Takamoto Biogas

Why to choose this solution?
Provides reliable biogas energy to small-scale dairy farmers in Kenya. Also minimizes reliance on firewood. Cooking with this biogas is easier, clean, quick, efficient, and convenient.

Savings per day or production:
More trees are conserved, households spend less purchasing charcoal and LPG for their cooking needs, and less time is spent by women and children in collecting firewood.

Cost in money and in own time to construct:
A customer pays KSh 100,000 (USD 1,000.00) for one system, with an initial payment of KSh 15,000 (USD 150). The remainder, KSh 85,000 (USD 850), is then paid in installments of KSh3,000 per month with no interest or security required until one fully acquires the kit. System installation normally takes one to two days.

Lifetime:
Related appliances, such as kitchen gas burners, and desulphuriser, which remove bad odours, are replaceable every two years. There is also on-site training for the users on maintenance.

Maintenance needed:
Replacement of appliances such as kitchen gas burners, de-sulphurisers which remove bad odour. There is also an on-site training for the users on maintainance.

Resources needed in use:
A farmer or buyer only needs to have a sustainable source of dung and sufficient water in order to process biogas through the digester.

Problems and limits:
High initial installation cost of biogas deters many low-income earners. Poor quality of installations done in the past by other individuals and companies led to failed systems and gave the technology a bad name. Lack of awareness about the use and benefits of biogas technology and a shortage of trained installers have been other issues that Takamoto has faced.

Where and how can you get it or make it?
Available at the head office in Githunguri town in Kiambu County, and from their warehouse in Karatina,

Nyeri County.

Skills needed to produce, install. maintenance, use:
Installation requires skilled technicians. There is on-site training on operation and maintenance. Internship programs where fresh graduates are trained and then attached to customers in specific areas over a three-month period are also provided.

How to use it:
https://youtu.be/8ZM0fiwu0Is

How to maintain it:
Not relevant.

Climate effect (if any):
More trees are conserved hence, deforestation is reduced. The system is also able to save about 4.5 tons of C02-equivalent methane emissions that would have been released to the atmosphere had the cow dung been left to decompose in the open.

Where it is used and how many users are there?
Over 3000 Takamoto biogas systems have been installed for small-scale dairy farmers (majority),self-help groups, children orphanages, government institutions and community hospitals in over 24 of the 47 counties of Kenya.

Why is it successful?
The system is very economical and there is readily available feedstock. Cost-friendly installation and affordable labour. Successful partnership with the number of local Savings and Credit Cooperative Societies (SACCOs) and Micro-Finance Institutions (MFIs) has increased uptake through credit facilities.

If you can make it, a short description, typical problems, materials needed:
A typical system comprises one 12m3 Balloon-Bag Digester, one double-burner cooker, and sufficient piping for the entire system.

How to make it (if possible):
https://youtu.be/-MPR2_Mckr8

How is it delivered and by whom?
Takamoto biogas company has employed Kenyans as technicians and sales people, 25% of whom are female. Technicians help with installations and repairs. Takamoto currently focuses on the lease-to-own model, which is working well. To support sales, the company engages seven sales agents, each with a monthly target of six systems, which they sell on a commission basis. Once the sale is made, the customer is assigned a unique account number that enables Takamoto to track the operational and financial status of the installation. System costs can vary due to the associated additional transport, labour, and other site costs.

Successful financial model
There is an internship programme offering training whereby fresh graduates are trained, then attached to customers in specific areas over a three-month period, to work closely with the farmers and to support them in biogas system operations. All Takamoto records/transactions are maintained electronically. A customised online software application manages all customer data including financial transactions, repairs, and maintenance with ease, then sends automatic alerts to the office during various stages of installation.

What policies and strategies helped the success?
Successful partnership with Kenya Biogas Programme (KBP), which provides technical support to biogas entrepreneurs and offers them a marketing platform by creating awareness and linking them up with potential clients. Successful partnership with a number of local Savings and Credit Cooperative Societies (SACCOs) and Micro-Finance Institutions (MFIs) has increased uptake through credit facilities.

More info:
http://www.takamotobiogas.com/

Sources:
Takamoto Biogas. Githunguri opposite Penko Petrol Station. Kenya. Tel: +254 738689788

When was the case uploaded?
2020-08-24