



Business models for cleaner cooking solutions in Africa

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Key terms: business models

- A **business model** is a plan or strategy that a company uses to generate revenue and make a profit
- **Revenue** is the amount customers have agreed to pay for a product or service
- **Customer Segmentation** is an internal process to group customers according to how and why they buy



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How to choose the right product-market-fit?

Product Type	Product Samples	Customer Segments	Revenues
Fuel only	Biomass-/Char-Briquettes, Bioethanol, Biogas, LPG	Customers that already have a cook stove and buy fuel on a regular basis	Monthly or weekly payments depending on use
Cook stove only	Cleaner and more efficient firewood / or charcoal cookstoves	Customers that use inefficient stoves or traditional three-stone fire and want to use a more efficient stove without changing fuel source (i.e. might still be using firewood)	One-off payment for the stove; depending on the price range of stove -> possible payment in installments or micro- financing for low-income customer groups
cooking system ("tool and fuel") Both the fuel and cook stove	Biomass-Pellets with clean gasifier stoves; Bioethanol or Biogas with efficient cook stove	Customers that are interested in changing their cooking system and fuel source (i.e. due to environmental reasons or lack of available firewood, national strategies etc)	A combination of the two above -> revenue model depends strongly on customer groups (i.e. urban middle class vs rural low-income)

Challenges: Acceptability of clean cooking systems

Barriers:

1. Affordability: too expensive (reality vs. perception)
2. Hardware: too heavy; breaks too easily; cannot fit large saucepans
3. Awareness: unsure about benefits: “is it worth the price?”
4. Culture and habits: people tend to like what they know

Best practices to overcome barriers

- Demonstration meetings
- Trainings & Communication
- Trustworthy Advocates in the Community, “Influencers”



The main business models

- Pay-as-you-go (PAYGO)
- Microfinance / In-House Financing
- Subsidies and donor-funded models (public-private partnerships)



© (B)Energy – Biogas Backpack & stove

Pay-as-you-go model (PAYGO)

- Allows customers to own clean cooking systems without incurring significant upfront costs
- Payments made in installments, or priced into fuel
- Revenues can be used to maintain the system
- Examples: Inyenyeri (Rwanda), PAYGO Energy (Kenya)

Microfinance / In-House Financing

- Provision of small loans to customers to purchase clean cooking solutions
- The loans are repaid in installments
- Examples: K-REP / Grameen Shakti / M-Kopa



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Subsidies and donor-funded models

- Subsidies: where cooking systems are sold at lower-than-market prices. Often provided by the State or NGO.
- Increases affordability but often financially unsustainable
- Free donor provision: often used in emergency situations or rural areas to kick-start demand
- Example: Safi Stoves (Kenya) and Gaia (Ethiopia)



Business Model Canvas



<p>Key Partners </p> <ul style="list-style-type: none"> • Who are our Key Partners? • Who are our key suppliers? • What are we getting from them? Giving them? 	<p>Key Activities </p> <ul style="list-style-type: none"> • What key activities do we require? Manufacturing? Software? Supply chain? 	<p>Value Propositions </p> <ul style="list-style-type: none"> • Which of our customer's problems are we helping to solve? • Which customer needs are we satisfying? • What are the key features of our product that match customers problem/need? 	<p>Customer Relationships </p> <ul style="list-style-type: none"> • How will we get, keep and grow customers? 	<p>Customer Segments </p> <ul style="list-style-type: none"> • Who are our most important customers? • What are their archetypes? • What job do they want us to get done for them?
<p>Cost Structure </p> <ul style="list-style-type: none"> • What are the most important costs inherent in our business model? Fixed? Variable? 	<p>Key Resources </p> <ul style="list-style-type: none"> • What key resources do we require? Financial? Physical? IP? HR? 		<p>Channels </p> <ul style="list-style-type: none"> • Through which channels do our customer segments want to be reached? 	
	<p>Revenue Streams </p> <ul style="list-style-type: none"> • How do we make money? What's the revenue model? Pricing tactics? 			

Product diversification as growth strategy

BURN Manufacturing, traditionally a charcoal stove manufacturer, has launched electric pressure cookers for grid-connected costumers in Kenya

BBOXX, known for its solar home systems, has added Liquid Petroleum Gas (LPG) clean cooking systems for customers in Rwanda and Kenya to their products. They use a pay-as-you-cook model.



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⚡ Any questions?

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