



SEED Initiative

promoting entrepreneurship for sustainable development

Founding Partners



LOW CARBON WINNER 2014

Green Bio Energy (GBE) offers low-income Ugandan families cost-saving, safe and environmentally-friendly energy solutions including energy-efficient cook stoves and eco-friendly charcoal briquettes. The enterprise's Briketi Charcoal Briquettes and Eco Stoves replace inefficient products that contribute to deforestation.



Green Bio Energy, Uganda

BUSINESS MODEL

The enterprise's briquettes and outdoor cook stoves are produced using improved production processes and locally developed machines. They are distributed to communities by a network of micro-entrepreneurs trained by the enterprise and through partner organisations. The enterprise also provides workshops in micro-enterprise management and briquette production and sells equipment for small-scale production.

The briquettes, made from 100% organic waste and residues, are designed to be long burning. The highly durable cook stoves have lower carbon emissions and a thermal efficiency 20% higher than competitors' stoves.

ENTERPRISE FAST FACTS

Location	Uganda
Year founded	2011
Sector	Energy / Renewables
Product/Service	Charcoal briquettes, improved cook stoves

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Social impacts:

- Increasing customer savings to USD 618,000 due to GBE's briquettes being cheaper and burning longer than traditional charcoal.
- Increasing female workshop attendance to 80% and ensuring 80% of micro-entrepreneurs are women.

Environmental impacts:

- Transforming 3,000t of agricultural waste into recycled charcoal briquettes.
- Reducing deforestation by preserving 2,500 trees.
- Decreasing indoor air pollution and ensuring 27,500t of carbon dioxide are not released by utilising GBE's briquettes, which produce less soot and smoke than traditional charcoal.

Economic impacts:

- Increasing employment opportunities for 379 individuals through franchises and direct employment opportunities for 378 individuals.
- Providing training to a network of 90 distribution partners.
- Increasing educational and training opportunities for inspiring entrepreneurs, which helps reduce poverty rates in local communities.

” Briketi Eco Stoves have a ratio of carbon monoxide/carbon dioxide emission 41 % lower than the main competitor on the Ugandan market.

Scaling up activities:

- Finalise the design for the new enterprise's prototype charcoal cook stove. The new stove would allow for significant improvement in energy saving, reduce indoor air pollution and would offer a better carbon monoxide/carbon dioxide ratio, using an innovative technology.
- Double the amount of independent micro-entrepreneurs trained to join the company's distribution network as well as the amount of business customers, such as restaurants and poultry farms.
- Upgrade the enterprise's production facility, stove workshop space and logistic capacity.
- Develop a partnership to get certified carbon credits.



” Green Bio Energy makes a difference in the lives of the poorest by offering affordable, safe, and environmentally-friendly energy products.



Partnership

• **Green Bio Energy Ltd.** produces energy-efficient cook stoves and briquettes made from agricultural residues and trains micro-entrepreneurs to market the products.

• **Up Energy** distributes the enterprise's improved cook stoves.

• The NGO **Living Goods** is the enterprise's retail partner in Kampala and the surrounding countryside, helping to sell small packets of Briketi Charcoal briquettes.

• **The Charcoal Project**, a joint venture between the Harvest Fuel Initiative and the Massachusetts Institute of Technology (MIT), provides grants for distribution to low-income households and conducts marketing studies implemented by MIT volunteers.

• **Design Without Borders**, a Norwegian non-profit organisation, provides technical support to improve the enterprise's production process



Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety

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About the SEED Initiative

The SEED Initiative identifies and supports promising small scale social and environmental entrepreneurs around the globe, entrepreneurs who while working towards a greener economy also tackle poverty, marginalisation and social exclusion. SEED provides these entrepreneurs with know-how and networks, taking the lessons learnt at local level up to decision-makers to promote evidence-based policy making. For more information please write to info@seedinit.org or visit:

www.seedinit.org

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