

Developing Energy Enterprise Project (DEEP) East Africa: Briquetting Technology



ACP-EU Energy Facility Seminar
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ACCELERATING ACCESS TO ENERGY

Global Village Energy Partnership



GVEP's mission:

To accelerate access to affordable energy - heat, light and power

GVEP's focus:

Africa, Latin America, Caribbean

The most appropriate technology – usually renewable

Small & medium-sized enterprises (SMEs)

GVEP believes:

Sustainable businesses last longer than the effects of direct donations

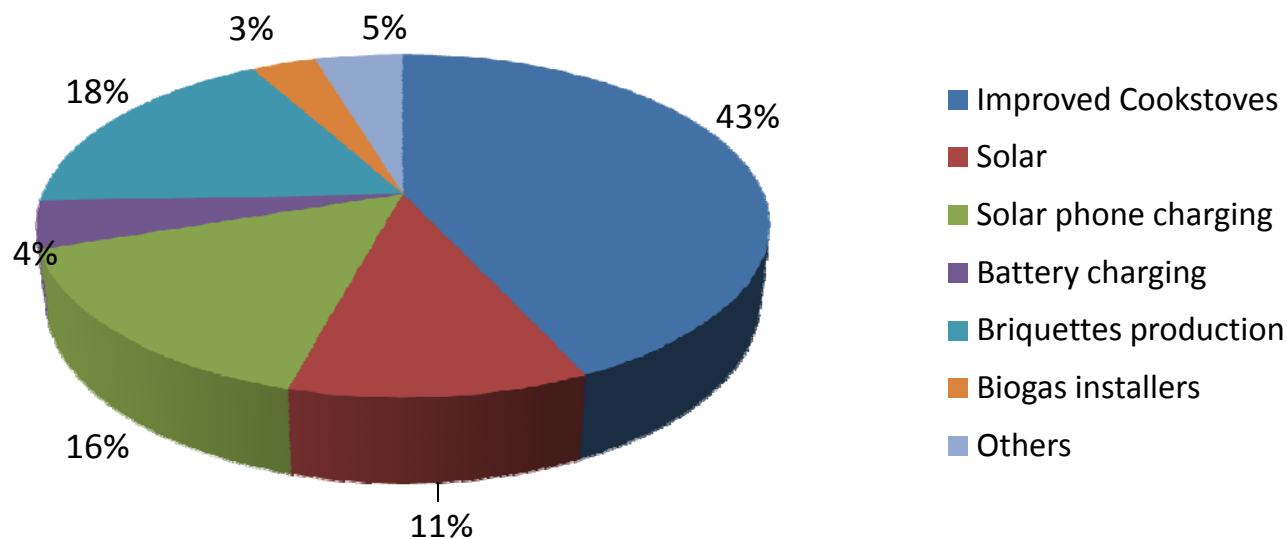
So, supporting energy businesses should achieve more access per \$ of aid

DEEP EA Programme

- ❖ Euro 4million – 5 year programme in Kenya, Uganda and Tanzania
- ❖ Funded by European Union (EU) and the Dutch Ministry of Foreign Affairs (DGIS)
- ❖ Nurturing micro and small energy enterprises in the following areas:
 - Entrepreneurship/ Business Development
 - Energy technology
 - Mentorship/Coaching
 - Financial linkage

Energy Technology Distribution

- ❖ Energy businesses supported are demand driven
- ❖ DEEP entrepreneurs as per technology uptake (as at December 2011)



Programme Revision

- ❖ Revised strategy to make the programme more result focused
- ❖ Changes approved by EU in September 2011
- ❖ Key changes:
 - Mentorship – full time staff vs. part time mentors
 - Target enterprises to be trained
 - Using a value chain approach
 - Focus on specific energy businesses – cookstoves, solar and briquettes

Progress against programme objectives & targets

Project Target Description	Achieved 2008-Dec 2011	Balance Jan 2012 –Feb 2013	Comments	Status of target
1800 MSEs supported	1600 trained	Focus on strengthening existing ents.	Training closed in March 2012	
430 supported firms survive	Active in the program 772	Target met	Sustainability strengthening	
1300 employed in supported enterprises	1811	Target met	More to benefit	
1.8 million benefiting from enterprises	1.2 million	0.6	Target to be met	

Key: Target attained  Within target  Not attainable 

Other programme results

Entrepreneurs have grown their businesses through:

- ✓ Transforming part-time entrepreneurs to full time
- ✓ Business expansion
- ✓ Improve quality of products – ICS & briquettes
- ✓ Better marketing skills and activities leading to business growth
- ✓ Better record keeping by entrepreneurs

Programme challenges

- Converting from informal to formal businesses
- Reliance on donors vs. self reliance
- Changing mindset – probability to operate energy services as an enterprise
- Reliance on rural based economies where disposable income is minimal
- Balancing support to a huge number of entrepreneurs
- Low literacy level especially in rural areas (and female entrepreneurs)

Alternative Fuels: Briquettes

- ❖ Briquettes - household and institutional fuel, made by compacting biomass waste
- ❖ Carbonised or non carbonised
- ❖ Typical applications include:
 - Cooking and water heating in households
 - Fuel for gasifiers to generate electricity
 - Powering boilers to generate steam
 - Heating agricultural processes such as fruits, tea drying
 - Fuel for kilns for firing ceramics wares such as improved cookstoves, pottery, bricks etc.



- Simple carbonisation plant: \$200-\$500 depending on sophistication of technology
- Large ones: \$2000-\$5000



Why briquettes?

- ✓ Adds value to biomass waste
- ✓ Reduces pressure on the forestry resources
- ✓ Raw materials readily available
- ✓ Strengthens rural economy as technology is simple, business can run parallel to other businesses
- ✓ Ready market at household and at institutional level



Distribution of briquette entrepreneurs

Country	# of briquettes entrepreneurs	Male	Female
Kenya	13	6	6 (1)
Uganda	133	45	88
Tanzania	7	5	2
Total	152	56	96 (1)

DEEP EA Intervention on Briquettes

- ❖ Technical training in improving quality
- ❖ Coaching and mentoring
- ❖ Supporting market development
- ❖ Linking briquettes entrepreneurs with financing institutions – SACCOs, MFIs through loan guarantees
- ❖ Supporting entrepreneurs in business diversification: cookstoves & solar

Gaps in the briquette sector

- ❖ Small and micro production across the region
- ❖ The subsector lacks guidelines
- ❖ Lack of technical skills in making good briquettes
- ❖ Most are manually produced or with simple machines (mechanical or electrical)
- ❖ Lack of good quality machines in the market
- ❖ Awareness about the value of briquettes is low

Issues to consider

- No 'One size fits all' product to reach the poor
- Reaching poorest continues to be a challenge. Fuel switching is difficult and briquettes must outweigh charcoal in costs and long lasting fuel
- Success in scaling up energy businesses is still low. Last mile delivery chain dependent on:
 - ✓ high skills and knowledge transfer
 - ✓ appropriate marketing
 - ✓ high end value products concentrated in urban markets
 - ✓ Initial subsidies
 - ✓ Adequacy of government policies (eg. In Uganda, no trees to be cut and therefore more interest in briquettes)

What works?

- ✓ Financing at lower interest rates for entrepreneurs/businesses to survive. GVEP has a loan guarantee scheme. 27 out of 72 entrepreneurs are briquette entrepreneurs.
- ✓ Mass marketing through trade fairs, community get together, local markets
- ✓ Exploit domestic financing, including informal networks
- ✓ Products need to be good quality (equivalent or better than charcoal) and branded/packaged if possible
- ✓ Private sector need to work alongside NGOs, community based initiatives, co-operatives, savings groups for market entry

Case Study 1 (Expansion)

- Patrick Mwangi is a briquette machine fabricator and producer of briquettes in rural town of Nyeri, Kenya.
- Joined the DEEP programme in 2009.
- Expanding business: Sales grown from \$1809 to \$2412
- Has been supported to take advantage of all types of biomass materials through carbonisation
- Has improved his marketing and management skills from the project
- He also acts as a briquettes production trainer

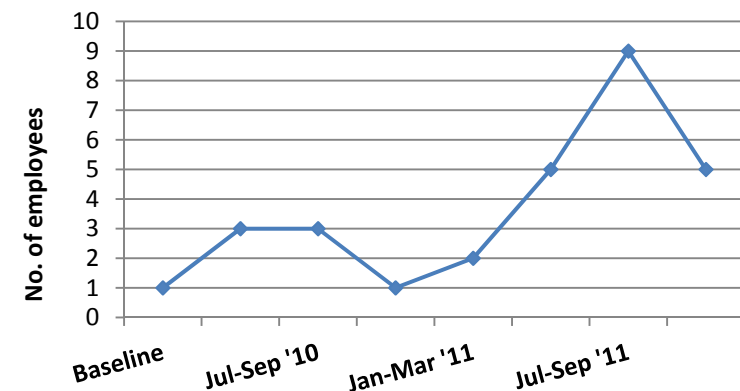


Case Study 1 (Transformation)

Margaret Kisakye is a briquettes producer in rural town of Masaka, Uganda. Joined the DEEP programme in 2009 as a start-up.

Key benefits:

- Monthly turnover of \$470/month
- Employment rising (see figure)
- Briquettes production trainer: \$20/trainee
- Has trained 60 briquettes entrepreneurs
- Marketing to households and local NGOs
- Started manual briquettes production
- Borrowed loan supported by GVEP guarantee and converted to mechanical production to increase production



GVEP In Action.....



We provide training to entrepreneurs



We work with local businesses to replace harmful fuels



We help people acquire the right set of business skills



We advise on the best technology available (such as solar lights)

Thank you!

For more information on the project

visit: www.gvepinternational.org



With thanks to the European Union and the Dutch Ministry of Foreign Affairs for supporting DEEP EA

