



SIMI[®]
STOVE

Innovative, Clean Cooking

We intend to be instrumental in making clean cooking accessible to the three billion people who live each day without it.

Improving health, protecting the climate, the environment and empowering local women





Problem

4+
Million

The number of people who die annually from illnesses attributable to household air pollution (HAP) through cooking with solid fuels

World Health Organisation (WHO) February 2016

3
Billion

The number of people still cooking and heating their homes using open fires and simple stoves burning biomass

World Health Organisation (WHO) February 2016

25%

The **GLOBAL** percentage of black carbon emissions - the second largest contributor to climate change after carbon dioxide - emitted from this form of cooking



Our Solution – Simi Stove using Bioethanol

Our patented Simi Stove has been specifically designed to burn Ethanol extremely efficiently

Ethanol is one of the safest and most effective, clean-cook fuels

Project Gaia

Ethanol provides a higher heat flux with no soot or smoke, cooking and hot water production can take place faster and pollution free

The Global Alliance for Clean Cook Stoves has driven more than 28M stoves into the field - only 8.2M (the ones running LPG, Ethanol and biogas) meet the health guidelines for indoor emissions set by the World Health Organisation

Washington Post 2015

Currently dirtier Biomass stoves sell for \$25 or less, but cleaner electric or liquid fuel stoves sell for much more. The affordable stoves are currently inadequate and the good ones are unaffordable

Kevin Starr, Director of Mulago Foundation



The Effect of Bioethanol on People's Health

Four million deaths are caused yearly through Household Air Pollution (HAP) produced through cooking with solid fuels. HAP also has a disastrous effect on birth outcomes

Household Air Pollution (HAP) from burning wood, charcoal, coal and kerosene is a leading risk factor for diseases, including childhood pneumonia, chronic obstructive pulmonary disorder, ischemic heart disease, stroke, and lung cancer,

In Nigeria, birth outcomes associated with switching to Ethanol were recently investigated with a randomized controlled clinical trial (RCT) with support from the [Global Alliance for Clean Cookstoves](#)

The Ethanol stove intervention improved pregnancy outcomes and reduced the risk of developing hypertension and chronic hypoxia during pregnancy

[Alexander, Northcross, Wilson, et al., 2017](#) | [Dutta, Brito, et al., 2017](#); [Dutta, Khramtsova, et al., 2017](#)

The rate of adoption and use of the Ethanol stoves was high. 84% of the women in the ethanol group gave away their kerosene stoves before the end of the study

[Northcross et al., 2016](#)



The Effect of Bioethanol on the Environment

Black carbon is a climate warming pollutant and is estimated to be second only to CO₂ in its warming impact on the climate

Globally, up to 25% of black carbon emissions come from household cooking, heating, and lighting with solid fuels

In many Asian and African countries, this can account for as much as 60-80% of black carbon emissions

2.4 billion people rely on firewood and wood-fuel for cooking, resulting in climate damaging emissions equivalent to 2% of global emissions

Around 30% of the wood-fuel harvested globally is unsustainable (harvested faster than regrowth) causing forest degradation which in turn causes losses in erosion and flood control as well as reducing the ability of trees and shrubs to absorb emitted carbon from the air

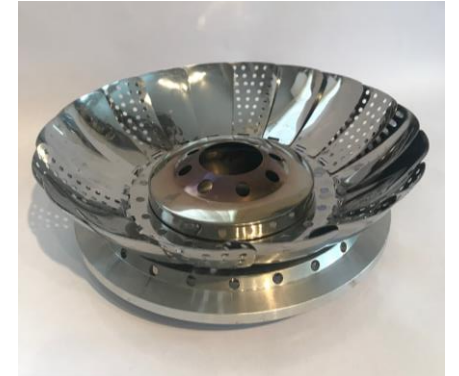
Ethanol is sustainable as it is produced by fermentation of sugar- or starch-containing crops such as Sugarcane, Sugarbeet, Corn or Potatoes



The Simi Stove

The Simi Stove employs better insulation of the combustion chamber and improves the flow of hot gases around the cooking pot or hotplate, so as not to waste heat

A unique feature is the ring of pivotable leaves that form to provide a shield against the wind, and provide a relatively constant cooking heat





Our Simi Stove

The patented Simi Stove has been specifically designed to burn Bioethanol extremely efficiently

67.3%

The efficiency rating of the Simi Stove burning Ethanol (Industry average 36%)
Chatham House report

95/100

Safety rating of Simi Stove
BUET Bangladesh University Engineering and Technology

\$30

Yearly cost per person (stove plus fuel) for a family of five cooking 3.5 hours per day
Based on Chatham House report Formula

\$10

Cost of stove



Target Market

The 3 billion people still cooking over open fires with dirty stoves burning biomass

700 million households spend over US\$ 100 billion on cooking fuel each year - a solid base for market development

The Clean Cooking Alliance previously called the Global Alliance for Clean Cook Stoves (launched by Hilary Clinton with \$413M in government funding) has driven more than 28M stoves into the field

Out of the 28M stoves only 8.2M (the ones running LPG, Ethanol and biogas) meet the health guidelines for indoor emissions set by the World Health Organisation

[Washington Post 2015](#)

Currently dirtier Biomass stoves sell for \$25 or less, but cleaner electric or liquid fuel stoves sell for much more. The affordable stoves are currently inadequate and the good ones are unaffordable

[Kevin Starr, Director of Mulago Foundation](#)



Business Model

Current Situation

Completed certification for the Simi Stove with the Renewable Energy Testing Station Nepal (RETS)

Hired Country Managers for Nepal and India

We are in talks with two Ethanol distributors in Nepal and have our first local Stove and Fuel distributor ready to go

We have interest from the Gurkhas charity in Nepal for a disaster relief program

We have completed a very successful field test and proof of concept in Bangladesh involving 50 families. Videos of families participating in the test can be found on our web site

Working with the CCA and RECON, who is working for the Energy Department for Nepal (AEPC), we are just starting a field test and proof of concept in 3 regions of Nepal.



Business Model

Moving Forward – The Fuel

Recurring income is key. We need to ensure that, for the majority of stoves sold, users purchase ongoing Ethanol from us.

We will brand the fuel with the Simi name and introduce additives such as Bitrex to prevent accidental ingestion and make it into gel for safety

For cooking the fuel has to be at least 85% concentrate, normally Ethanol is 65%

Included in the price of the stove we be two litres of fuel. If the user then switches to another source they will have our fuel to compare with.



Business Model

Moving Forward – Country organisation

Each target country will have one Country Manager who will be employed by Simi Stove

The Country Manager will be tasked with creating and managing the distribution channels for Stoves and Fuel

Distribution will be through established distributors as well as newly formed local, independent organisations

Distributors will always remain independent, but will receive support from Simi Stove (see Stock Purchase Plan)

The Last Mile

As well as Large established distributors, government programs and charities, our aim is to build an innovative model based on rural sales initiatives, i.e. working with the local self-help groups, women-run businesses and investing in Women Entrepreneurs and local village matriarchs.

We will also conduct Regional and Country-Level Workshops to raise the profile of the clean cook stove issue and encourage knowledge sharing implementers, funders, and governments.



Business Model

Moving Forward – Distributors

Stock Purchase Program – Initial Order Only – Based on Minimum Order

Cost of initial stock purchase;

- 50 Stoves at a cost of \$5 each \$ 250 (regular cost is \$10)
- 100 Kilos of fuel at a cost of \$1.20 \$ 120 (regular cost is \$1.60)
- A start-up cost of \$ 370

Sale of initial stock;

- 50 Stoves at the sales price of \$18 \$ 900 (est. sales price ranges from \$15 to \$20)
- 100 Kilos of fuel at a sales price of \$2 \$ 200
- Gross revenue \$1,100

- A one-time gross profit of \$ 730

Recurring income from fuel – 50 households using 10 kilos of fuel a month (for a family of 5)

- 500 kilos – profit of \$0.40 per kilo \$ 200 per month





Sales and Marketing Strategy

Our target is 5M stoves in the next 5 years

We are focusing on 3 major markets, Nepal, Bangladesh and India. In these markets we are looking for bulk sales, e.g. Nepal, The Gurkhas are currently looking for a product for a disaster relief package which could total 50,000 units.

We will work with local government agencies to certify the product which gives the product a certain level of prominence and allows it to be imported duty free.

Within each country we will partner with local village savings and loan associations to assist local women entrepreneurs to set up and start businesses in the clean-cooking field

The Fuel and Stove will be branded.

Fuel sales will provide a recurring income and so as we expand into a country with additional distributors we will be looking at ways to ensure that it is our fuel that is being purchased by Simi Stove users.

We will be introducing pots and pans especially designed to cook quickly and evenly on the Simi Stove



Simi Stove is a direct replacement for wood-burning, emission producing, biomass stoves



- Health
- Price
- Safety
- Efficiency
- Flexibility



Simi Stove is an ideal secondary cooking source



- Power cuts
- Delivery delays of LPG
- LPG running out before re-supply due

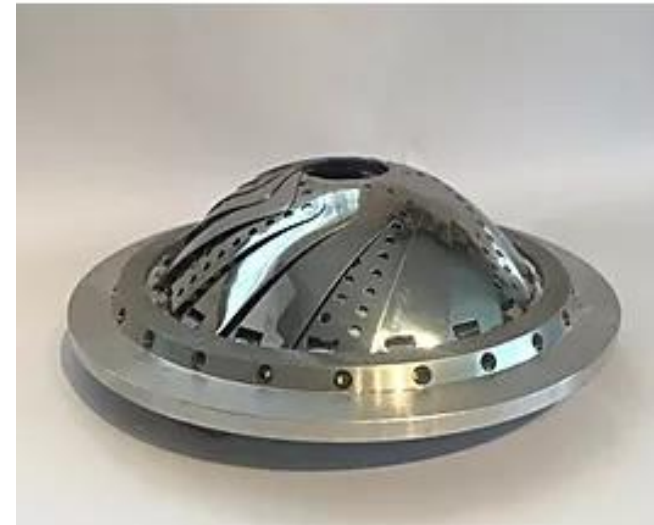


Simi Stove can provide a cooking solution for victims of a disaster



- Folds into a compact unit for ease of storage and delivery
- Simi Stove cooking-bowls pack around stove to form protective case

- Store and ship with fuel
- 2 litres of fuel provides for 24 hours of cooking and has a shelf life of 2 years plus





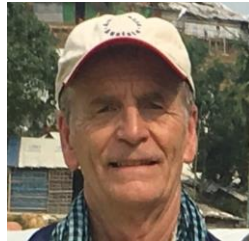
Team

Sean Satterley FRSA
MD and Founder
Inventor



30 years of selling in variety of markets including retail and b2b. Over 12 years experience of product development and design protection. Entrepreneurial and creative expertise.

Chris Piper
Humanitarian Expert



Chris Piper is a multi-skilled Global Humanitarian and Development Practitioner, who has worked extensively across the Australian, Asian-Pacific, Eastern and Southern African, and European regions. He is also a Community Engagement Practitioner (CEP) and Bangladesh and Rohingya Humanitarian Expert.

Leigh Hughes
Global Marketing



35 years Sales and Product Marketing experience. Resident in USA and UK. Silicon Valley start-up experience. Worldwide Sales



Team

Mark Bubb
Operations Officer



Business management and marketing. Living in the Far East. Experienced in Far East production with sourcing and manufacturing contacts across Asia

Arshdeep Singh
Country Manager
India



Research Analyst working in the US and UK markets. Chemical engineer by profession with an interest in clean-cook fuels and their effect on the environment



Competition

Competition in the clean-cooking market comes in a number of forms with stoves using solar, electricity, LPG and solid fuels such as coal, wood, charcoal and dung.

The viability of Solar, electricity and gas is still quite limited in the majority of areas and when compared to these clean-cooking solutions, due to equipment costs, Simi Stove offers very good value for money for smaller installations.

When looking at the competition, one has to consider the combination of stove and fuel as a single product.

When compared to solid fuels, Ethanol is by far the cleanest burning as it does not produce toxic fumes. To reduce these toxic fumes in stoves using solid fuels, the stoves themselves have to be designed to contain the soot and smoke and this increases the cost of manufacture.

One of the cons associated with Ethanol is its perceived low-heating value. The patented design of the Simi Stove, however, improves the flow of hot gases around the cooking pot or hotplate, so as not to waste heat. It can boil a litre of water in under 10 minutes making Simi Stove the only high-volume Ethanol cook stove on the market today.



Competition – Pricing Comparisons

Sampling of current market leading, clean-cooking stoves (**Clean Cooking Alliance**)

Stove	Manufacturer	Fuel	Thermal Efficiency	Sale Price
Canamake Ivuguruye	Ruwanda AJDR	Firewood	37.1%	\$ 5.50
CookMate	Cook Clean Ltd	Charcoal	25.0%	\$11.91
Biolite Home Stove	Biolite	Firewood	32.3%	\$55.00
Oorja	First Energy Ltd	Pellets	33.7	\$35.00
Telia a 2	Sodigas APC	LPG	49.3	\$50.00
Bio Moto	Int. Research Africa	Ethanol	39.5	\$44.00
Clean Cook	Domestic Group, Gaia	Ethanol	60.00	\$78.00
Fortune Cooker	Fortune Cooker	Solar	n/a	\$100.00
Simi Stove	Simi Stove Ltd.	Ethanol	67.3	\$ 10.00

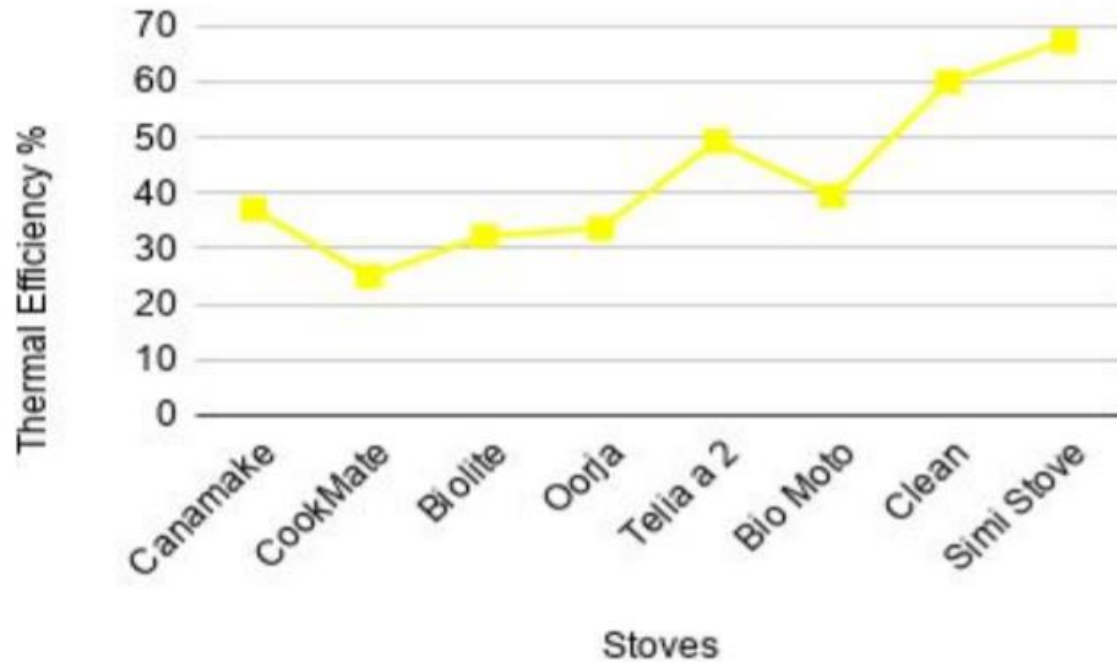




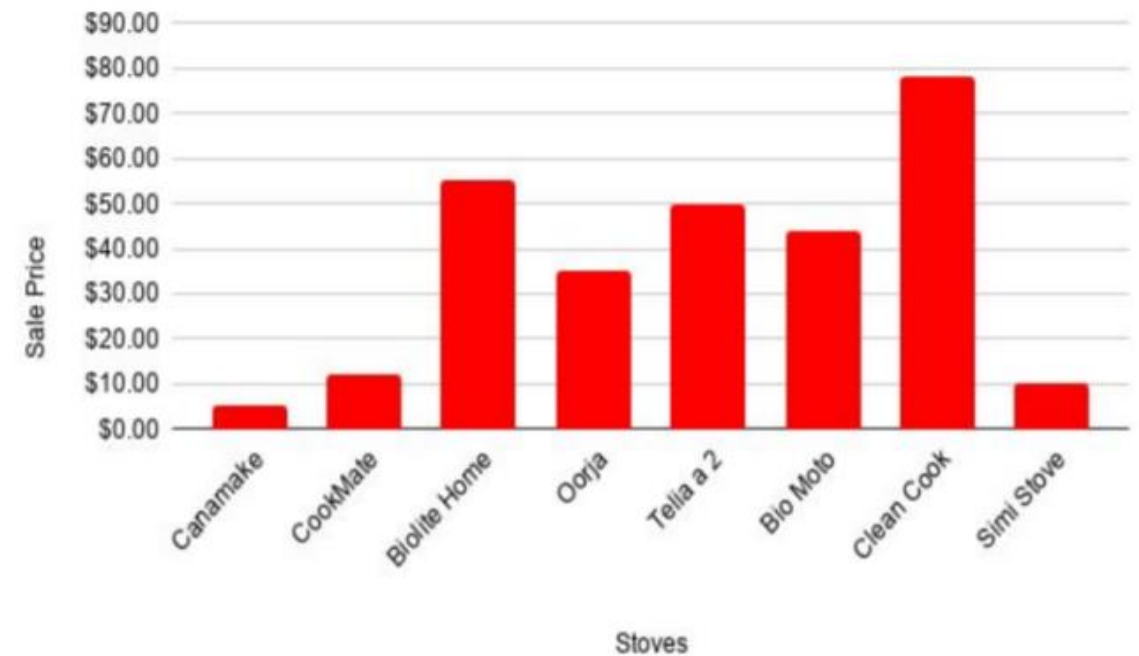
Competition – Pricing Comparisons

Sampling of current market leading, clean-cooking stoves (Clean Cooking Alliance)

Thermal Efficiency % vs. Stoves



Sale Price Of Various Stoves





Financials

Simi Stove, Incorporated November 2016

As of today over **\$90,000** has been invested by the founder, Sean Satterley, which has allowed us to complete the following;

Research

Market data, size of market etc.

Testing

Competitor comparisons

Village Trials

Fuels types.

Methanol, Ethanol, Gas LPG and Propane.

Product Design

All drawings have now been completed and some have tooling

Marketing

Web site. Designed, hosted and online

Simi Stove Patents

UK - Granted

Patents applied for -

Europe, America, India, China, South Africa,

Indonesia, Malaysia

Trademark "Simi"

Europe – Filed

Stock

Stoves - 800 (less burners)

Burners - 300 (old version)

We have 300 complete stoves that are available for testing and trials.





Investment and Use of Funds

The following are areas for which we require funding

Tooling

- Bowls
- Burners

Manufacturing for Stock

- Initial lot, 5000

Branded Fuel (Ethanol) containers

Travel

- Trade shows, promotions, In-country trials

Testing

Distribution

- Office/Shop, Staff (in country)

Online Marketing

- Website Marketing (SEO)
- Online Ordering Portal

£150,000