Alleviation of Energy Poverty for Empowerment & Environmental Protection



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Mwangaza Light - who we are

- A social enterprise concerned with last mile distribution of clean energy solutions in order to alleviate energy poverty
- Build last mile distribution into infrastructure of churches and FBOs
- ▶ HQ in Nairobi, sales leads in 10 counties, commission agents in 25+ counties
- Developed 'Green Churches' initiative aims at growing environmental stewardship amongst churches to enhance climate change mitigation
- Partner to Green Anglicans Movement; MD is member of the Provincial Steering Committee and Focal Point for Thematic Area on clean energy adoption in ACK
- What others say about us 'Mwangaza Light is doing an excellent job reaching an unserved market with high customer satisfaction' (conclusion of an independent customer survey, December 2021)

Why focus on alleviation of energy poverty?

Energy poverty is an obstacle to socio-economic development

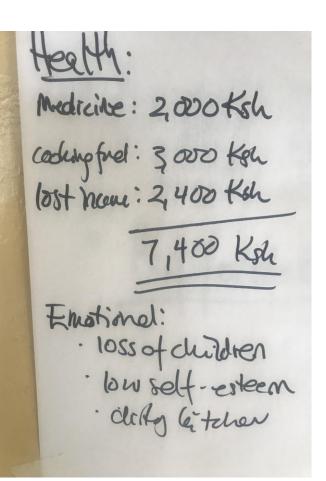
- Loss of lives indoor air pollution is the main 'killer' of women and infants in Africa; smoke is the highest avoidable risk factor for child pnemonia
- **High cost in cooking fuel** due to poor cookstoves
- High cost in medical bills due to smoke and firewood collection
- **Low productivity** due to long hours spend on firewood collection, cooking time
- Gender inequality women spend much time on cooking-related activities, which increase dependency on the husband; girls do domestic work > homework, which makes them less able to succeed in education and employment compared to boys
- **Deforestation** due to use of logs and big branches

Current cooking technology: Open fireplaces & local improved cookstoves



Costing the problems of current cookstoves

- Ex from training in Elgeyo-Marakwet, November 2021



Financial cost:

Medicine: \$20 (only cooking related)
\$15: 1 Panadol per HH member per day
\$5: cough medication (excl. chest examinations)
Cooking fuel/firewood: \$30 - \$1 per day x 30 days
Lost income due to firewood collection: \$24 KES
1-2 days per week where woman could be productive

Emotional cost:

Loss of children due to indoor air pollution, Low self-esteem from firewood collection, dirty cooking Dirty kitchen is uncomfortable, low value by husband

Solution: Energy efficient cookstoves

Benefits

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50% saving on cooking fuel 70% reduced smoke & no brown carbon emission

Time saving Saving trees

Solution: Energy efficient cookstoves

Tier 4 cookstoves



Benefits

- ▶ 50% less cooking fuel
- 70% less smoke & no brown carbon emission
- Time saving on cooking
- Time saving on firewood collection
- Save trees

Affordability: Financing Models

Partnership with SACCO/MFIs:

Sell at wholesale price & paid within 30 days

Mwangaza Light act as the financing entity: Payroll check-off mechanism Registered groups (county, church)

ML acts as financing entity

Credit plan

Cookstoves

- ► 33% downpayment & give out stove
- ► 33%: first installment after 30 days
- ► 34%: second installment after 60 days
- ▶ 60 days credit for cookstove at \$30-50
- No interest

Solar energy solutions: \$25-1,200

- 2 months 23 months
- 1.3% interest per month

Cost of financing

Credit control unit: Sales team cost for receivables Staff/office cost Operation cost/field visits

Defaulters: About 30%

Required to reduce defaulters:

IT software

More and more efficient Change Agents