

## Energy Programs and Grassroots Entrepreneurship in the Millennium Villages

### Executive Summary

The Millennium Village Project has initiated programs to disseminate efficient household energy products and services to the rural communities. A highlight of these programs have been their focus on building entrepreneurial capacity at the village level to ensure long term sustainability of the program. This document describes two such flagship projects in Uganda and Malawi.

#### Biomass Cook-Stoves Program (Ruhira, Uganda)

Typical to Sub-Saharan Africa, there is high stress on environment due to non-renewable biomass (estimated at 2-3 tons per household per year) being used as fuelwood. Field-tested, efficient cook-stoves were introduced to the community through a seed grant to a cooperative made up of vendors in the village.

We have seen fuelwood savings of 30-40%, moreover, the stoves not only save non-renewable biomass and time spent on collecting fuelwood (especially for women and children) they can also help reduce indoor air pollutants.

Carbon credit potential is a big next step for long term success.



- To date, 400 cook-stoves sold and another order of 1300 is being delivered
- Initial target is 4,000 households - at least 50% coverage in the village
- Sale price of \$10 includes all commissions and thus far, demand has outpaced supply
- Cooperative's \$4,000 revenue from sales could be augmented by carbon credits
- Each cook-stove can potentially remove 1.5 tons of CO2 from atmosphere over its lifetime (worth around \$10 in credits)
- Innovative rural marketing efforts, e.g. local community ambassador program and buy 5 and get 1 free schemes
- Capacity building efforts at the cooperative very successful and long term sustainability as a growing business is an achievable goal

#### Solar Lantern Program (Mwandama, Malawi)

Rural populations in the Millennium Villages have poor access to lighting sources. In many cases, this is limited to burning hydrocarbons - kerosene/paraffin or candles. Solar charged, LED-based lanterns were introduced by a seed grant to a cooperative.

Over 90% of households that bought the lanterns stopped using traditional lighting sources within 2 weeks of purchase and were saving \$30-\$50 a year in lighting costs. Also, a year after the purchase, buyer satisfaction remains high and we have noticed increased income generating opportunities (more working hours), educational opportunities (brighter light), reduced health risks (emergency transport), possible reduction in air pollutants, etc.



- To date, 750 lanterns sold
- A new order of 400 additional lanterns is being processed - will be paid and procured directly by the cooperative!
- Initial target is 3,000 households - at least 50% coverage in the village
- Sale price of \$40 includes commissions
- Cooperative's revenue of \$16,000 is being used as revolving working capital
- Capacity building efforts and microfinance facilitation at the cooperative are very successful
- Long term sustainability and eventual independent operation of the cooperative are achievable goals
- Discussions underway with government and private sector entities for national level scale-up

### Looking Forward

The demonstrated success of the energy programs approach (in partnership with the business development team) could become a blueprint for success of income generation and enterprise promotion activities in the Millennium Villages, especially now as we look to the next phase of the overall project. Our key challenge after capacity building at the local level is setting up efficient international supply chains so that the flow of goods and services does not hamper the development of the grassroots entrepreneurs. Efforts are also underway to replicate this success: programs in Ghana (lanterns) and Nigeria (cook-stoves) are starting and will be followed by launch in at least 4 more sites in 2010.