

GRID ELECTRIC COOKING: SENSITIZING THE PUBLIC ON E-COOKING AS A VIABLE AND AFFORDABLE OPTION TO THE PROBLEM OF BIOMASS



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BACKGROUND

Cooking using traditional methods is currently the leading cause of environmental health risks throughout the world. Despite the revelation, **it is projected that more than 640 million people in Sub-Saharan Africa (SSA) will depend on biomass for their cooking needs by 2040.** Cooking with solid biomass in Kenya persists as the main cause of deforestation and indoor air pollution (IAP). Worth noting is that exposure to IAP has been **categorized as the second leading risk factor for deaths in low-income countries.** It is estimated that about 3 billion people are subjected to IAP, which leads to the death of more than 4 million individuals every year and over 50% of untimely mortality that is attributed to pneumonia in children under 5 years. In Kenya, the use of biomass fuel results in 44,000 deaths each year.

Even with the known harmful effects of biomass energy for cooking, it still dominates the cooking market in Kenya. **According to the 2019 report by the Government of Kenya,** 67% of Kenyan households depend on firewood and charcoal for their cooking needs with the proportion being extremely high in rural areas at 92% vis-à-vis urban areas at 27%. While the use of firewood has been declining steadily in the recent past the use of charcoal has relatively remained constant with firewood use being displaced by LPG over the last 20 years. Just like LPG, electric cooking can greatly revolutionize the cooking sector in Kenya. However, its adoption is relatively low considering that only 3% of Kenyan households own electric

cooking appliances. As such, awareness creation on e-cooking ought to be conducted often to stimulate demand for e-cooking technology.

Electric cooking, if adopted on a large scale, can help address the problem of biomass and other developmental goals such as gender equity, energy access, environment, and well-being by enabling access to reliable electricity and clean cooking. The emerging opportunity will take advantage of the speedy progress made in the electrification sector to steer the clean cooking agenda towards the realization of SDG7 by 2030. Besides, a new generation of e-cooking appliances that are highly efficient such as electric pressure cookers (EPCs) now exist, which can decrease costs significantly by reducing the time and number of electric units needed to cook. Nevertheless, many people are still not yet aware of energy-efficient appliances and their potential in as much as they can offer a cost-effective solution to the biomass menace.

The grid cooking event was thus organized with the sole aim of creating a platform where different manufacturers can showcase their energy-efficient electric appliances while demonstrating their effectiveness.



Figure 1: Sayonapps displaying their appliances

OBJECTIVES OF THEWORKSHOP

The workshop aimed to create awareness on e-cooking to stimulate demand for the technology and its eventual adoption on a wide scale. This was done by:

- Demonstrating how the various energy-efficient e-appliances work, the energy they consume, the time taken to prepare different meals, and their prices/availability in the market.
- Informing the participants of the effectiveness of the technology i.e., its versatility and effectiveness.
- Identifying the capacity gaps related to clean cooking and addressing them.
- Having conversations about strategies that will promote the uptake of clean cooking technologies.
- Giving the attendees the chance to taste the different sampled meals and express their opinions on how the meals taste.

OVERVIEW OF THEWORKSHOP

Driven by the common agenda for the adoption of clean cooking technologies, specifically e-cooking, and global transformation, the Africa Centre for Technology Studies (ACTS), the Kenya Power & Lighting Company, the Clean Cooking Association of Kenya (CCAK), and Gamos East Africa organized a one-day hybrid meeting.



Figure 2: Participants keenly following the demonstrations

The event, which took place at the Pika na Power Demonstration Center, Electricity House, Nairobi on the 6th of September 2022 brought together different e-cooking manufacturers such as BURN Manufacturing, Von Hotpoint, Sayona apps, and Moulinex Tefal. The workshop thus provided an essential platform for the manufacturers to display a wide range of their energy-efficient electric appliances and demonstrate how the appliances function, the precautions to take while using them, the energy they consume, their prices, and their efficiency.

The event was the third of the e-cooking community of practice (CoP) dialogues that are normally held monthly. The first monthly dialogue focused on understanding the electric cooking techno-policy landscape in Kenya while the second focused on the role of mini-grids in promoting e-cooking in the country.

The e-cooking community of practice (CoP) was virtually launched in April 2022 to initiate and sustain continuous dialogue on electric cooking options in Kenya towards the realization of universal clean cooking access in Kenya by 2028. The platform brings together various stakeholders in the electric cooking and clean cooking space in Kenya and beyond. While acting as a platform to bring different stakeholders together to dialogue on the e-cooking opportunities in Kenya, the CoP also allows data and information sharing thus allowing inclusive and effective collaborations between the electrification and clean cooking sectors which had previously been working independently. As a result, an enabling e-cooking environment will be created to allow policymakers to formulate policies that endorse electric cooking in the country.

Key Messages

- Awareness creation on e-cooking should be continuously carried out to sensitize the general public, especially those in rural areas who mostly use biomass fuel to cook.
- There is a need for political good that will create an enabling environment that will accelerate the uptake of e-cooking technology on a wider scale.
- Underscore the co-benefits of clean cooking beyond its affordability given that many people are hesitant to transition to e-cooking since they feel it is quite expensive.
- E-cooking appliances have to be energy-efficient. If it is not energy-efficient then it is not effective.



Figure 3: Tefal Distributors in action

OUTCOMES AND WAYFORWARD

The event which had almost 100 participants (both physical and virtual) was a success. As it is always said, you cannot buy an idea that has not convinced you. Distributors from BURN Manufacturing came to the workshop with 10 EPCs with a capacity of 8 liters each, which they wanted to sell at a discounted price of Ksh. 10,000 after the meeting. To their surprise, all the EPCs were bought and the participants who were present ordered more from them, which they promised to deliver.

The implication as such is that e-cooking technology has a huge potential and can greatly revolutionize the cooking sector. However, many people are still not aware of the technology. As a result, more such events need to be organized often in different parts of the country to create awareness and ensure that no one is left behind in the journey aimed at achieving universal access to clean cooking by 2030.



Figure 4: Food sampling session

ABOUT MECS

Modern Energy Cooking Services (MECS) is a five-year Programme funded by UK aid which aims to spark a revolution through rapidly accelerating the transition from biomass to clean cooking on a global scale. By integrating modern energy cooking services into energy planning, MECS hopes to leverage investment in renewable energy (particularly in electricity access, both grid and off-grid) to address the clean cooking challenge. Modern energy cooking is tier 5 clean cooking, and therefore MECS also supports new innovations in other relevant cooking fuels such as biogas, LPG and ethanol. The intended outcome is a market-ready range of innovations (technology and business models) which lead to improved choices of affordable, reliable and sustainable modern energy cooking services for consumers. We seek to have the MECS principles adopted in the SDG 7.1 global tracking framework and hope that participating countries will incorporate modern energy cooking services in energy policies and planning.



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