



ELECTRIC COOKING MARKET, NEEDS, VALUE PROPOSITION, AND THE KNOWLEDGE ATTITUDES, AND PRACTICES OR PERCEPTIONS TOWARDS ELECTRIC COOKING IN UGANDA

EXECUTIVE SUMMARY

Uganda's reliance on biomass for cooking accounted for 90.5% of total energy consumption by 2023, driving significant environmental and health challenges, including rapid forest degradation, deforestation, and household air pollution. With less than 15% of the population employing clean cooking practices, Uganda's forested land is shrinking by 2.6% a year, and 8.2% of infants are dying due to household air pollution¹.

To address these issues, the Government of Uganda prioritized clean cooking in its Third National Development Plan (NDP III), to reduce biomass energy use for cooking to 50% by 2025 from over 80% in 2020².

Despite significant government efforts, including tax exemptions on clean cooking technologies and the introduction of an electricity cooking tariff, adoption remains low³. Electric cooking (e-cooking) offers a promising solution, with Electric Pressure Cookers (EPCs) proving highly energy- and cost-efficient⁴. These technologies enable significant time and energy saving for cooking traditional dishes, including plant-based cuisines, which are popular in Uganda.

Despite this potential, adoption faces barriers, including cultural attachments to traditional cooking methods, misconceptions about taste and quality, and infrastructural limitations.

STUDY FINDINGS IMPLICATION

The Behavioural Change Communication for e-Cooking (BCeC) project, implemented by the National Renewable Energy Platform (NREP) on behalf of the Ministry of Energy and Mineral Development (MEMD), funded by the UK's Foreign, Commonwealth & Development Office (FCDO) through the Modern Energy Cooking Services (MECS) programme, aims to accelerate the adoption of e-cooking technologies. The project aims to raise awareness, dispel misconceptions, and highlight the benefits of e-cooking through targeted messaging and community engagement.

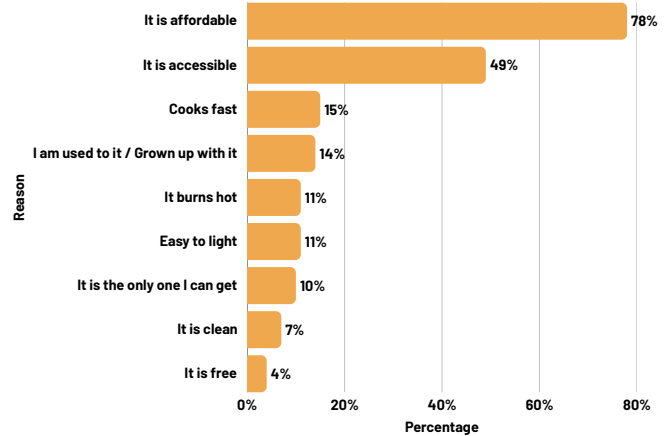
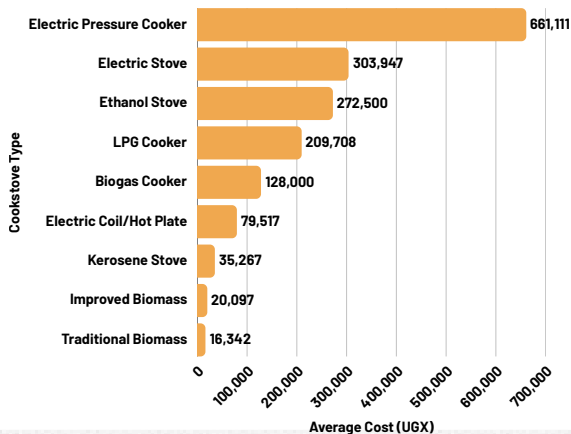
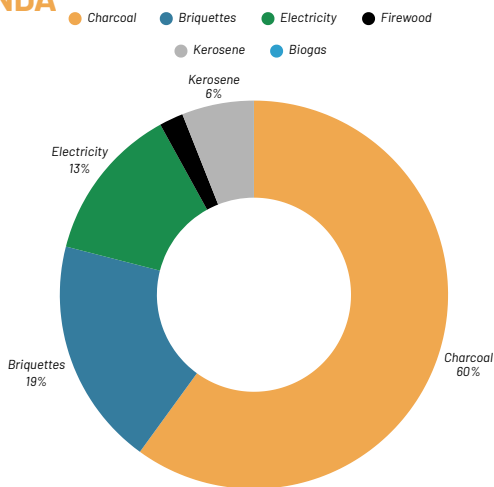
A baseline study involving 3,666 respondents across six cities, that is, Kampala, Mbarara, Gulu, Masaka, Mbale, and Jinja, from whom data were collected on household cooking practices, perceptions of e-cooking, and preferred communication channels. Findings were intended to inform targeted awareness campaigns and guide strategic interventions aimed at reducing biomass dependence, improving public health, and promoting sustainable energy solutions.

KEY INSIGHTS

- Traditional biomass fuels, particularly charcoal, are the predominant fuels used in urban Ugandan households. Of the respondents, 91.4% use charcoal in some form, while 77% primarily rely on it.

- Fuel stacking is common among urban households. About 45% of households use multiple fuels to cope with seasonal changes, rising costs, and diverse cooking needs.
- Women are the main determinants for cooking technology use in 79% of households.
- Grid electricity access in urban households is high, with over 85% of households in case study cities had access to electricity.
- Electricity reliability varied widely across cities. While 62% of households reported having reliable electricity, cities like Gulu (50% reliability) and Mbale (11% unreliable electricity) face significant challenges.
- More than 50% of households rarely or never received advance notice about electricity service interruptions.

CURRENT CLEAN COOKING CLIMATE IN UGANDA



POLICY CONTEXT AND ANALYSIS

Uganda's National Development Plan III aims to position the country as a competitive upper-middle-income economy by 2040, with a focus on sustainable energy development. Clean cooking is a key enabler for achieving this vision as it contributes to improved health, environmental sustainability, and economic growth.

In line with this vision, the Ministry of Energy and Mineral Development and its respective working groups have made significant efforts to promote alternative fuels like Liquefied Petroleum Gas (LPG), biogas, ethanol, and electric cooking through various policy instruments. These have led to a slight cutback in the use of traditional biomass for cooking, marking a positive step towards achieving Uganda's clean cooking targets. Some of these include;

- **The Uganda Energy Credit Capitalization Company (UECCC) subsidy program** subsidizes cooking appliances to households in the range of 50-60% of the market price⁵.
- **The electricity cooking tariff** was set at a rate of UGX 412/kWh for units in the 81st -150th range for domestic customers, making e-cooking more appealing⁶.

⁵ Akullo, L.R. (2024). UECCC's Price Subsidy Program for Clean Energy Technologies officially launched

⁶ Nantume, C (2025). ERA's Cooking Tariff: A Gentle Flame of Hope for Uganda's Women

- **The government's commitment to global climate change treaties**, such as the Sustainable Development Goals (SDGs) and Sustainable Energy for All, emphasizes clean energy as one of Uganda's priorities in improving the lives of its citizens, especially SDG 7 on affordable and clean energy and SDG 13 on climate change, which aim for universal access to modern cooking solutions by 2030⁷

In an effort to coordinate planning and execution of clean cooking interventions, the Ministry of Energy and Mineral Development is setting up a Clean Cooking Unit to oversee these efforts as well as attract investment in the subsector.

Notwithstanding, there have been persistent barriers to the realization of the targets to cut biomass use for cooking to 50% by 2025 from over 85% in 2020 due to;

The absence of national standards for Electric cooking in Uganda creates a challenging environment for consumers. Without standards, consumers have limited knowledge to make rational choices. This leads to a market dominated by overpriced, suboptimal appliances that cannot compete in regional and international markets.

Limited awareness, socio-cultural limitations, and misconceptions about clean cooking technologies hinder the transition from traditional biomass to clean cooking technologies, particularly electric cooking. This limited awareness on the long-term benefits of electric cooking solutions means that households may prioritize short-term cost benefits due to the high upfront costs of the electric cooking appliances and limited financial solutions over the long-term economic, energy-saving, environmental, health, and time-saving benefits.

Although the government has labored to allocate resources to clean cooking interventions, there is still a significant need.

The sector continues to heavily rely on donor funding. This results in insufficient funding, slow market growth, and dependence on unpredictable donor funding, which threatens project continuity.

Reliance on imported clean cooking appliances over the possible establishment of local assembling and manufacturing, particularly for electric cooking, affects the market prices and supply stability.

Last-mile presence and access to clean cooking appliances and after-sales repair services remain a key hurdle to the adoption of clean cooking, regardless of the awareness levels and affordability capacity. For instance, in several cities, respondents had never heard of or seen an electric pressure cooker prior to the study.



[Fashina et al. \(2018\) The Drivers and Barriers of Renewable Energy Applications and Development in Uganda: A Review](#)

RECOMMENDATIONS

- **Execute electric cooking campaigns in multi-layered programs curated in different local languages and champions**, which will enable further dissemination of behavioral change messages on electric cooking and also up-skilling of consumers. Integrate live cooking demonstrations in the electric cooking campaigns to render fast-hand experience among the masses to avert socio-cultural myths about the use of electricity for cooking.
- **Enhance last-mile access to electricity** through national grid and off-grid solutions to facilitate the use of electricity for cooking by households, institutions, and businesses. This will minimize the fuel demand imposed on the limited existing biomass stock.
- **Fast-track the development and gazettement of electric cooking standards** to address the national challenges of counterfeit and substandard appliances that could distort the e-cooking market.
- **Streamline the monitoring, reporting, and verification processes** of clean cooking interventions to facilitate consolidation of learnings, impact, reach, and challenges in order to inform policy, planning, and future interventions.
- **Leverage the charcoal supply chain network to establish clean cooking service value chain presence at the last mile.** Through capacity building and appropriate financing, charcoal suppliers and distributors can appropriately champion the supply of clean cooking technologies.



This policy brief was prepared by the National Renewable Energy Platform (NREP) as a follow-up to the Baseline Study Report on Electric Cooking Market Needs and Value Proposition, and the Knowledge, Attitudes, and Practices/Perceptions towards Electric Cooking in Uganda (2024).

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