial cost barrier for energy-efficient appliances, thereby mitigating environmental impacts associated with biomass cooking, such as deforestation and air pollution. KPLC is actively committed to the promotion of electric cooking among its 9.2 million customers. Their target is to increase the uptake of eCooking from approximately 90,000 current users to over 500,000 users within a three-year period.

The KEMDP proposal seeks USD 7 million to promote measures to encourage KPLC customers to adopt electric cooking appliances while simultaneously reducing the initial cost barrier for energy-efficient devices. This initiative aims to mitigate environmental impacts linked to biomass cooking, including deforestation and air pollution. In addition, the project seeks to reduce vulnerability to climate change by enhancing energy security, improving health, reducing dependence on climate-sensitive fuel sources, and providing a more stable and adaptable cooking solution for households and communities.

Considering the expected development outcomes and the Bank's strong commitment to clean cooking, which was announced by the President at COP28, we request the consideration of the CAW for support in implementing the KEMDP.

Thank you for your consideration.

Cc:
Alemayehu Wubeshet Zegeye, Manager, PESD.4
Andrew Mugenga, Principal Operations Officer, PESD.4
Adele Bandza, Senior Energy Specialist, PERN.2

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Annex V: Government of Kenya's Letter of Support

REPUBLIC OF KENYA

MINISTRY OF ENERGY & PETROLEUM

State Department for Energy

OFFICE OF THE
PRINCIPAL SECRETARY
KAWI COMPLEX
NAIROBI

Ref: MOE/7/19

30th January, 2024

Dr. Chris K. Kiptoo, PhD., CBS
Principal Secretary
The National Treasury
Treasury Building
Harambee Avenue
P.O. Box 30007-00100
NAIROBI

Dear Colleague,

REQUEST FOR ENDORSEMENT OF PROPOSAL FOR THE KENYA ELECTRIC COOKING (ECOOKING) MARKET DEVELOPMENT PROGRAMME TO THE CLIMATE ACTION WINDOW (CAW)

Kenya Power and Lighting Company (KPLC) developed a Concept Note (Annex 2) in collaboration with African Development Bank (AFDB) on *"Facilitating the expansion of Kenya's modern power infrastructure by stimulating demand for eCooking"* in 2023. This development is a result of the interaction between the KPLC and AFDB after the Kenya Clean Cooking Week held in Nairobi, in November 2022. The Concept note builds on the ongoing work on Kenya's eCooking Strategy, eCooking Market Assessments by Modern Energy Cooking Services (MECS) and lessons from eCooking pilot programmes implemented across the country.

The following opportunities have been identified to support the distribution of electric cooking appliances under the proposed Kenya eCooking Market Development Programme (KEMDP) to enable KPLC achieve its target of increasing the uptake of eCooking from 90,000 to 500,000 users over a three-year period: Component 1 - Distribution of electric cooking appliances (USD 5 million); Component 2 – Awareness and Capacity Building (USD 1 million); and Component 3 – Program Management (USD 1 million).

1

The strategy is to access the Climate Action Window (CAW) for which the First Call for Proposals was issued on 7th December 2023, and is focussed on the Adaptation Sub-Window only. KPLC wishes to leverage the grant resource to foster the expansion of the electric cooking market and experiment with various operational and implementation models. This approach is crucial for the identification of the most effective strategies for sustainable growth in this sector so as to guarantee success.

The purpose of this letter therefore is to request that the National Treasury endorses the submission of the Kenya Power & Lighting Co. (KPLC's) proposal for the KEMDP.

We believe that the *Kenya eCooking Market Development Programme* will not only improve the lives of electricity consumers but also contribute to the sustainability of the distribution infrastructure and the environment. The proposal will also introduce a new dimension in the multi-faceted and long collaboration between KPLC and the AfDB. Additional details are provided in Annex 1, 2 and 3 (Background, Concept Note and Highlights of the Pre-feasibility study, respectively).

We appreciate your utmost consideration of this request.

Alex K. Wachira, CBS
PRINCIPAL SECRETARY

Copy to: **Dr. (Eng.) Joseph Siror**
Managing Director/CEO
Kenya Power & Lighting Company
Stima Plaza
NAIROBI

ANNEX 2

CLASP Study: Scaling E-Cooking in Kenya: Results-Based Financing Design Recommendations

CLASP was engaged by the African Development Bank (AfDB) to conduct research and analysis on the Kenyan electric cooking (e-cooking) market to inform the design of a forthcoming results-based finance (RBF) program under the contract "Support the design of an electric cooking Results-Based Finance Program – Kenya Power and Lighting Company (KPLC).

1. Stakeholder Consultation Insights

CLASP conducted 11 in-depth consultations with Kenyan e-cooking market stakeholders, as shown in Table 9. Consultation participants represent a wide range of market players, from industry leaders to donor organizations, technical experts, and KPLC representatives.

Table 1: Stakeholders Consulted

Organization Type	Organization Name	Description	Consultation Date	Attendees
Manufacturer	Burn Manufacturing	Manufactures and sells EPCs; recently launched induction cooktop product line	23rd November 2023; 11 January 2024	Majd Chaaya, Meredith Muthoni, Christine Muhoro, Tom Fannon
Manufacturer	Group SEB	Developed EPCs specifically for the East Africa market to accompany the Tefal and Moulinex product lines	22nd November 2023	Pauline Ferrier, Ken Odipo
Distributor	Bidhaa Sasa	Distributes EPC with a focus to rural communities and women's segments	7th December 2023	Rocio Perez
Distributor	Sunking	Distributes EPC	7th December 2023	Mark Okeefe
Distributor	Powerpay	Distributes EPC	4th December 2023	Kimiti Mburu
Consultancy	EED Advisory	Charged with developing the Kenya National Clean Cooking Strategy	4th December 2023	Murefu Barasa
Consultancy	Gamos East Africa	Electric cooking specialists	23rd November 2023	Jon Leary
Test laboratory	Kijani Testing	Conducts Global LEAP EPC test method	22nd November 2023	Kinya Kimathi, Joe Irungu
Funder	MECS	Modern Energy Cooking Solutions program	23rd November 2023	Jon Leary
Funder	ENDEV	Runs RBF programs across Africa and Asia	22nd November 2023	Valerie Ostermann, Samwel Tobiko
Utility	KPLC	Kenyan utility company	11th January 2024	Irene Wanjohi

Government	Ministry Of Energy	N/A	14th March 2024	Myra Mukulu
Government	Energy and Petroleum Regulatory Authority (EPRA)	N/A	7th March 2024	Eng. Nickson Bukachi, Eng. Peter Wahenya, Eng. Hasan Oklunu, Eng. Ignatius
Public Institution	Clean Cooking Association of Kenya	N/A	8th March 2024	N/A
Funder	SNV	Runs RBF programs across Africa and Asia	Unavailable	N/A
Consultancy	Nuveni	Charged with developing the Kenya National Electric Cooking strategy	Unresponsive	N/A
Consultancy	WRI	Runs the Energy Access Explorer which maps clean cooking access	Unavailable	N/A
Distributor	ATEC	N/A	Unavailable	N/A
Retailer	Hotpoint	Retails a wide range of electric cooking equipment	Unresponsive	N/A
Retailer	Ramtons	Retails a wide range of electric cooking equipment	Unresponsive	N/A

2. Key Findings

1) There is strong political will in Kenya to advance the e-cooking market.
The current e-cooking market outlook looks different than it was back in 2019. Endorsement by the KPLC director and declaration of a half-a-million goal targeting the roll out of new connections during the Africa Climate Summit demonstrates a strong political will and interest from the government of Kenya to promote the adoption of e-cooking.

2) **Existing e-cooking technologies are appropriate for the Kenya market and are increasingly available**. There is a wide range of technologies to choose from including EPCs, electric induction cookstoves, air fryers, and hotplates. The prices of these solutions range from KES 2,000 to 20,000 but pricing generally correlates with efficiency: the more energy-efficient the product the more expensive it is. Brand and product size are other factors influencing price. EPCs have a wide variety of brands available ranging from 6L to 20L – a recent survey by MECS identified over 26 brands in the market. They are also primarily used in households.

3) **EPCs and induction stoves are the most impactful e-cooking technologies**. These two products categories have the potential to support the widest range of cooking activities, and both also present the most opportunity to drive increased energy efficiency. Hot plates are a lower cost option, but their electricity requirements are disproportionately high, and their usability is far more limited than induction stoves.

4) **Internet of Things (IoT)-enabled EPC products are increasingly common.** These products allow for pay-go payments and usage monitoring and are central to the long-term goal of unlocking carbon revenues. At the forefront of this are companies such as Sunking and PowerUp. IoT-enabled products still represent a minority in

the marketplace, but their market share is expected to grow rapidly over the coming years. EPCs with IoT are slightly more expensive than those without, and that price gap has the potential to narrow further over the coming years as the overall EPC market grows.

5) The number of e-cooking suppliers and distributors active in the market has increased significantly in recent years. Key players include Burn Manufacturing, Hotpoint, Tefal, Sayona, Powerpay, Group SEB, Bidhaa Sasa, Scode, and Nyalore Impact Group, and there are many other active companies as well. Leading companies also have developed a range of sales and customer acquisition strategies. For example, Powerpay has an online platform through which they distribute their EPCs while Group SEB works directly with different groups of distributors, one targeted at poorer rural communities and another at wealthier households. Some of these companies have run successful pilots focused on sales of IoT-enabled products.

Despite recent growth, many stakeholders identified a similar set of barriers to market growth, including:

- Upfront and operational costs of e-cooking products, with the latter driven by current electricity tariffs;
- Cost of customer acquisition;
- Power quality in rural settings;
- Maintenance & and repairability service limitations;
- Lack of standardization with e-cooking technology categories; and
- An absence of financing that is required to lower prices and enable long-term growth.

Most respondents expressed hope that the proposed RBF program would help address some of these challenges. Particularly, the affordability challenges and also by catalyzing change in some of the other areas (e.g., investments in power system infrastructure, improved product quality standards).

6) A special e-cooking tariff will be critical to the long-term viability of the market, and the RBF program should help inform that process. Stakeholders emphasized that a dedicated e-cooking tariff would be necessary to unlock rapid market growth by reducing operating costs for end users and that the RBF program must include usage a usage component to better understand utilization rates under a lower-cost tariff regime. They also encouraged KPLC to allow as flexible an approach as possible to the program's design and administration, including support for pricing experimentation. Conversations with EPRA officials to influence policy toward the application of a special e-cooking tariff also noted it would require substantive evidence backed by reliable data on the costs and benefits as well as a clear roadmap on how to roll out the policy in terms of the infrastructure needed to enable monitoring of energy use in households as per appliance.

3. Stakeholder Interview Notes

AFDB E-cooking Interview: EED Advisors
Introductory Information

Participant Name(s)
Sam Grant Murefu Barasa
Organization
EED Advisors

Experience
What is your/your organization's role in EPC market?
EED Advisors is a consulting company that has done several market assessments of the clean cooking sector in Kenya and East Africa. We are currently helping the Kenyan Government design a National Cooking Action plan which will include a special section dedicated to electric cooking. At the Africa Clean Energy Summit hosted here in Kenya the Managing Director of KPLC pledged to speed the deployment of 500,000 electric cooking appliances in Kenya.

Ecooking Models and Pricing
Are you familiar with what e-cooking technology is currently available in the market? If so, what models do you know of (and what's their price)?
We have surveyed several electric cooking suppliers in Kenya such as Burn, Hotpoint, Tefal, and Sonya. I don't know the prices off the top of my head but most electric pressure cookers retail for 8-12k KES, electric hotplates are sold for as cheap as 2k, and Burn's induction cooktop retails for 11k. I think that the KPLC subsidy program should seriously consider including electric hotplates due to their low upfront cost, and suitability with aluminum sufurias (cooking pots). I feel they offer a path of least resistance to move people toward electric cooking.

Market Sizing and Needs
- **What is most needed for the market to scale/what are the biggest challenges?**
I think that cost is a major barrier to scale.
- **Do you see affordability as a major challenge for the market?**
Yes, both the upfront cost and the ongoing perception of cost.
- **Are you aware of other initiatives to support e-cooking market growth?**
We are aware of CLASP's RBF program for EPCs and I have heard that EnDev is looking to launch a small 12-month RBF pilot next year. I would like to think that our work with the key government to develop a National Electric Cooking Action Plan will help support long-term growth in the market. The CCA is working with the government to develop a Delivery Unit to assist with policy implementation. The MECs program and SE4All have launched the Global Electric Cooking Alliance which will benefit Kenya as one of the core geographies in scope.
- **What types of financing are most necessary for market growth?**
I am particularly interested in experimenting with usage subsidies to drive people away from charcoal and truly adopt electric cooking**.**

RBF suggestions
- **What would make an e-cooking RBF successful in the Kenyan market?**
Please propose to KPLC to create differentiated tariffs instead of a universal subsidy. Test out different percentage points in a price discovery exercise that allows the market to create access as needed to different people.
- **What challenges do you foresee in developing and executing this program?**
The program needs to balance price discovery with being overly complex to avoid a situation where money is too slow to move to companies and households. The program needs to be rolled out over a longer time period than 18 months to ensure companies have ample time to raise other types of finance needed to increase sales.

- **Do you think that an RBF program could help e-cooking become sustainable over the long-term in Kenya?**
Yes, ultimately I would like to see KPLC roll out a special tariff for electric cooking.
Other
- **Do you think carbon finance is necessary to grow the Kenyan e-cooking market?**

Yes, all the major clean cookstove companies have grown quickly over the last two years with generous injections of funding from the carbon markets. Electric cooking has the potential for large carbon benefits in Kenya due to the green generation mix in the country.
- **What are the impact of LPG subsidies on the Kenyan e-cooking market?** I don't think there is a big impact. Most of the EPC we see in use are displacing charcoal.

AFDB Ecooking Interview: PowerPay

Participant Name(s)
- **Kimiti Mburu**

Experience

What is your/your organization's role in EPC market?
PowerPay designs, manufactures and installs IoT hardware for appliances that need to be monitored for carbon tracking or locked out due to lack of payment.
We are building a production line and will be able to digitalize 9000 e-cookers a day in late 2024. We have an online platform for selling where we currently have an electric bike and electric pressure cooker for sale. We hope to expand our product offering in 2024. I would like our technology to help enable an Ecooking tariff.

Ecooking Models and Pricing

- **Do you currently sell e-cooking technology?**
o We sell the SEB Tefal EPC. Next year we will be working with Syona, a local manufacturer of EPCs with a large sales history, which will provide the digital infrastructure for their EPCs. We will also be working with three other companies to provide more products next year and white-label a new digitalization tool.
- **If so, what models and at what price?**
o Tefal – 12,600 Syona – 11700 with IoT and 8000 without IoT.
- **How long have you been selling these products?**
o We started testing these products in early 2022 and began properly selling them this year. We install an IoT monitoring system that can lock out the device. We have only had to lock out one customer to date.

Market Sizing and Needs

- **How many have you sold this year? Last year? Do you expect to sell next year?**
o We sold 430 EPCs this year. We have already ordered two containers that should arrive early in Q1 and we expect to sell 24,000 EPC by the end of the year.
- **Is affordability a major challenge for you in growing sales?**
o Yes, customers are very sensitive to the cost of the equipment and the cost of cooking.
- **What are your major challenges for growing sales?**
o **Are there customer segments you have had difficulty reaching?**
▪ We are excited to leverage table banking groups (15,000 of them) in the future with marketing and activation. They are moving a bit slowly but it will be very big when this happens.
o **Are the available e-cooking products appropriate for the market?**
▪ Yes we are very happy with the suppliers we are working with.
- **Are you able to access needed financing to support sales?**
o Accessing working capital debt has been very challenging. We have made some progress with our local banks but we still do not get great terms. The interest rates are high and not very patient. We have been trying to raise equity capital. Fortunately, we have three companies that are willing to prefinance the products.
- **What is most needed for the market to scale/what are the biggest challenges?**
o The cost of electricity needs to fall to help with mass adoption. There is still a strong perception in the market that that electricity is too expensive for the average Kenyan family. We need mass communication campaigns coupled with subsidies to help people get over this barrier.

- **Do you see affordability as a major challenge for the market?**
o The usual suspects – cost both upfront and ongoing, consumer perception and awareness.
- **Are you aware of other initiatives to support e-cooking market growth?**
o MECS has the ECAP Consumer finance program, which has been a great initiative. KOSAP is an example of something that has just not moved.
- **What types of financing are most necessary for market growth?**
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o We have tried to avoid offering consumer financing but this limits affordability. We try to encourage cash payments as much as possible. We are working with farmer marketing organizations that guarantee payments, like the TEA Board or Coffee Board. We have recently partnered with a farming group that employees 40,000 farm workers.

RBF

For companies:
- **Would RBF financing help accelerate your sales velocity?**
o Yes absolutely. It can also serve as a tipping point in adoption and economies of scale in the future.
- **What subsidy amount would be needed to accelerate your sales velocity?**
o 25-30 USD would be great because that is the digitalization element.
o A usage rebate would be a good motivator for adoption.
- **What would prevent you from participating an RBF program?**
o Bureaucracy could get in the way. Projects need to be agile and move quickly.
- **What challenges do you foresee in developing and executing this program?**
o I think the only thing is bureaucracy. Before I was very skeptical of government-led support but since working with KPLC this year, I think they will be a good partner and have a good structure for things like payments. Largely I am optimistic they will be able to execute a subsidy program.

Other

- **Do you think carbon finance is necessary to grow the Kenyan e-cooking market?**
o Yes- we plan to test carbon financing next year.
- **What are the impact of LPG subsidies on the Kenyan e-cooking market?**
o From the people we have sold to this has not interfered. In our experience, LPG use does not discourage EPCs from being bought. It competes with charcoal, firewood, and kerosene.
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AFDB Ecooking Interview Guide: SunKing

Participant Name(s)
• Mark Okeefe

Experience

What is your/your organization's role in the EPC market?
SunKing acquired PowerPay, an IoT-enabled pay-as-you-cook platform. PowerPay has integrated PAYGo technology into liquified petroleum gas (LPG) cylinders and more recently partnered with PowerUp to sell EPCs.

Ecooking Models and Pricing

- **Do you currently sell e-cooking technology?**
o We are currently marketing the PowerUp EPC and are looking into other partnerships with electric cooking companies that would benefit from SunKing's sales and distribution channels.
- **If so, what models and at what price?**
o 11,999 KES in cash upfront.
- **How long have you been selling these products?**
o We are currently piloting the EPC and have only sold around 1,000 over the last six months.

Market Sizing and Needs

For companies:

- **How many have you sold this year? Last year? Do you expect to sell next year?**

o We sold around 1,000 units this year. The sales forecast for next year is uncertain as we are still trying to figure out our optimal strategy. We are still looking a product market fit, financing options, etc.. We do believe that the EPC is a strong fit for the Kenyan market.

- **Is affordability a major challenge for you in growing sales?**

o Absolutely, most customers are very price sensitive.

- **What are your major challenges for growing sales?**

o **Are there customer segments you have had difficulty reaching?**

▪ Power quality is very poor in rural areas and, as such, we have not focused our efforts on this market segment.

o **Are the available e-cooking products appropriate for the market?**

▪ We are still trying to figure this out. To date, our pilot with Power Up has been very promising. We are trying to remain open and not close off any technology options.

- **Are you able to access needed financing to support sales?**

o SunKing's size allows it to access finance relatively easily.

RBF

For companies:

- **Would RBF financing help accelerate your sales velocity?**

o Yes, it would accelerate your sales.

- **What subsidy amount would be needed to accelerate your sales velocity?**

o 20-35 USD per product.

- **What would prevent you from participating an RBF program?**

o An overly prescriptive approach would slow down our product market fit discovery process and this would dissuade us from participating.

- **What other benefits might participating in an RBF program bring? For example, would you leverage the support for other financing?**

o An RBF program would allow us to move more aggressively with our working capital.

- **How could an RBF program help your e-cooking line become sustainable over the long term?**

o We anticipate that consumer acquisition and education costs will reduce as EPCs become more mainstream. An RBF program will help us reach better unit economics. You could also flip this question around. Not supporting electric cooking is unsustainable both for KPLC needs the revenue and for family economics health and the environment.

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Other

- **Do you think carbon finance is necessary to grow the Kenyan e-cooking market?**

o Yes, it is necessary. PowerUp was the first cookstove company to register an EPC using the Gold Standard metered methodology.

- **What is the impact of LPG subsidies on the Kenyan e-cooking market?**

o I don't think they have had an impact at all. I see LPG and electric cooking equipment as compliments, not competitors.

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AFDB Ecooking Interview: Burn Manufacturing

Introductory Information

Participant Name(s)

• Meredith Muthoni
• Christine Muhoro
• Majd Chaaya

Experience

What is your/your organization's role in the EPC market?

Description of BURN:

BURN sells a variety of e-cooking products, including electric induction cookstoves (EIC). EIC product sales have been a bit slow due to issues with PAYGo. Once this is resolved, BURN projects over 10,000 sales in two months. BURN's PAYGo system includes a backend system integrated with Safaricom via GSM. They can set a lock-out algorithm at weekly or daily intervals.

Market Experience

BURN sees high scaling potential in Tanzania due to the market's strong economic condition. The Kenyan market is proving to be more challenging & and BURN believes that electricity rebates won't have a long sustainable impact. RBF rebates for customers' credit are needed to demonstrate market potential

Involvement with EnDev's Upcoming RBF Program

BURN is working with EnDev, who will be launching an RBF to test electricity token rebates in Q1 next year (2024). The program will track electricity consumption for cooking and provide customers with direct rebates. They will provide 15 euros for appliance subsidies and an additional 4 euros for smart metered appliances. Customer data will be shared with Pika and Power, including electricity usage (4-5 months). EnDev would then pay the subsidy to KPLC, which would pass it on to customers

Recommendations for RBF Structure

- The structure should support KPLC's policy shift towards demand stimulation. This approach will increase income from reduced emissions, resulting in revenue addition.

AFDB Ecooking Interview: Group SEB

Introductory Information

Participant Name(s)

Pauline Ferrier Ken Odipo

Organization

Group SEB

Experience

What is your/your organization's role in the EPC market?

We supply household electrical appliances globally. In Africa, we supply through distributors who then sell to retailers and have a presence in 35 countries on the continent**.** In Kenya, our products are in Carrefour, Naivasha. Last, we set up a project to pilot the supply of affordable EPC products that can also reach customer segments that usually cannot afford our appliances. For this project, we have had to set up a new distribution model and work with new distributors. Currently, we are working with Bidhaa Sasa, Powerpay, and Nyalore Impact Group who are selling products in more rural and less well-off households. For the product, we still haven't we have achieved the perfect fit yet. We are still trialling the design to ensure it responds to the customer's needs as customer experience is very important to us.

E-cooking Models and Pricing

- **Are you familiar with what e-cooking technology is currently available in the market? If so, what models do you know of (and what's their price)?**

We are aware that there a couple more models of EPC available outside of those we are supplying. Overall though, prices range from 6 to 20 K I think

Market Sizing and Needs

- **What is most needed for the market to scale/what are the biggest challenges?**

Good question which we would also like to answer. We are still new in the Kenya market, particularly for this project where we are serving a less well-off customer segment. We think there is market potential. The biggest hurdles to EPC uptake are the perception that they are expensive and that cooking with electricity is expensive. Also, because

there is no proper aftersale services network, people are hesitant to purchase products that they don't know if they can repaired/replaced in case they break down.

RBF Suggestions

- **What would make an e-cooking RBF successful in the Kenyan market?**

What we have observed with our distributors is that they struggle to have payments done. We require them to pay for product orders pre-production, and especially when they are new, they need to pay 100% upfront. For those we have now established relationships with, we are allowing them to pay 60% upfront and the balance be created over 6 months. We are still exploring better credit facilities we can extend – but it will take time. We know RBFs require sales to be completed before the money is released, which can be tough for distributors.
We would suggest,
• Providing financing channels that distributors can tap into before they meet their sales targets
• Find ways to get some money out the door for the RBF to help support distributors in their operations
• Now that KPLC is likely to be involved – can they build in a special tariff for EPC buyers
• Criteria for inclusion should consider product quality and aftersale services provided

Other

- **Do you think carbon finance is necessary to grow the Kenyan e-cooking market?**

We have some distributors who express interest in carbon credits they are thinking of designing projects around EPCs. Support to these distributors would be great as unlocking financing from the carbon credit schemes would help them lower the prices of their products and have more regular stocking and re-stocking flow.

AFDB Ecooking Interview: Kijani Testing

Introductory Information

Participant Name(s)
• Kinya Kimathi
• Joe Irungu
Organization
• Kijani Testing

Experience

What is your/your organization's role in the EPC market?
• We offer quality assurance tests for clean cooking and have tested over 10 different brands of EPCs under Global LEAP and other Productive Use Applinaces e.g Milling machines and egg incubators
• We have a lab approved by Verasol – testing of EPC as per the Global LEAP Test Method
• We are currently collaborating with Verasol to assess the feasibility of SWP testing
• We also conduct field tests for sustainable technologies to help get the sellers to understand the needs of the buyer e.g.
o we field-tested a solar EPC by Village Angel Infrastructure
o conducted MECS market field research study in Kenya with 12 households (HH). Part of the activity was undertaking field tests cooking with 100% electricity for over 3 weeks. HHs could test with EPCs, air fryers, or Induction plates. These technologies were selected by the MECS (the client). The EPC option was given to Charcoal/ firewood users in rural areas who had access to electricity. Households with Microwaves and electric kettles were allowed to toggle between EPC and Induction plates. Wealthier households already with EPC tested with an air fryer. From the results, the wealthy HHs found a utility from the health aspect i.e air fryers use less oil than from efficiency of the appliance. Other learnings from this activity:
▪ There is a general lack of awareness of e-cooking i.e. that they are available, affordable, and more efficient options compared to electric -ovens
▪ Cooking with electricity is perceived as expensive
▪ Push back on using EPC on Ugali/ Chapati / Pancake due to entrenched cooking habits
▪ There is a huge variance in the performance of e-cooking appliances. EPCs have added value from the pressure cooking aspect, Induction plates are less efficient but less expensive to EPCs, while Hot plates (often packaged as induction plates) are affordable but very

inefficient
▪ There needs to be a standardization of how different technologies are classed. Currently, marketing of appliances can be misleading where one appliance is presented as something else e.g. hot plates as induction plates General comments on E-cooking:
• We are aware KPLC has been creating awareness with their e-cooking hubs where there are live cooking demos with local recipes
• The efficiency of e-cooking technologies tends to correlate with better quality and higher prices. Incentivizing suppliers ensures there are quality products in the market. However, we need to evaluate what options we are providing for end-of-life products as this remains a gap

Ecooking Models and Pricing

- **Are you familiar with what e-cooking technology is currently available in the market? If so, what models do you know of (and what's their price)?**
o EPC sizes range 6Ltr to 13 Ltr
An AC EPC price ranges from 6K to 20 K – depending on size, brand, and performance. In our experience, we have not had to rewire households for the use of EPC. However, we expect this would be needed where EPCs are intended for use in micro and mini-grid contexts
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Overall performance is more or less similar across EPC's. In some cases, the pressure cooking phase kicks in at a later stage than others
• Suppliers try to add more edge to the products by
o putting local food functionalities in buttons
o product design - some EPC models have knobs, others buttons; bigger LED lights others smaller; some have menu options in pictures, others in words, etc
• DC EPCs are very expensive, and from our tests, they constantly go off. They take 3 times longer to cook and almost 10 times the price of a regular AC EPC.

Market Sizing and Needs

- **What is most needed for the market to scale/what are the biggest challenges?**
o It is important to understand market needs. Which customer segment is targeted? How do you best approach customers in rural areas versus those in urban settings? The approach needs to be customized to target markets
o The e-cooking market is vast but there is a huge perception that electricity is very expensive to cook with
- **Do you see affordability as a major challenge for the market?** Yes
- **Are you aware of other initiatives to support cooking market growth?**
o Pika na power
o MECS program
o Strathmore Energy Research Center has been researching e-cooking
o Nuvoni is developing a national e-cooking strategy
- **What types of financing are most necessary for market growth?**
o Rbf incentive to get suppliers to organically grow their customer base – suppliers/ manufacturers
o Awareness creation financing to stimulate the market for demand

RBF Suggestions
What would make an e-cooking RBF successful in the Kenyan market?
o Eligibility requirements for participants should be inclusive
o Include requirements on quality products with warranty in the RBF Structure
o Incorporate end-of-life requirements
o Ask for information about how a product is marketed/ described by companies
o Focus on customer experience i.e use subsidy not only the acquisition of the product
- **Do you think that an RBF program could help e-cooking become sustainable over the long term in Kenya?**
o Yes, it can turn a push product into a pull product
o Without proper structures supporting an RBF, it can lead to damage

o Realistic targets in terms of the numbers need to set -

Other

- **Do you think carbon finance is necessary to grow the Kenyan e-cooking market?**
o We do not have a lot of experience with carbon finance. It is not well understood by a lot of people. How is it structured? Where are experts coming from advising on carbon credits? For us, it seems every organization/ company has their way of describing carbon financing.
o There is potential for e-cooking in carbon financing, but more capacity building and education need to be done
- **What is the impact of LPG subsidies on the Kenyan cooking market?**
o It is aspirational – for a lot of Kenyans – perceived as cheaper than electricity
o There is a higher uptake of LPG
- **Are there any other partners that we should engage with?**
o MECS –
o Strathmore Energy Research Centre
o BURN
o Village infstracture Angels

- **Anything else you would like to share?**
- Technical support as a service should be considered – reparable / disposed off / certified

AFDB Ecooking Interview: MECS/Gamos EA

Participant Name(s)
Jon Leary

Market Sizing and Needs

The Nuvoni team tried to collect market data (on actual appliance sales and potential for the market) while conducting e-cooking strategy work in Kenya but was unable to. They are conducting a similar market assessment study in e- cooking with the Institute of Energy Studies & Research (IESR). They have a letter from the director of this institute to companies requesting sales data. This request has not been successful with companies and therefore do not have data yet.
The first part of the study will involve going out to the shops. So far, the enumerators have identified 25 different brands of EPCs and Induction Cookstoves. Using RBF to capture market data will help inform a much larger dataset and can be used to capture data from retailers

The Kenyan Ecooking Market

• The current e-cooking market outlook looks different than back in 2019. Endorsement by KPLC's director and declaration of a .5 million goal targeting the roll-out of new connections, the applications of new financing, and other support has allowed momentum to pick up on e-cooking uptake activities. There is potential to reach 500,000 customers cooking with electricity.
• We're seeing stronger uptake of e-cooking in Tanzania because of the difference in tariffs. Therefore, making specific tariffs to e-cooking could boost uptake.

Ecooking Models

In the Kenyan context:
• EPCS are cheaper than induction cookstoves. The ongoing cost is already low and unlikely to further decrease.
• Induction cookstoves are more expensive. A special tariff to subsidize electricity costs is a good value proposition to drive uptake as seen in Tanzania -- maybe Kenya could consider applying a similar tariff.

Recommendations & Thoughts on RBF Design

- **Sectoral Support:**
o This program would have good timing as there are now many voices advocating for clean cooking from both sides (i.e. clean cooking and the energy sector).
▪ There is also a rise in smart metered PAYGo IoT devices (e.g. Sunking, Burns, Atec, PowerUp,

and Powerpay) that are actual implementable products.
• Powerpay has built a partnership with Hotpoint aimed to: o To unlock new markets for e-cooking and o Reach the middle-income households.
- **Standards and Labeling:**
o MECS is not aware of a specific standard that KEBS uses for EPCs outside of the basic electrical testing for appliances. There are no performance thresholds set or labels – this information would be useful. However, from a workshop event, they learned that KEBS has a lot more standards on file that they do not use.
o It would be good to have a threshold on subsidy in terms of safety that would be generally accepted in the sector – otherwise, we will promote sub-standard products.
- **Maintenance and Reparability:**
o Maintenance and Reparability (M&R) is often a problem. Lots of improvements have been made on the part of companies like Hotpoint, BURN, and Sunking. However, there is a need to encourage better M&R. KPLC could use a market-based approach where subsidies are pegged on continued usage of appliances and quality after-sales service. An additional incentive could be linked to smart metered appliances, to monitor the continued usage of products both for the company and the customer. We could also have a portion of the subsidy by applying a dedicated tariff for e-cooking. However, it's important to
• be aware of data security working with KPLC
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• and note that there might be pushback from distributors without metered appliances.

Other Initiatives

Radar 2024
MECS is concluding the eCAP (Electric Cooking Capacity Building) Program with KPLC and will have reports from Powerplay on:
• Consumer financing
• On bill financing
• Pay-go business approach and
• Potential for scaling up to 200 connections/testing appliance financing.
They are concluding an e-cooking strategy – it was to be completed in September but there were a lot of issues with the baseline data and modelling.
GECCO
There is a dichotomy in the level of ambition between the international stakeholders and local companies (i.e. concerns from local companies about how fast the transition and scale-up is going to be. There are also outstanding questions about the right speed to transition.

AFDB Ecooking Interview: Clean Cooking Association of Kenya (CCAK)

Participant Name(s)
Simon Kiragu
Organization
Clean Cooking Association of Kenya

Experience

What is your/your organization's role in the EPC market?
- CCAK aims to promote and market the use of clean cooking solutions and innovations through increasing public awareness, capacity building, and enabling better government policies.
- We support all kinds of clean cooking solutions including electric cooking innovations.
- For e-cooking, we are aware of the current push to transition to electric pressure cookers and induction cookstoves in the Kenya market.
- Various models of EPCs are available in supermarkets ranging from 6000 to 20,000 in price.
- I also know there are some Ugali cookers which are available on the market.
- We have set up a community of practice that is national and meets every month to reflect and discuss on clean Cooking together with partners KPLC, GAMOS, and ACTs

- As an organization, we have been involved in the 1st e-cooking project called eCAP funded by MECS/UK PACT. It is a capacity-building and market development program for eCooking in Kenya led by Kenya Power

What has consumer feedback been on e-cooking from interactions and experiences of CCAK with them through their work?

- As CCAK, we do consider consumers as very important and ensure their voice is heard.
- We have e-cooking hubs- demo centers where people interact with technology – demystifying the quantity and amount /price of cooking with electricity in Kakamega, Nakuru, Kitui, and a fourth location.
- There is interest and uptake when people understand how the solutions are working.
- E-cooking compared to LPG – depends on issues with costing and value-add when it comes to adoption of use. If using LPG, you need to have access to LPG and E-cooking to electricity.

What is most needed for the market to scale/what are the biggest challenges?

- E-appliances are heavy on electric tariffs – there is a need to incorporate product standards, advocate for ecooking tariffs,
- Need to figure out how to support the implementation of the KNECS, - updating some of the e-cooking resources e.g. registry of manufacturers, strengthening EPRA, KEBS roles, explore incentives for e-cooking. A 67

2019 study on E-cooking by MECS I believe found less than 5% of the market share of people who have electricity access do not use e-cooking meaning it has a big market opportunity over 75% of the households.
- The e-cooking is nascent, how can different financing and approaches be used e.g. subsidies and grants, lowinterest loans, vendor financing (a collaboration of suppliers, distributors, and microfinancing)? There is an attraction for carbon financing – How can people explore this opportunity? Other instruments are tax incentives and public-private partnerships.

Recommendations & Thoughts on RBF Design

What would make an e-cooking RBF successful in the Kenyan market?

- We do not have much experience with RBF though KOSAP had an RBF program biogas through SNV. I think the RBF:

• Needs gov't support and regulatory framework.
• Public awareness and education on the benefits of e-cooking
• Affordability of RBF itself – E-cooking is an expensive appliance.
• Have in place a comprehensive M&E framework on the effectiveness of the RBF –
• Capacity building – invest in training programs for repair/jobs in e-cooking.
• You need to have very good and credible suppliers.
• You need to have a very good infrastructure to ensure customers are connected to electricity.
• Policies and regulations – how can they be conducive given the high cost of appliances, limited aftersales support especially as some EPCS have components that damage easily and how do you handle e-waste from e-cooking?

What are your thoughts on the impact of LPG subsidies on the Kenyan e-cooking market?

o Subsidies influence consumer choices and market dynamics, for example having pricing competition. They may make LPG preferable and create other market distortions.
o If from the Govt, maintaining it will make it very difficult- given govt revenue constraints.
o Need for infrastructure –LPG focus will divert needed infrastructure needs from e-cooking.
▪ There is good traction for e-cooking best option.
• For a whole meal use just about 1 token
• It has better per capita consumption compared to other alternatives.
•

Anything else you would like to share?

o No

AFDB Ecooking Interview: Ministry of Energy (MoE)

Participant Name(s)

- Myra Mukulu
- Technical Advisor- Kenya Off-Grid Solar Access Project (KOSAP) – 5 Years – previous chair of Clean Cooking

Association of Kenya

Organization

- Ministry of Energy

What is your/your organization's role/stance in the E-cooking market?

- The MOE is generally excited and supportive of efforts towards the uptake of clean cooking fuels such as Ecooking.
- The ministry has been doing a campaign on clean cooking and is interested in universal access by 2028.
- The e-cooking strategy is eagerly anticipated to help inform the roadmap for this.
- We have been running the KOSAP program – with SNV as the facility manager – targeting 14 countries in Kenya that are marginalized primarily in the North and Northern Eastern region and South Eastern parts of the coastal region.
- We have RBF components in the KOSAP program focused on households, enterprises, and mini-grid contexts.
- At the stage of design, the World Bank was reluctant to use the terminology – subsidies - used and insisted they call it an affordability incentive.

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- How the KOSAP program works is that SNV puts out a call for proposals, evaluation of applications done by all partners including MOE, and successful applicants are contracted.
- Clean cooking, especially electric cooking, is a very niche market.
- For KOSAP, since we work in very poor counties – it is even more difficult to move products even an improved biomass cookstove as the pastoralists are cash-poor and the products are pricey.

How KOSAP RBF works

There are 3 components:

- Market entry funds
  - o It is important during an RBF to ensure you are giving an advance grant – to help companies set supply chains, conduct marketing activities, recruitment, and promotional activation such as through influencers who are key in the communities they operate in
- -

Procurement Subsidies

- o Supplier does a proposal – they have to say – this is our business plan, work plan, and budget.
- o SNV evaluates and approves participants with the involvement of MOE. The maximum amount each company can be awarded is 500K.
- o RBF is 37% of the stove price - The subsidy is based on a market study undertaken before KOSAP's inception.
- o Companies must submit financial reports of what they have achieved.

- End user subsidies.
  - o We introduced a 50% subsidy for the end user to help ease the burden.
  - o The company takes the cost of providing the customer a discount.
  - o Supplier gives a discount to end user i.e. if a product is 5000 KES, then the customer pays 2500.
  - o Independent Verifying agent goes to households to verify and issue certificates- then the balance is paid.

Outcomes/ Learnings from RBF

- No sales have been made on mini-grids – none have been operational due to several challenges including project land acquisition.
- Overall, people are willing to take up the product except for affordability challenges.
- The companies that have achieved sales of products are those that are providing pay-go, therefore, to sell cookstoves you must devise a mechanism for credit.
- So far, only biomass cookstoves have been distributed through the RBF program. Even with the above grants, we have recorded 13000 sales over 5 years.
- In 2022, we expanded the scope to include LPG, biogas, and ethanol – the biggest challenge for this has been creating awareness for the products and still the low purchasing power by the communities we are serving.
- Some companies have returned money to KOSAP because the market has been very difficult.
- Companies that have succeeded provide credit to end users.

Recommendations & Thoughts on RBF Design

What would make an e-cooking RBF successful in the Kenyan market?

- RBF should also ensure to include rural and poor populations in its scope.
- Companies need a lot of support like the advance grant.
- Pay-as-you-go/ credit support is helpful for companies in their marketing/selling strategy.
- Ensure the duration taken for verification is not so long in between as companies need money as in most cases their funds are not enough.
- Set targets for the RBF realistically.
- Consider the multitier framework in the RBF allocation approach – for communities in the poorest locations i.e. 14 ASAL counties in Kenya, most people cannot afford the product.
Carbon finance has been creeping up and its potential can be explored.
Anything else you would like to share?
o It seems you have had success on RBF, it will be good to share with us your learnings and insights on uptake per county.

- - AFDB Ecooking Interview: Energy &Petroleum Regulatory Authority (EPRA)

Participant Name(s)
- Eng. Nickson Bukachi
- Eng. Ignatius
- Eng. Peter Waihenya
- Eng. Hassid Okumu

Organization
- Energy & Petroleum Regulatory Authority

EPRA and CLASP have collaborated in the past on MEPS for refrigerators.

Experience

What are your thoughts on having an RBF targeted for e-cooking technologies?
- As EPRA, we do not have much experience with RBF. However, personally (Eng. Bukachi) was involved in the design of the RBF program i.e. ADELE together with the EED Advisory

From conversations with other stakeholders, consideration for a special tariff e-cooking tariff has come up. What are your thoughts on this?
- There are three current tariff bands, 0-30, 30-100, and above 100 kWh
- For households using less than 50 kWh per month, there is already a special tariff in the current tariff period.
- Before an e-cooking tariff, it would require first determining the cost i.e., at what tariffs per unit does e-cooking become viable? Also, if something is using tariff over time i.e. what is the price sensitivity?
- If we were to amortize the cost of buying feedback, what is the breakeven point i.e. amortize cost per unit vs smart metering technology?
- How do we isolate the smart metering utility by appliance based on the current distribution model
- It would require having regulations in place
- It would also require a cost comparison of similar e-cooking tariffs implemented elsewhere to inform a basis upon which the tariff can be applied

In terms of implementation, it will be good to consider:
- For domestic consumers, how is it viable for EPRA to give incentives?
- Are there case studies where people have implemented an e-cooking tariff
- How does EPRA make it work – tools & infrastructure needed, the inclusion of relevant partners/ parties, etc?
- How does KPLC differentiate domestic customers?

Recommendations & Thoughts on RBF Design

Recommendations / Suggestions on RBF Design
- Consider the balance between social impact, quality, and efficiency standards for e-cooking technologies and innovation of technology.
- Engagement of 3rd party stakeholders in the processes such as evaluation etc
- Carbon financing and how it can be leveraged.
- Make it agile – quickly update the database of products that can be included in the program
- The sector is still developing- ensure appliances in the market meet the needs of Kenyans, they might need changes in terms of product quality

- Inclusion – ensure a balance between people with experience and new market entrants i.e. small traders may not have good proposals but that does not mean only big companies (who can invest in presenting strong proposals) should benefit.
- Be aware of market distortion – support growth in an organic way – don't prevent people who want to participate from doing so based on conditions the RBF may create.
- Who is the main beneficiary in the RBF? Company or users? how are benefits transferred? We have seen cases, particularly in the context of Mini grids where ex-pats are paid w

Annex 3: - Minutes of KPLC engagements in Targeted Markets

Kenya Power	ISO 9001.2008 QMS OPERATING PROCEDURE SALES GRWOTH – PIKA NA POWER	DOC NO.	
		Issue No.	1
	Nyeri- Nyeri County	Revision No.	1
	Date: 7th June 2024 -March 2025	Date of Issue	10th June 2024

AREA: NYERI- NYERI COUNTY

PARTICIPANTS:

Marketing Officer 1 (Sales growth) – Wairimu Njakia

Customer Experience Staff – Nyeri/ Nairobi Office

Our partner Sayonaapa

EVENT: STAKEHOLDER FORUM AND REALTORS BRUNCH EXPO 2024

SUMMARY:

SET-UP & LOCATION

The venue was at the Nyeri County -Nyeri Members Golf Club(Realtors brunch) and Stima house Nyeri (stakeholders forum)

We enjoyed good visibility as we had informative banners right from the gates. The people walked in and enjoyed the talks and the live demos. There were questions asked and answered as the live demonstrations were carried out. Sayona and tefal sold their appliances to all the customers who were interested.

On display, we had:

I. Electric Pressure Cookers, Rice Cookers, Commercial Blenders & mills,
II. Induction Cook Stove, Air- fryers
III. We shared the space with Customer experience staff form Nyeri / Nairobi office who answered any enquiry and sorted complaints on other Kenya power issues.

ATTENDANCE

The event was well attended and attracted mainly the business community. There were also a few leaders. The MP for Nyeri and some MCAs were present. We managed to attract a good number of customers who were curious on Kenya Powers interest in cooking. Our partners made some impressive sales and most importantly, they went away with list for sales follow up as their stocks run out. They were to follow up and supply. 17 EPCs were sold and carried away on the 1st day.

REMARKS

1. The myth that cooking with electricity is expensive is real and Customers need to see to believe.
2. It was evident that the people who came are influencers in their own right. Some ordered appliances for their mothers and wanted their mothers educated too.
3. There were very many questions on the induction cooker and more about 12 people indicated interest in buying. Unfortunately there was no induction cooker supplier present.
4. The middle class is quick to adopt to e-cooking once the message is received. The switch is made fast and the satisfaction is high.

5. The event generated a lot of interest & empowered our customers in the need to switch to clean cooking and specifically eCooking with energy efficient appliances. The EPC was the main attraction due to the savings that are realised everytime a meal is made
6. For the business class and the people in leadership the most important thing was cost and time saving. The convenience the appliance provided was an added advantage. The health aspect was something they considered for their relatives and workers. Who would need to pay for the appliances through a financing model that allowed them to pay several times.

Conclusion.

There is need for awareness creation for all sectors of the community in the country. Its is clear that knowledge of ecooking is still low in the counties.

The events were successful.

Below are some photos from event

AREA: MURANG'A COUNTY

PARTICIPANTS:

Pika na Power Team

Wairimu Njahia

Victoria Nzioka

Customer Experience & Liaison staff in the region

Kenya Power	ISO 9001.2008 QMS OPERATING PROCEDURE SALES GRWOTH – PIKA NA POWER	DOC NO.	
		Issue No.	1
	Nyeri- Nyeri County	Revision No.	1
	Date: 7th June 2024 -March 2025	Date of Issue	10th June 2024

Our partners: TEFAL – Nyalore impact

EVENT: CUSTOMER ENGAGEMENT - E-COOKING/SALES GROWTH AWARENESS CAMPAIGN - MT KENYA

SUMMARY:

SET-UP & LOCATION

The Pika na Power Mobile Kitchen was used for the cooking demonstrations.
The focus for this campaign was the EPC Electric Pressure Cooker especially in the rural areas

KPLC MUKUYU OFFICE

The Mobile unit was set up near the main entrance to attract the staff as well as the public in the spirit of starting the eCooking education with the Kenya power staff. The interest was big especially in making the local delicacy which is Maize and beans.
The was a lot of interest with the men buying more units than the women. This was interesting as they did not listen for long but made decisions very fast.

MARAGWA MARKET

The set up was at the parking of the market lot, this was a good location as it was a market day and there were many people coming to the market.

ATTENDANCE

There were 32 staff attending the early morning engagement. And 30 external customers. The EPCs were bought by both the staff and customers.
A the market the traffic was good and Tefal managed to make sales.

REMARKS

The event was very successful and the Supplier of the day, Tefal, sold an impressive 35 EPC's in total.
There is need to return to the area to continue sensitizing our staff in other depots & the public on the benefits of clean cooking

Kenya Power	ISO 9001.2008 QMS OPERATING PROCEDURE SALES GRWOTH – PIKA NA POWER	DOC NO.	
		Issue No.	1
	Nyeri- Nyeri County	Revision No.	1
	Date: 7th June 2024 -March 2025	Date of Issue	10th June 2024

AREA: WEST KENYA - KISUMU

PARTICIPANTS:

Pika na Power Team

Wairimu Njehia

Hylina Kerubo

Customer Experience & Liaison staff in the region

Our partners: TEFAL – Nyalore impact

EVENT: CUSTOMER ENGAGEMENT -

SUMMARY:

SET-UP & LOCATION

The Pika na Power Mobile Kitchen was used for the cooking demonstrations. This unit helped reach a section of customers that would not reach the Pika na Power center easily. These customers are supplied power from the grid making them relevant for this engagement.
The focus for this campaign was on the Electric Pressure Cooker (EPC)

Kisumu

We set up at the staff parking at Electricity house so as to start with staff awareness. We moved to another location within the town. Before moving to the interior areas of Kisumu.
There exercise took 5 days.

ATTENDANCE

The staff engagement was at 7.45am before they continued with the duties of the day. 45 members of staff attended the awareness and were actively engaged for one hour.
The event was a success 18 EPC's. were bought. The staff requested that there be schedule to visit the region at least quarterly this was mainly due to the fact that they felt there was more they needed to learn.
The mobile demonstration unit continued to other areas that had been planned by the county staff. Market areas and other areas that had high population.
The interest was very high whenever people witnessed for themselves how the meals used few units to cook and still tasted as good as when cooked in the traditional way. It was difficult to take names of attendants but the supplier was able to sale 22 EPC in the 4 days the mobile unit was in the market places.

Conclusion

Kenya is ready for ecooking. The masses do not know about the efficiency of eCooking yet kenya power has 9 Million connected customers. There is room for ecooking.

AREA: KAJIADO

PARTICIPANTS:

The Pika na Power Team

Wairimu Njehia

Victoria Nzioka

Our partners – Tefal, Sayona & Powerpay.

EVENT: CLEANING COOKING WEEK- KAJIADO

SUMMARY:

SET-UP & LOCATION

The venue was at the KCB grounds in Kajiado where ~~we~~ a booth and a space was provided for us to park our mobile kitchen

On display, we had a wide selection of
Electric Pressure, Cookers, Rice Cookers, Air fryers ~~&~~ Induction cookers

ATTENDANCE

The event was well ~~attended the~~ Permanent secretary of the Ministry of Energy was in attendance together with senior officials of the Ministry and the County. The were over ~~300 people~~ attending spread out in the 3 days the forum took place. The mobile kitchen Unit ~~attracting many~~ people. This was the trucks maiden trip.

The traffic was good ~~and~~ had at least 100pax visit both the booth & truck!
Many people bought the appliances and others placed orders for follow-ups.

REMARKS

I. The event was an ~~eye opener~~ in many ways. With the last mile project most of the people who came revealed that they had been connected but they still used firewood to cook. They did not have the capacity to buy Ecooking appliances but were willing to do so through the women Chamas
II. There were a few villages that only accommodated women from abused marriages and these were very needy and willing to transition to any-cooking method that would save them money and time. The EPC is a good sale for them.
III. Kajiado is a very big ~~area~~ and the potential is very big and the potential for ecooking is totally unexplored.

Annex 4: Attendance Lists

ATTENDANCE SHEET

Date: 21/11/2024 Activity: SAYONNARAS – EPC's

No	Name	Staff no	Section	Sign
1	Lucy W. Njoka	17216	Finance	[illegible]
2	Stephanie Vorman	15914	Finance	[illegible]
3	Mercy W. Nyoro	32462	Clinic	[illegible]
4	Catherine Stephen	15354	C/ Service	[illegible]
5	Mercy Towett	05572	Admin	[illegible]
6	Keith Gitonga	71475	Finance	[illegible]
7	Lucy Kamau	19305	Admin	[illegible]
8	Lucy Juma	71587	SHE	[illegible]
9	Grace Nduta	18960	Finance	[illegible]
10	Lydia Mwangi	14347	B/DEV	[illegible]
11	Susan Cherotich	80412	ICT	[illegible]
12	Rosaline Awuor	5430	Finance	[illegible]
13	Jane Wanjiru	11925	Adm	[illegible]
14	Margaret Gathoni	14702	Experience	[illegible]
15	Catherine Otieno	72314	CX	[illegible]
16	Miriam Moraa	16044	Finance	[illegible]
17	Eva Osodo	18513	Finance	[illegible]
18	Evalyne [illegible]			
19	Kiende Mwenda	71049	Finance	[illegible]

20	Joy Githinji	71466	Finance	[illegible]
21	Lilian Anyango	07325	Dl control	[illegible]
22	Ruth Chemutai	57035	Finance	[illegible]
23	Mercy Kimathi	71623	Finance	[illegible]
24	Miriam Kavanga			[illegible]
25	Esther Njenga			[illegible]
26	Grace Mugambi	12206	Dl control	[illegible] – 0722586105
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MT. KENYA REGION
PIKA NA POWER DEMO
HELD ON 11[TH] MARCH 2025– STIMA HOUSE -NYERI

Name of Participant	Staff No.	Designation	Mobile No.	Sign
1. Jackyline Wasike	17838	Finance	0724309159	
2. Ann Nzilani	83628	PROCUREMENT	0735213870	
3. Michael Murage	19278	HR & Admin	0715246954	
4. Simon [illegible]		[illegible]	0706994610	
5. Derrick [illegible]		ICT	0700408908	
6. Samuel Gitiha		ICT	0791820308	
7. [illegible] [illegible]		ICT	0707275543	
8. Laura Mbo		ICT	0780052523	
9. [illegible] [illegible]		[illegible]	[illegible]	
10. Edde Mathenge		BID	0722906879	
11. Beatrice [illegible]		E/PLANT	0720518081	
12. Luke Ragga Wan		M/R III	0723 867401	

HR - L&D

HR - L&D

49. JOB MONYONCHA	S/N 20480	O&M	NYERI	
50. Julius Njage	N/A	O&M	NYERI	
51. GEORGE WAMBUGU	25206767	O&M	NYERI	
52. JACKLINE Muriuki	21357212	OEM	NYERI	
53. MICHAEL MUCHORA	18016	O&M	NYERI	
54. [illegible] [illegible]	15330	E/Plant	Nyeri	
55. Emma Auma	N/A	Attachment	Nyeri	
56. Nicholas [illegible]	N/A	O&M	Nyeri	
57. Cyrus Gitonga	N/A	O&M	Nyeri	
58. [illegible] NGARITHI	N/A	O/M	NYERI	
59. Brian [illegible]	N/A	O/M	Nyeri	
60. Peter Githaka	S/N 17767	Bus.DEV	Nyeri	

Name of Participant	Staff No.	Designation	Mobile No.	Sign
27. DAVID NGUNJIRI	03193	2nd ASS. SUPT.	0721-184813	
28. DORCAS [illegible]	57433	ACCOUNTANT III	0727-71292	
29. Thomas Mwaniki	–	Attachee	0759674346	
30. Peter [illegible]	86009	C/S	0702666015	
31. Brian [illegible]	–	Attachee	0795587319	
32. Brenda [illegible]	–	Attachee	[illegible]	
33. JOAN MUMBI	–	Attachee	0706882386	
34. Dickens Etty	20797	E. Plant	0707451495	
35. Peter [illegible]	–	Casual	0111023428	
36. [illegible] [illegible]	–	Casual	[illegible]	