Introduction

- Design cooking stoves for Kenyans
- Focused project → Stick Fed Rocket stove Department of Energy (DOE)
- Make a safer, better fuel-consuming stove to be utilized indoors
- Fumes from indoor stoves kill 4 million a year globally [1]

- Burn Design Lab CEO, Peter Scott, started to save the forests
  - 7-10 tons of wood makes 1 ton of inefficient charcoal [1]
- Burn Design Lab has developed stoves for other countries including:
  - Eko-Stove for Guatemala
  - Wood Gasifier for Congo
  - Next generation wood stove working with DOE

Project Description

Stick Fed Rocket stove (SFR) that can produce Tier 4 performance in each following category:
- High power (HP) thermal efficiency
- Low power (LP) specific consumption
- HP CO intake
- LP CO intake
- High and low power particulate matter (PM)
- Indoor emissions CO and PM

- DOE is working with other companies to reach tier 4
- Uses LEMS computer sensors to read the CO, CO2, PM, etc.

Results & Discussion

- Millions of deaths occur in Sub-Saharan Africa annually [2]
  - 2004 death toll (millions)
    - 0.75 from Malaria
    - 0.25 from Tuberculosis
    - 1.7 from HIV/AIDS
    - 0.57 from open fire cooking
  - 2012 death toll (millions)
    - 0.6 from Malaria
    - 0.25 from Tuberculosis
    - 1.2 from HIV/AIDS
    - 0.68 from open fire cooking
  - 2030 Projected death toll (millions)
    - 0.23 from Malaria
    - 0.14 from Tuberculosis
    - 0.67 from HIV/AIDS
    - 0.7-0.8 from open fire cooking

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