



GLOBAL ALLIANCE FOR
CLEAN COOKSTOVES

The Global Alliance for Clean Cookstoves will create a thriving market for clean cookstoves and fuels.

PROBLEM

Every day,
3 BILLION
PEOPLE
(500 million households)
rely on solid fuels to
power their rudimentary
stoves



which leads to...

- 4,300,000 deaths annually
- Wasted productivity
- Climate, forestry & other environmental degradation
- 21% of global black carbon emissions
- Health & economic burdens that disproportionately impact women & girls



MISSION

- SAVE LIVES
- IMPROVE LIVELIHOODS
- EMPOWER WOMEN
- PROTECT THE ENVIRONMENT



GOAL



100
MILLION
HOUSEHOLDS
ADOPT CLEAN AND
EFFICIENT
COOKSTOVES &
FUELS BY 2020

Clean Cooking Directly Supports Achievement of 10 SDGs

1 NO POVERTY



Clean cooking is part of basic services necessary to lead a healthy and productive life and saves households time and money.

2 ZERO HUNGER



Efficient cookstoves reduce the amount of fuel needed to cook, thus reducing the burden on families who would otherwise have to collect it, buy it, or trade their food for it. Emissions of short-lived climate pollutants from inefficient cooking also hamper agricultural productivity.

3 GOOD HEALTH AND WELL-BEING



Reducing smoke emissions from cooking decreases the burden of disease associated with household air pollution and improves well-being, especially for women and children.

4 QUALITY EDUCATION



Children, particularly girls, are often kept out of school so that they can contribute to household tasks, like cooking and collecting fuel.

5 GENDER EQUALITY



Unpaid work, including collecting fuel and inefficient cooking, remain a major cause of gender inequality.

7 AFFORDABLE AND CLEAN ENERGY



Clean cooking is essential to addressing energy poverty and ensuring sustainable energy security for billions of people.

8 DECENT WORK AND ECONOMIC GROWTH



Energy access enables enhanced productivity and inclusive economic growth. The clean cooking sector offers many job opportunities.

11 SUSTAINABLE CITIES AND COMMUNITIES



Clean cooking addresses household and ambient air pollution, resource efficiency, and climate vulnerability.

13 CLIMATE ACTION



Up to 25% of black carbon emissions come from burning solid fuels for household energy needs. Clean cooking solutions address the most basic needs of the poor, while also delivering climate benefits.

15 LIFE ON LAND



Up to 34% of woodfuel harvested is unsustainable, contributing to forest degradation, deforestation, and climate change.

And contributes to an enabling environment for achieving the entire Agenda 2030.

The Alliance now has more than 1800 partners actively supporting and growing the sector.

Donor Countries	Canada Denmark Finland	Germany Ireland Malta	Netherlands Norway Spain	Sweden United Kingdom United States			
Private Sector & NGO	 	  	 	 	 	 	
UN & MFI	 	 	 	 	 	 	
National Partners	Afghanistan Bangladesh Burkina Faso Cambodia Central African Rep.	China Colombia Côte d'Ivoire El Salvador Ethiopia	France Ghana Guatemala Honduras Indonesia Italy	Kenya Laos Lesotho Liberia Malawi	Mexico Mongolia Nepal Nicaragua Niger	Nigeria Peru Poland Rwanda South Africa	Sri Lanka South Korea Tanzania Uganda Vietnam

Current State of Cookstove Technology

Performance	Subtier 0	Subtier 1	Subtier 2	Subtier 3	Subtier 4
PM2.5 (mg/min)	>40	17-40	8-17	2-8	0-2
PM2.5 ($\mu\text{g}/\text{m}^3$)	>600	6-300	300-100	100-35	<35

Stoves



TSF



Traditional



Rocket



Charcoal

Natural Draft



Gasifiers/TLUDs

Forced Draft



LPG



Solar

Models



Chulhas



Bondu Chula



Shakti Chula



Life Cook Stove



Mimi Moto



LPG



SolSource

Fuels

Unprocessed Biomass

Processed Biomass

Clean Fuels

- Performance by tech is along a continuum and can vary widely within type
- Forced draft stoves are generally cleaner than natural draft stoves
- User factors (ease-of-use, familiarity, etc.) affect adoption and thus impact
- Access and availability challenges must be overcome

Fuels Landscape

Performance	Subtier 0	Subtier 1	Subtier 2	Subtier 3	Subtier 4
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Wood



Dung



Charcoal

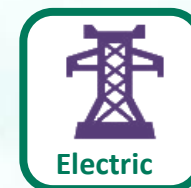
MORE ACCESSIBLE
LESS ACCESSIBLE



Pellets



LPG



Electric

Increased processing and infrastructure requirements

- As with technology, performance by fuel type is along a continuum and can vary widely within a type
- Processed biomass is generally cleaner than unprocessed biomass
- Optimal performance requires proper use and **the right fuel**

Our market based approach is built on three pillars



LPG: Challenges and Solutions for Scale up

Availability and Accessibility

- Explore different models to strengthen last mile distribution
- Provision of lighter, safer and different cylinder sizes

Affordability

- Targeted subsidy for low income households
- Revolving fund for cylinder refills
- Pay as you go options

Awareness

- Behavior change communication



Improved Biomass Cookstoves: Challenges and Solutions for Scale up

Enabling Policy and Institutional Environment

- Stronger focus on technology development, stricter quality standards, nurturing the ecosystem

Transition to Pellet/Tier 4 Cookstoves

- Innovative locally manufactured stoves & pellets
- Accredited standards testing labs
- Faster and detailed stove test reports
- Product labelling and warranty
- Improve affordability through carbon credits, other consumer financing models
- Consumer awareness and behavior change communication



Electricity: Challenges and Solutions for Scale up

- Improve reliability and quality of electricity supply
- Enhance energy efficiency of induction stoves
- Augment capacity of infrastructure for electrification, manage peak loads
- Consumer awareness & behavior change communication
- Improve affordability of stove and power



Solar: Challenges and Solutions for Scale up

- Economics becoming attractive with technology costs coming down (panel and battery storage)
- Provides opportunity to leapfrog to electric cooking
- Greater investment in R& D for solar for cooking
- Test viable business models
- Ecosystem building - manufacture, O &M, finance