

**TEA TIME**

SDG 7 – BY 2030

FOR ALL

# SDG 7

## UNIVERSAL ACCESS

Even the rural poor

In every country

-- Leave no one behind --

# SDG 7

# AFFORDABLE

@ HH level

@ country level

# SDG 7

## MODERN

Clean, not Cleaner

ISO/WHO Tiers 4/5

# There is no magic stove...

- Nor even a magic stove/fuel combination unless it lends itself to...
- A business model designed

**TO SCALE**

# How did we get to SDG 7 ?

- Affordable, reliable, universal access, modern energy
  - We missed the 'sustainable' part

## UTILITY BUSINESS MODEL

# How to know the stove is used?

- SELL FUEL
- KPT
- CRM
  - Can even tell how much stove stacking



# Market share & Customer Retention

- 5,000 HH Customers
  - ~2,000 Urban HHs
  - ~1,000 Rural HHs
  - ~2,000 Refugee Camp HHs
- **\$0.04/per day/HH**
- Unprecedented experience

# How to speed adoption?

- DON'T SELL THE STOVE
- Fuel+Stove system is CHEAPER from DAY ONE
- No risk – no fees to join or leave
- Customer Service
- Training in use
- Free delivery of fuel to HH door

# How to assure continued use?

- Free same day repairs
- Customer Service Reps
- Additional trainings
- Continuous stove improvements
- Cooking/kitchen accessories

# Locally owned utilities in each country

- Private, Public, or PPP
- State ownership component
  - Access to cheap accommodating capital
  - MOU w/Rwanda to get to 1M HHs by 2024
- Well regulated to assure ...
  - Sustainable feedstock supply chain
  - Universal access to ALL

# Aligning public health goals & SDG7 goals

- Cost of HAP on GDP

Cost-of-Pollution (PAGE 100).pdf (page 118 of 122)

Economy	Mean annual ambient PM <sub>2.5</sub> (µg/m <sup>3</sup> )		Total deaths from air pollution		Total welfare losses (Million 2011 U.S. dollars, PPP-adjusted; % GDP equivalent)		Total forgone labor output (Million 2011 U.S. dollars, PPP-adjusted; % GDP equivalent)	
	1990	2013	1990	2013	1990	2013	1990	2013
	Russian Federation	19.66	14.23	113,744	104,379	260,457 (9.08%)	279,801 (8.28%)	6,808 (0.24%)
Rwanda	17.32	17.02	9,734	6,410	405 (6.57%)	534 (3.18%)	138 (2.24%)	117 (0.69%)

## The cost of air pollution in Africa

DEV/DOC/WKP (2016) 5

Table 4.1. Economic cost of premature deaths from air pollution, per country, Africa, 2013 (cont.)

	Ambient PM pollution	Household air pollution
	USD millions	USD millions
Mozambique	191	2 006
Namibia	272	1 215
Niger	584	1 088
Nigeria	41 796	70 471
Rwanda	392	1 123

## OECD DEVELOPMENT CENTRE

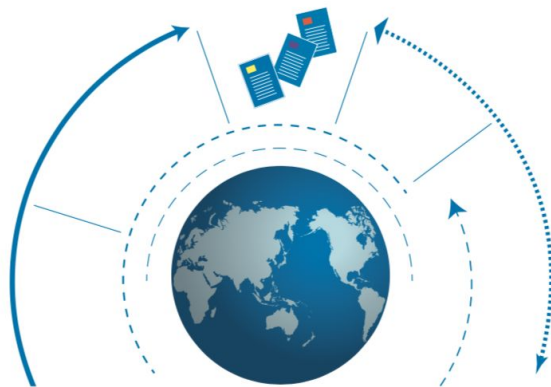
Working Paper No. 333

Research area: African Economic Outlook



### The cost of air pollution in Africa

Rana Roy



## The Cost of Air Pollution

Strengthening the Economic Case for Action

**Yes, there is enough wood.  
IF, Biomass Gasification Technology path is adopted.**

