

# EMERGING COOKING SOLUTIONS TO DELIVER 50,000 HOME ENERGY SYSTEMS TO LOW-INCOME HOUSEHOLDS IN ZAMBIA THROUGH PAYGO

Emerging Cooking Solutions has with support from EEP so far sold about 5,000 domestic stoves and about 100 institutional pellet cooking stoves. After years of trial and error, and many challenges associated with being one of the first movers in Africa in the sector, it is now set for a rapid growth. During 2017-2021 Emerging Cooking Solutions is poised to sell 50,000 units of its comprehensive Home Energy Systems (lights, mobile charging, stoves and fuel).



Emerging Cooking Solutions is a Zambian company established in 2012. It was founded on the vision that biomass pellets made from sustainable biomass can replace the vastly destructive charcoal as a cooking fuel, by competing on price. The business idea is that most low-income people in peri-urban areas spend about \$200 per year on cooking fuel and that the same cooking needs can be met by a much smaller amount of pellets, produced at a relatively low cost, when using high-efficiency pellet stoves.

The company established its first pellet factory in 2013, which burnt to the ground along with 6 months of pellet stock at the end of 2015. Not intimidated by challenges and with the support of EEP, the team managed to build up a new factory and gain momentum again. It has now been proven that cooking with pellets is cheaper than charcoal in the major cities in Zambia, and that the performance of the pellet stoves provided is far better than traditional charcoal stoves both in terms of speed and low emissions. In fact, the combination of pellets, branded SupaMoto®, and stoves, tuned by the company to work perfectly together, works so well that cooking can be done indoors without any discomfort or blackening of the pots. The customers are very excited about this.

## High cost of the equipment, low cost of the consumable

Although the consumable (pellets) is cheaper than charcoal, the pellet stoves are not. This is one of the main challenges that the company has had to tackle. The high-end stoves have a built-in battery to power a fan for cleaner combustion and a solar power to charge the battery. These stoves are made by companies such as MimiMoto, ACE or Philips and has retailed at around \$100 or more. The lower end pellet stoves, without a fan, retails at around \$40, but the combustion is not clean enough to cook indoors.

To provide a clean cooking solution, Emerging Cooking Solutions has been striving to sell mostly high-end stoves. To do so, the company has been developing various hire-purchase type models to allow customers to pay off the stoves over time. Payroll deduction schemes, using women's savings groups and working through farmer cooperatives are examples of models that the company has developed in order to increase security of payment.



However, to speed up the market creation and reach people outside of such group structures, the company has been working on a low-cost pellet stove without a battery that is close in performance to the very best. After two years and hundreds of hours of testing in an advanced emissions laboratory, the already patented stove is now in a user testing phase and planned to be introduced to the market towards the end of 2017.

## Combining lights and stoves with mobile money

In August 2016, the company introduced a comprehensive home energy packet, where the high-end MimiMoto stove is connected to a Solar Home System using Pay-As-You-Go (PAYGO) technology. The company's new business model is to extend the payment terms to 6-18 months for this comprehensive Home Energy System, much longer compared to the 3-4 months the company typically offered for only the stoves. The result of this longer payment period is that company has managed to more than double the average revenue per customer, increase margins, and reach both peri-urban and rural areas while maintaining security of payment through the PAYGO technology.

Although the company has an agreement with the French oil giant Total to distribute pellets through its gas stations nationwide, building up the capillary distribution infrastructure has still been a challenge. In this regard, introducing Home Energy Systems with its pellet subscription, working through groups and cooperatives has helped solve the challenge of distribution by a great extent.

[Emerging Cooking Solutions](#) has been funded by EEP first in 2011 (ZAM4010) and now recently through a regional project with the company Renen in South Africa (REG8036). The company has been selected by the Beyond the Grid Fund Zambia to sell 50,000 of its Home Energy Systems during 2017-2021.