How a Green Bond Powered Clean Cooking, Better Jobs, and Climate Gains

Access to clean cooking remains a critical global challenge with widespread effects on health, gender equality, environmental sustainability, and economic development, states the World Energy Outlook 2025 report by the International Energy Agency (IEA)[1]. Nearly 2 billion people worldwide, half of them in Sub-Saharan Africa, lack access to clean cooking, relying on polluting fuels.

In Africa, greenhouse gas emission from traditional cooking methods causes about 815,000 deaths; a loss of 1.3 million hectares of forest to fuel use; and up to 25% of energy-related carbon dioxide emissions annually. Furthermore, women and girls are extremely affected, spending more than four hours daily gathering fuel and cooking, thus limiting their educational and economic opportunities.

Such grim reports highlight the urgent need for investment to accelerate universal access to clean cooking solutions. At 44%, the IEA reports that the private sector is the largest investor in clean cooking. With over 13 years of sustained impact and innovation, BURN Manufacturing has emerged as one of the most successful private sector actors in the sector.

In 2023, BURN Manufacturing, an Africa-based cooking stove manufacturer, launched a US$5m short-term bond to finance its manufacturing expansion and research and development of energy-efficient cookstoves. The bond was 100% oversubscribed, raising US$10m. *"It was so successful, we were 80% subscribed before the public announcement!"* shares Ted Miller, head of corporate finance at BURN. With the proceeds, BURN increased its manufacturing capacity in its main plant in Kenya from a monthly capacity of about 150,000 units to nearly half a million units; and to develop four assembly sites in Tanzania, Malawi, the Democratic Republic of Congo and Nigeria.

FSD Africa's Catalytic Role

FSD Africa provided technical assistance to ensure that the bond aligns to the International Capital Market Association's (ICMA) Green Bond Principles (GBP) 2021; and technically and financially supported the second-party opinion through Agusto and Co. Ltd., a leading credit rating agency. *"FSD Africa got wind of our fundraising efforts and just jumped in to support us through programme activities and green certification as part of their objective to develop capital markets here in Africa,"* explains Ted.

[1] UniversalAccesstoCleanCookinginAfrica.pdf

FSD Africa’s support was vital for BURN’s inaugural green bond offering. *“Typically, bond offerings are reserved for larger scale or Western companies. It was a novel concept for clean cooking in sub-Saharan Africa,”* Ted states. BURN faced the challenge of demonstrating that the impact of its energy-efficient cookstoves delivers significant health, environmental and livelihood benefits. With FSD Africa's technical guidance, BURN persuaded regulators to adopt a more holistic understanding of what qualifies as a green investment and ultimately enabling the bond to qualify under Green Bond Principles.

FSD Africa’s support proved catalytic, enhancing BURN’s credibility among existing investors and new partners, including stock exchanges, guarantee providers, and institutional investors across Africa and globally. The green bond served as a de-risking instrument, helping to attract further large-scale investments such as a €15 million investment from the European Investment Bank (EIB); and a more recent US$25m from the African Trade and Development Bank. BURN has raised over US$100 million additional financing since the bond issuance.

Being among the first African clean energy companies to successfully issue a green bond, BURN has created a financing playbook that other firms in the sector are now looking to replicate. With the green certification, BURN is better placed to negotiate more favourable financing terms and access more competitive capital through diversified funding sources beyond development finance institutions and donors. These include public listings or restricted public offerings to open investment to institutions, pension funds, retail investors, carbon project investments, other debt financing and bond issuances with higher amounts and longer tenor. The company is currently preparing a second bond offering focusing on indicators such as women’s time savings, quality of life and other social impacts beyond carbon savings.

Outcomes of the Bond

Following the successful capital raise, BURN has expanded its presence from 8 to 14 countries across Africa, offering five product types including wood, charcoal, electric and LPG appliances, and institutional-sized stoves. The company also remarkably expanded its workforce by nearly 1,000 new employees, to over 3,000 across Africa.

Beyond significantly scaling up production and innovation, BURN has impacted millions of households across Africa through safer and cleaner cooking alternatives, directly addressing the health, economic, and environmental burdens associated with traditional cooking methods. *“Two million new families can now breathe less emissions every day and save about USD 1000 over the life of their (respective) products,”* Ted breaks down the figures.

Each stove helps reduce greenhouse gas emission by up to 80%, contributing to improved health outcomes, particularly for women and children, who are traditionally responsible for cooking and fetching fuel in the African context. Independent assessments have validated that each stove saves approximately two tons of carbon emissions annually and delivers around USD 1,000 in lifetime savings per household, largely due to reduced fuel use. Jointly, they are expected to prevent the consumption of 15 million tons of firewood.

One of the most groundbreaking outcomes supported by the bond was the development of Africa’s first electric induction cooker tailored for low-income households. This innovation integrates highly efficient induction technology, carbon financing to subsidise consumer costs, and localised design features such as regional naming conventions and culturally relevant functionality. To ensure affordability, the cookers are sold through flexible payment models such as pay-as-you-go (PAYGO) and deposit-and-instalment plans. This addresses the affordability barrier faced by up to two-thirds of Africans who would otherwise need to spend more than 10% of their income to adopt clean cooking technologies.

BURN also invested in localised manufacturing capacity to support the scaling of this innovation, operating the only induction-ready stainless steel cookware manufacturing line in Africa. The green bond also contributed to the following eight Sustainable Development Goals (SDGs): 1. reduced poverty; 2. reduced hunger; 3. improved health; 5. gender equality; 7. clean energy; 8. work and economic growth; 13. climate action; and 15. sustained life on Land. *“We exceeded our expectations… But there are still about 900 million people using traditional cooking methods every day in Africa, to reach,”* Ted concludes.

Customer Testimonials

Mercy Njoki Waigwa is a married mother of three daughters aged between 20 and 12 years. She bought BURN’s electric induction cooker set which includes two pots and a pan, priced at Kshs. 14,000 (USD 109), using a pay-as-you-go plan of Kshs. 240 (USD 2) per day. She previously used a regular charcoal stove, spending up to Kshs.200 daily on fuel. She has used the cooker for slightly over one year. *“The cooker is cleaner, cheaper (at Kshs.70 per day), faster, portable and easier to use. My eldest daughter is allergic to charcoal smoke but no longer needs eye medication because the indoor air is cleaner. My youngest daughter can* *also cook on it as it has clear instructions for use. I've recommended the cooker to neighbours, friends and my mother."*

Caroline Wangui is an unmarried mother of three boys aged between 15 and 8, uses the improved charcoal stove, *jikokoa*, which she bought at Kshs.2,000 (about USD 15) from savings. Previously, she used a regular charcoal stove and a kerosene stove, spending Kshs.420 per week on fuel but currently spends about Kshs.140. *"The other jikos were not durable… One time my house almost got burnt after the jiko got damaged and spilled ambers on the carpet. Also, sometimes neighbours would complain about smoke from my cooking. Besides, my son who has respiratory challenges could not stay indoors while I cooked, due to the smoke. His chest is clearer now, and he doesn't need regular medical attention. Jikokoa is lighter, fuel saving, durable and cleaner to use."*