Energizing Conservation Efforts

Findings From a Review of Clean Energy Technologies in Kenya & Tanzania

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Purpose & Background

Household energy is a crucial issue for organizations who are working to conserve local environments that are coming under pressure from increasing human populations and activity.
Methodology of the Study

Main Outputs:
• Learning Report
• Toolkit

Methodology:
➢ Desk review
➢ Stakeholder interviews
➢ Two site surveys
➢ Shared team experience
Available Energy Technologies

**Improved Cookstoves**

- Many different types exists
- Local artisan, factory made and imported
- Can vary from $4 to $80 for domestic type
- Often made as different components with middlemen and retailers involved

**Challenges:**
- Awareness
- Lack of quality control
- Distribution costs
Solar

- Lighting, television, phone charging, water pumping & productive use
- Array of systems available
- Products are imported and locally distributed

Challenges:
- Perceived high cost
- Cheap products in the market
- Improper use/ sizing
- Last mile distribution
Briquettes

- Fuel made from compacted charcoal dust and other agricultural waste
- Most made from charcoal dust
- Varies shapes & sizes depending on the production method and market
- Most producers small scale

Challenges:
- Awareness
- Competition with charcoal
- Production bottlenecks
Wind

- Electricity generation and mechanical power
- Dependent on site specific conditions
- Most systems imported

Challenges:
- Very site specific
- Back up is often required

Source: www.reuk.co.uk
Biogas

- Gas produced by breakdown of organic waste
- Most common type dome biogas
- Cost from $500 to several thousand
- National domestic biogas programs

Challenges:
- Specific market niche
- Quality control/maintenance
- High upfront costs
Financing Options

- Energy financing is still new
- Most FI don’t have specific energy portfolios
- Interest rates and requirements can be prohibitive
- Flow of credit combined with capacity building and awareness

- Consumer payment options
  - Upfront payment
  - Payment through installments
  - Pay as you go schemes (solar)
Challenges for Energy Initiatives

- Lack of available financing for consumers and entrepreneurs
- Poor quality products have left consumer disappointed
- Lack of local capacity for product suppliers
- Ensuring sustainability of approaches
- Last mile distribution
- Household don’t priorities energy products
Successes and Lessons Learnt

• Get the economics right
• Strong local presence keep momentum going
• Support from government policy helps
• Tapping into existing distribution channels can reduce costs
• Identify and understand your market segment
• Show consumer tangible economic and social benefits
• Peer marketing can have a strong effect
• Expect seasonal variations
• Cultural and social factors have a strong influence
• Local availability of products, materials and skills can increase sustainability
Site Surveys – Imbirikani Ranch, Kenya
Site Surveys – Kigoma, Tanzania
Suitability of Energy Technologies – Imbirikani
Suitability of Energy Technologies – Kigoma
Recommendations

• Work with existing energy businesses to extend product range or reach
• Identify opportunities to develop new energy enterprises within the community
• Further promotion and awareness creation of energy technologies with local households and institutions
• Explore specific financing options for energy technologies working with financial institutions and local SACCOs
• Promotion of woodlots and sustainable charcoal production techniques
• Learn from existing projects and businesses
• Leverage organizations with strong community links and those that are developing similar projects
Thank you!