



**AFRICA INSTITUTE FOR
ENERGY GOVERNANCE**



INCLUSIVE GREEN ECONOMY NETWORK-EAST AFRICA

Kampala, Uganda • Website: www.igen-ea.org • Email: contact@igen-ea.org

CLEAN COOKING ALTERNATIVES

Background

Earlier this year, President Museveni signed an executive order banning tree cutting for commercial charcoal production. This was a good gesture for environmental conservation. However, to successfully enforce the presidential directive, affordable clean cooking alternatives have to be available. Through this brochure, the Inclusive Green Economy Network-East Africa (IGEN-EA) shares what the

available clean cooking alternatives in Uganda are.

AVAILABLE CLEAN COOKING SOLUTIONS

Briquettes: These are more efficient than charcoal due to their increase in heating value (High Calorific Value: around 4000-4600). Briquettes can produce relatively more intense heat than other fuels. Briquettes also burn more reliably than other biomass fuel like charcoal and firework. They also burn at a constant temperature, which makes them efficient. Other quick facts about briquettes

include:

- They burn for an average of three and a half (3.5) hours compared to forty-five (45) minutes for charcoal.
- One requires 2 hours to cook dry beans using charcoal while briquettes cook beans in 1 hour and 10 minutes. The time savings increase exponentially when beans are soaked.
- In addition, it takes just about 50 minutes [L1] to cook steamed matooke using briquettes. The comparable time using charcoal is at 1 hour 40 minutes.
- Cooking matooke to steaming stage will cost UGX 2,000 if one is using a charcoal stove and just UGX 1,500 [L2] if one is using briquettes.

Cost: A pack of about 20 briquettes costs UGX 5,000. A sack of charcoal (70-80kg) costs about UGX 120,000. Briquettes can be bought from Tokosa Eco-Briquettes and grocery shops. Communities also make their own briquettes.



Modern cooking stoves:

These are more efficient and emit less emissions in addition to saving charcoal and money. Modern cookstoves consume up to 40% less fuel than traditional cookstoves. The cookstoves have the potential to save a family 20% of their daily expenses as they use less charcoal per day. The CO₂ emission saving of the stove is found to be 1.3 tCO₂/year. Modern cookstoves come in blue and purple colours in Uganda. They can be bought from UGASTOVE among other suppliers.



Cooking Wonderbags: The Wonderbag is a simple, non-electric slow cooker. It is a heavily insulated bag that uses the principle of heat retention to cook the food slowly. After bringing a pot of food to boil and placing it in a Wonderbag, the food will continue cooking for up to eight hours without any additional energy source. The Wonderbag can support cooking of ordinary foods like matooke, rice, beans and others. Beans need 20 minutes pre-cooking time and about 2-3 hours in the bag to be ready. Other benefits of Wonderbags are discussed below.

- The wonder bag saves at least 30% of the total fuel costs associated with cooking using charcoal or firewood.
- The bag reduces deforestation by three times and carbon emissions by half a ton every year.
- It also preserves 100% food nutrients since there is no evaporation.

Cost: A single Wonderbag costs between \$14 and \$60 which is about Shs 51,000- Shs 220,000 depending on the

size. Wonderbags can be bought from Tanuri Uganda grocery store.



Electric Pressure Cookers (EPC) are predominantly for households with access to electricity. They heat more efficiently and effectively, which saves electricity bills and makes cooking, faster, easier and more affordable. Electric Pressure Cookers use steam pressure and temperature to cook. Research by Uganda's Centre for Research in Energy and Energy Conservation (CREEC) reveals the following:

- Cooking beans with an electric pressure consumes 0.6 Kilowatt hours (kWh), which is equal to 0.6 units of electricity. Using an electric hotplate would consume 2.1kWh, or 2.1 units

- The comparable figures for cooking matooke would be 0.35kWh or 0.3 units and 1.1kWh or 1.1 units respectively.

- It also takes just about 50 minutes to cook steamed matooke using an EPC. The comparable time when one is using charcoal is 1 hour 40 minutes.
- It requires 2 hours to cook dry beans using charcoal, and just 30 minutes using an EPC.

Cost: EPC prices range from between UGX 150,000 and UGX 416,000, depending on size and quality. EPCs can be bought from Kwesi stores, kweli.shop as well as The Ideal Kitchen and Appliances among others.



Rocket Lorena Stoves: They are energy-efficient cooking stoves, powered by wood and made out of local materials such as soil, clay and water. Wood is burned in an insulated combustion chamber, heating two pots which increases efficiency further, after which the smoke

is rerouted outside by a chimney. The rocket lorena stoves use up to 50% less firewood compared to traditional three stone fireplace by maximizing the heated surface area and minimizing unwanted heat dissipation. Additionally, smoke is reduced and contained, which ensures a healthier cooking environment. For trainings on how to make Rocket Lorena Stove contact: 0765845251 or 0773698725



Other clean energy alternatives include biogas, especially for people engaged in animal husbandry and those with kitchen waste. Solar cookstoves which use solar power and volcanic stones are the other option.

