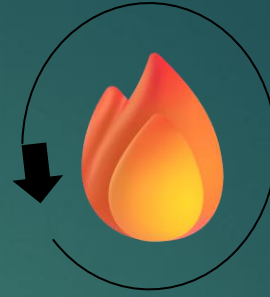


1 Stove



Patented



www.1stove.co.za billy@hadlowinnovations.co.za

The problem



- **✗ TOXIC SMOKE** (4M DEATHS/YEAR FROM INDOOR AIR POLLUTION, WHO).
- **✗ FUEL SCARCITY** (FORCED TO SWITCH BETWEEN CHARCOAL/OPEN FIRES).
- **✗ SPILLS & BURNS** (KEROSENE FIRES AND ACCIDENTS).

The Solution

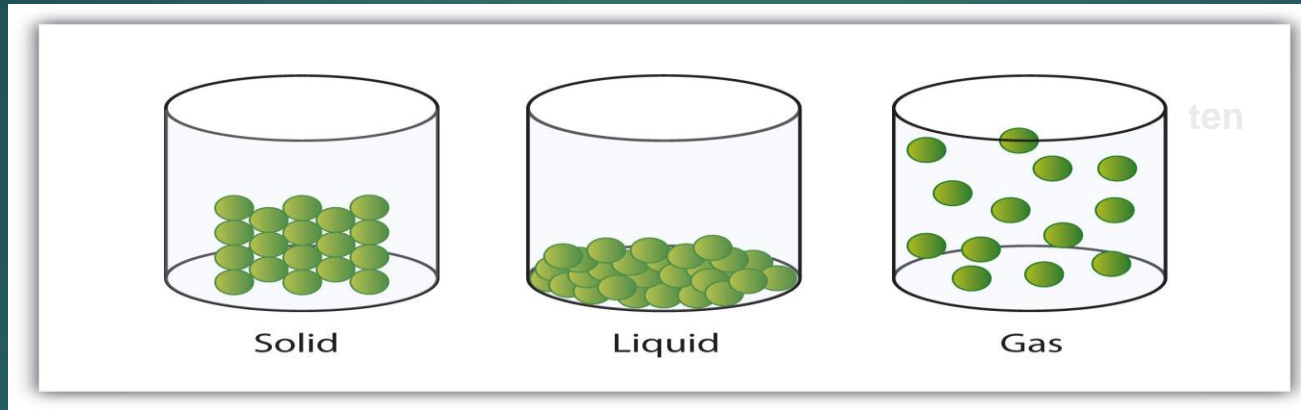
"The World's First Truly Multi-Fuel Stove"



- Interchangeable handle (Solids. Solids and Liquids. Solids, Liquids and Gas).
- 5V fan (AC,DC, solar compatible).
- Compact, modular design (CMC/SMSC parts).
- Removable fuel chamber (Pot stand is separate from fuel holder).
- **Any fuel:** Charcoal, ethanol, waste oil, LPG—**no swapping stoves.**
- **Zero spills:** Patented spill-proof ethanol system.
- **Smokeless ignition:** Light charcoal with LPG/ethanol in 2 mins.
- **Modular design:** Used coffee or food tins make up the fuel chamber (optional)

Multiple fuels

Same stove

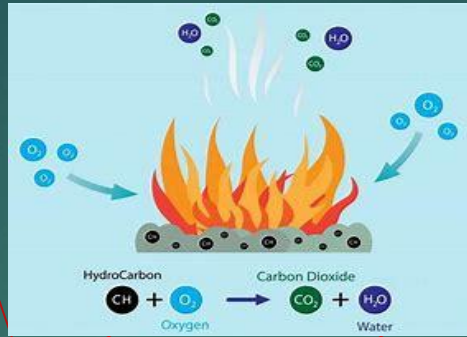


Wood Pellets
Charcoal
Wood
Cow dung

Used cooking oil
Methanol
Solvent blends
Ethanol

LPG gas
Bio gas

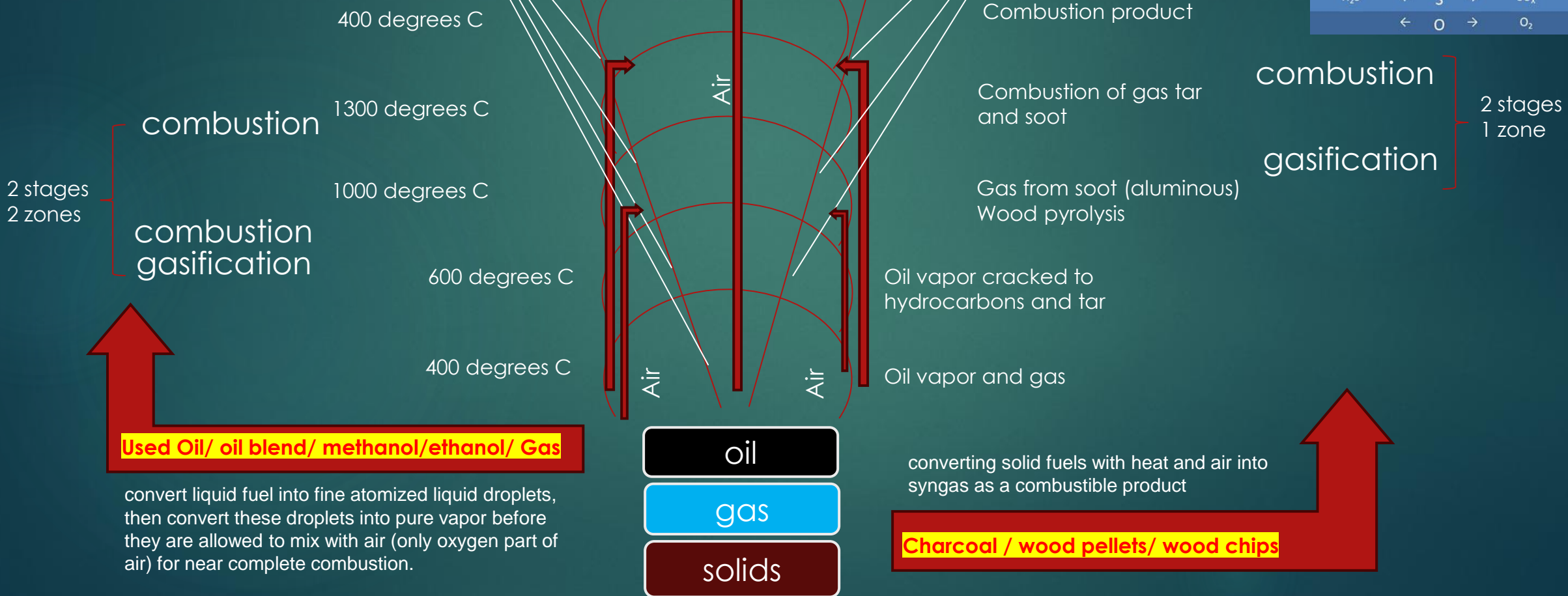
Chemistry taking place inside the stove chamber



Gaseous volatile vapour burns

Free carbon burns

Gasification	versus	Combustion
CO	← C →	CO ₂
H ₂	← H →	H ₂ O
N ₂	← N →	NO _x
H ₂ S	← S →	SO _x
	← O →	O ₂



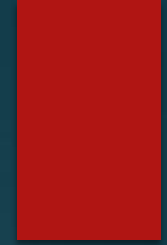
Used Oil/ oil blend/ methanol/ethanol/ Gas

convert liquid fuel into fine atomized liquid droplets, then convert these droplets into pure vapor before they are allowed to mix with air (only oxygen part of air) for near complete combustion.

Charcoal / wood pellets/ wood chips

converting solid fuels with heat and air into syngas as a combustible product

ISO Tier Matrix upgradable by switching the Fuel and Handle using the same stove.



Efficiency Tier 1 to 4

Tier	Thermal Efficiency	Emissions (PM2.5, CO)	Fuel Savings
Tier 1	25-30%	Moderate reduction	~20-30% better than open fires
Tier 2	35-40%	Better reduction	~30-40% better
Tier 3	40-45%	Significant reduction	~40-50% better
Tier 4	>50%	Very low emissions	>50% fuel savings



Carbon monoxide levels Tier 1 to 4

Tier	Thermal Efficiency	Estimated CO ₂ per Meal	Reduction vs. Open Fire
Tier 1	25-30%	1.1-2 kg	20-30%
Tier 2	35-40%	0.8-1.5 kg	35-45%
Tier 3	40-50%	0.6-1.2 kg	50-60%
Tier 4	50%+	0.4-0.8 kg	65-75%



Molecule parts Tier 1 to 4

Tier	CO (ppm)	PM2.5 (µg/m ³)	Efficiency
T1	200-500	500-1,200	25-30%
T2	100-300	300-800	35-40%
T3	50-150	100-300	40-50%
T4	<50	<100	50%+



Safety Tier 1 to 4

Feature	Tier 1	Tier 3-4
CO Emissions	High (200-500 ppm)	Low (<100 ppm)
Stability	Moderate	High (tested for wind/knockover)
Burn Risk	Higher (exposed heat)	Lower (shielded designs)
Child Safety	Minimal	Better (auto-shutoff in some models)



Durability 1 to 4

Component	Minimum Standard	Common Failure Points
Combustion Chamber	6 months without cracks >5mm	Clay liners crack in 2-3 months
Outer Casing	No deformation after 500 cycles	Metal warping in high-heat zones
Grates/Insulation	50% mass retention after testing	Ceramic fiber degrades quickly
Moving Parts	200 cycles without failure	Door hinges/hatches wear out

Genie Handle

The stove is sold with a standard "solid fuel Handle. Customers can upgrade the handle for different fuels depends what they have access to.

- ▶ Solid fuel Handle: for Solid's
- ▶ Liquid fuel Handle: for liquids and solid's
- ▶ Gas fuel Handle: for Gas, liquids or solid's



“Get a handle on your cooking.”

This modular, upgradeable stove and handle concept is a win-win for both “**1 stove**” and the community. It addresses affordability concerns while promoting the adoption of cleaner cooking solutions.

“in a class of its own”

Route to Market

Independent Agents selling stoves to customers

Independent Agents selling/collecting fuel on tap

Independent agents selling starter fuel on tap.



To Customers



1 Wood pellet stove 2 LPG/Bio Gas burner 3 Ethanol stove 4 Charcoal stove 5 Used oil stove

Market

People in the world using

As of **2021**, approximately **2.3 billion people** worldwide still lack access to clean cooking facilities.

- Kerosene
- Wood pellets
- Solid wood open fires
- Charcoal
- Ethanol
- LPG gas
- Bio gas
- Used oil

Making use of different stoves with different fuels

More than just a stove

- ▶ Safe to use
- ▶ Curbs pollution
- ▶ Recycles old tins
- ▶ Job creator
- ▶ Turns trash into cash
- ▶ Accessories : 1. Oven
 - 2. Speed kettle
 - 3. Hot water maker
 - 4. Heater
 - 5. Genie handle

No need for stove stacking : A backup stove for every fuel

Next Steps

- ▶ Acquire Investors
- ▶ Acquire certification on stove
- ▶ Setup distribution network
- ▶ Assign Manufacturing Partner



Join the “**1stove**” journey

- ▶ Contact Billy : billy@hadlowinnovations.co.za