

The **FabStove** is a clean burning and efficient biomass pellet cookstove and heater that replaces open wood fires, charcoal and paraffin stoves as a better environmental solution to domestic heating and cooking

FABSTOVE
MAKES & BURNS GAS FROM BIOMASS

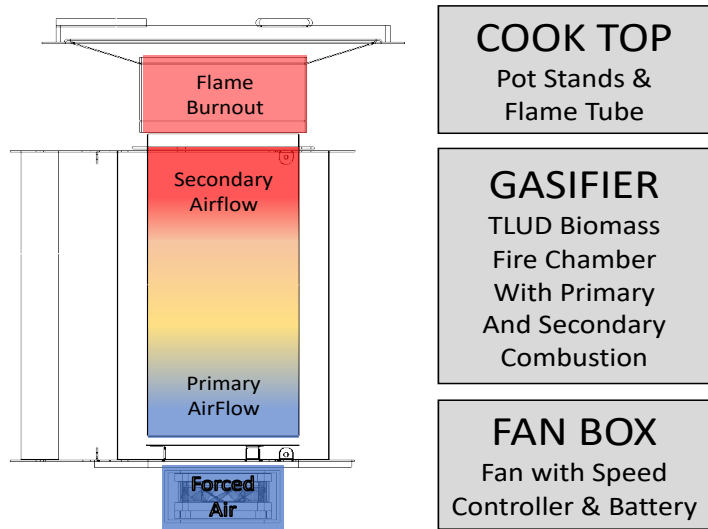
- **Designed for and built in Africa**
 - Strong sturdy frame for large pots
 - Easy loading with removable gasifier
- **Small internal fan controls combustion**
 - Complete heat control
 - Multiple battery power options
- **Safe to use indoors**
 - Low emissions (Smoke & CO)
- **Renewable Biomass Fuel**
 - Uses 6mm biomass pellets
 - Made from recycled waste



The core of our cooking system is the
FABSTOVE GASIFIER ENGINE KIT

An efficient 2 stage biomass combustion kit with a
replaceable stainless steel fire chamber

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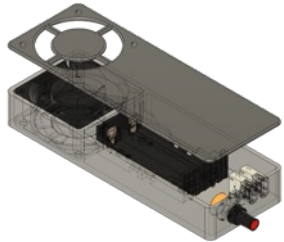
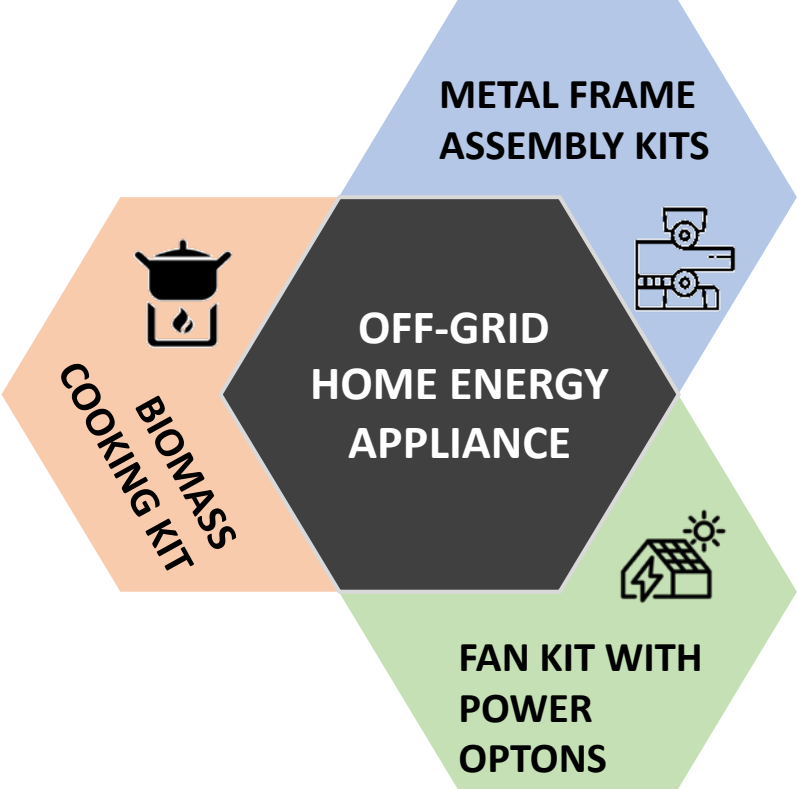
- TLUD Gasifier Principles
- Fan Assisted Air Flow
- Optimised for Biomass Pellets
- 40% Combustion Efficiency
- Low CO emissions
- Replaceable Fire Chamber
- Modular Design & Assembly

In numerous independent cooking tests, forced air gasification updraft combustion has proven to meet WHO tier 4 standards for efficiency, low emissions and safety. It is considered an advanced cooking solution by the ESMAP Multi-Tier Framework (MTF) for Cooking

Our modular stove kit approach focuses on reusability and serviceability of the energy appliances in remote areas, lowering the cost of ownership

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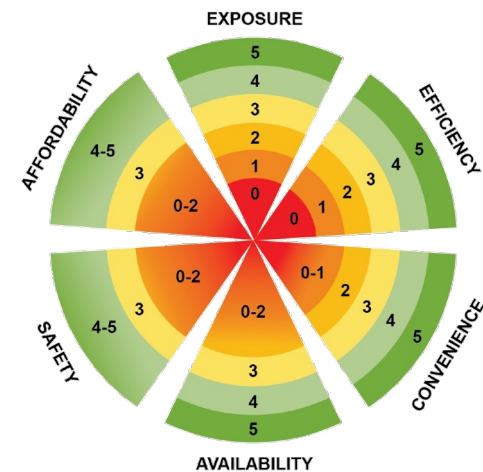


SDG7 – ACCESS TO CLEAN AND AFFORDABLE ENERGY

The **ESMAP Multi-Tier Framework (MTF) for Cooking** is a comprehensive assessment method to measure access to modern energy cooking services and complements the binary approach currently used to track progress toward SDG target 7.1, which measures whether or not households have access to clean fuels as their primary source for cooking.

A household is considered to have gained access to **modern energy cooking services** if it scores on Tier 4 or above on all six attributes of the Multi-Tier Framework (MTF) for Cooking.


























1. **Efficiency:** combustion & heat-transfer efficiency
2. **Exposure:** exposure to pollutants
3. **Convenience:** time collecting & preparing fuel
4. **Availability:** fuel readiness when needed
5. **Safety:** severity of injuries caused by the stove
6. **Affordability:** % of budget spent on cooking fuel



SDG 7 Goal: Ensure access to affordable, reliable, sustainable and modern energy for all

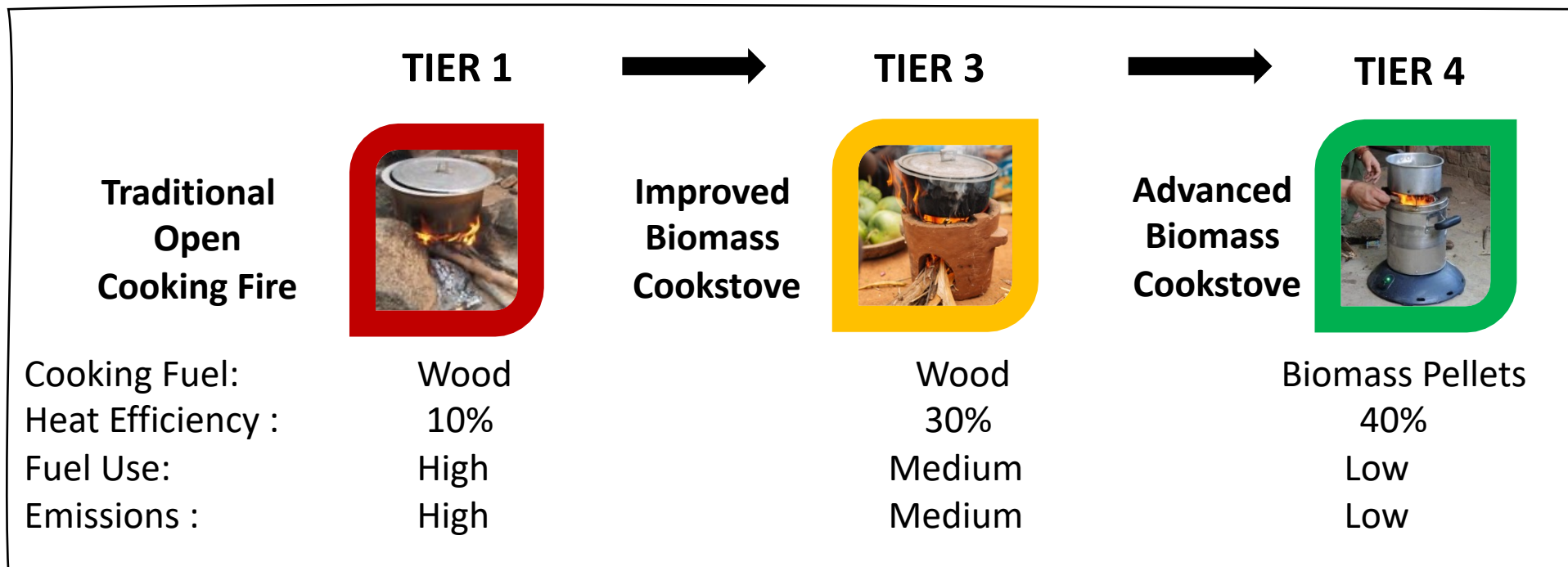
With a sustainable & affordable source of biomass, the FabStove achieves all the assessment objectives to be considered a modern / advanced cooking solution.

WHY CLEAN COOKING AND HOW IT IMPACTS LIVES

	STOVE TECHNOLOGY & FUEL	EFFICIENCY	VENTILATION	TIME	COST	IMPACT
TIER 0-1 NO ACCESS 	 <p>Open fire, three-stone stove or traditional stove with traditional solid fuel (e.g., firewood, charcoal, dung, agricultural residue).</p>	 <p>Less than 20%</p>	 <p>Poor</p>	 <p>More than 7 hours per week for fuel acquisition and preparation</p>	<p>  Stove cost \$0-\$5  Fuel cost per month \$0-\$30 </p> <hr/> <p>Fuel is often collected for free or purchased through local market.</p>	 <p>Significant negative health, climate, and gender impacts.</p>
TIER 2-3 IMPROVED 	 <p>Improved cookstove (e.g., rocket stove, natural draft gasifier with traditional solid fuel, pellets/briquettes, or kerosene).</p>	 <p>20%-40%</p>	 <p>Improved</p>	 <p>Less than 7 hours per week</p>	<p>  Stove cost \$10-\$30  Fuel cost per month \$0-\$18 </p> <hr/> <p>Fuel switching is not required. Households save fuel expenditure or time required for collection due to stove efficiency improvement.</p>	 <p>Good climate and gender equality improvement due to reduced fuel usage. Limited health improvement as indoor air can remain polluted.</p>
TIER 4-5 MODERN 	 <p>Modern cooking appliance with clean cooking fuel (e.g., biogas, LPG, ethanol, electricity, and natural gas or forced air gasifier with pellets).</p>	 <p>Above 40%</p>	 <p>Good</p>	 <p>Less than 1.5 hours per week</p>	<p>  Stove cost \$40-\$100  Fuel cost per month \$10-\$30  Downstream infrastructure cost per household \$50-\$1,000 </p> <hr/> <p>Household spends less than 5% of the total expenditure on fuel cost</p>	 <p>Negative health, climate, and gender impacts are significantly mitigated.</p>

SDG 7 Goal: Ensure access to affordable, reliable, sustainable and modern energy for all

CLEAN COOKING AND SOLID BIOMASS FUELS



Dependence on solid biomass cooking fuels will persist for many years

- *Global patterns in population growth, urbanization, and historical fuel use show that the people relying on solid fuels for cooking will persist at a level of over 3 billion*
- *Growing firewood consumption and rising charcoal use in Sub-Saharan Africa*
- *Alongside primary users of solid fuels, millions across the developing world will continue to use wood, charcoal, and coal as a secondary cooking energy source.*
- *Serving as a long-term demand driver for improved solid fuel stoves and cleaner fuels.*

SDG 7 Goal: Ensure access to affordable, reliable, sustainable and modern energy for all

*NON-MODULAR COMPETITOR
GASIFIER PELLET STOVES*

FABSTOVE
MAKES & BURNS GAS FROM BIOMASS



MIMI MOTO
NETHERLANDS



ACE ONE
NETHERLANDS



ECOSENSE
INDIA



SSMCOOK
CHINA

The same **FabStove Cooking Kits** can be built into a variety of stove frames and solar energy options using different frame kit and power options.

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FABSTOVE GASIFIER

TABLE OR FLOOR STANDING



FABSTOVE TWINPOWER

TABLE OR FLOOR STANDING



The FabStove has many user advantages over other Fan Gasifier Stoves for cooking.

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INDEPENDENT STOVE FRAME



- A high frame allows user to stand when cooking
- Square frame offers stability for large pots
- High clearance for fan, ensures no blockages
- Standard 45 cm leg, but other lengths available

REMOVEABLE BIOMASS GASIFIER

- Wooden Handle for easy cool grip
- Single hand used for loading and removal
- Replaceable Fire Chamber
- One Liter Fire Chamber takes 700g pellets

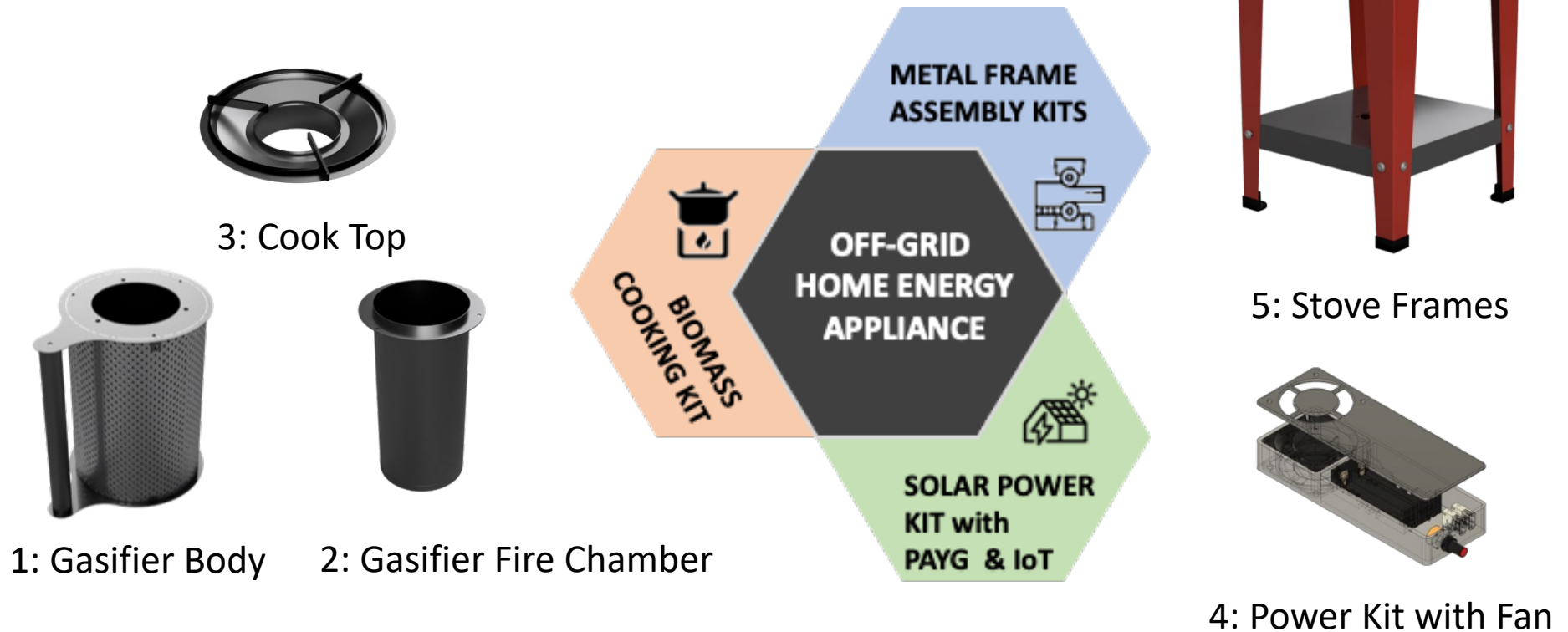


Modular stoves and energy kits are shipped as SKD's (Semi Knock Down Kits) and assembled and tested by local assembly teams.

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FabStove Kits are:

- Made up of 5 different component kit types
- There are different frame and power options
- The kits shipped "flat" in multiple quantities



The advantages of using the FabStove Gasifier Kit for your project over other Fan Gasifier Stoves.

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Lower Upfront and Stock Holding Costs

- **Lower Shipping Costs:** *FabStove Kits are shipped to you as CKD flatpacks.*
- **Stock Flexibility & Assembly:** *You make up frames and energy options as required.*
- **Component Kits** results in lower stock holding

Multiple Energy / Battery Options

- **TwinPower Kits** come in 3 options:
 - **Type A-Fan Only:** *No Battery. Powered from independent battery pack*
 - **Type B-Fan and Small Rechargeable Battery:** *4 hours independent use*
 - **Type C- Fan and Solar System: Solar Panel and Battery:** *For use with stove and other appliances (phone charger, lights, small fans etc)*

Field Adaptability

- **Multiple Frame Options:** *Adapted to application needs*
- **Parts Replacement:** *FabStove parts are easy to replace for repairs*
- **Energy upgrades:** *Power kits can easily be swapped out or upgraded in the field*

FABSTOVE

GASIFIER COOKSTOVE

Advanced Biomass Cooking



TWINPOWER

OFF-GRID HOME ENERGY

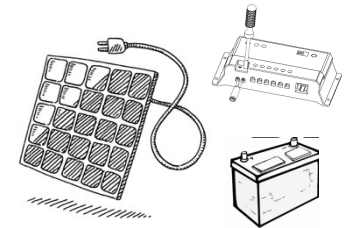
Total Energy Independence



A total home energy solution that addresses both the electricity and heating/cooking needs of a small off-grid home.

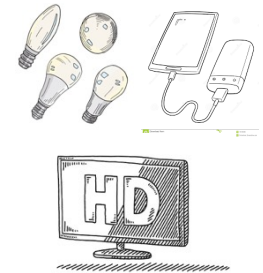
SOLAR HOME SYSTEM

Solar PV Panel: 50Wp
Li-Ion Battery: 200Wh
Solar Controller: 20A



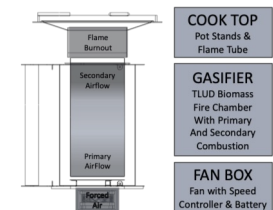
DC HOME APPLIANCES

LED Lighting: Included
USB Charger: Included
Cooling Fan: Optional
LED TV: Optional



CLEAN BIOMASS COOKING

Double Gasifier Stove
Retained Heat Cooking Bag



POWERFRAME

Modular Steel Furniture

