

Microenergy Credits: Linking microfinance institutions to the carbon markets when they lend for clean energy



One Just World Forum
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Making clean energy part of every microentrepreneur's journey out of poverty



microenergy credits 

Many microfinance clients suffer from a vicious cycle of energy poverty

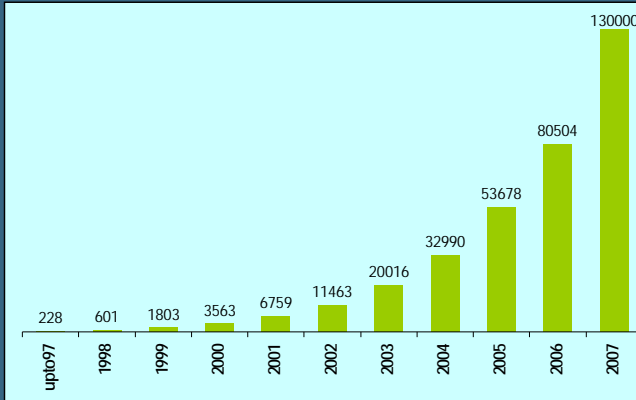
- Recurring expenses
- Health impacts
 - Respiratory disease
 - Childbirth
 - Awareness
 - Burns
 - Water borne disease
- Gender impacts
- Education impacts
- Environmental impacts



microenergy credits 

Microfinance can be a channel for clean energy alternatives
Example: Grameen Shakti

Cumulative Solar Lighting Systems Sold



Other products include
 Biogas digesters and
 Improved cookstoves



MFIs can use carbon revenues from MEC to reduce the cost of clean energy to end users and to offset program costs

Carbon markets



MEC aggregates
 carbon credits



MFIs lend for clean
 energy products



Microentrepreneurs
 adopt clean energy

- Companies in Europe spent **120 Billion Dollars** on carbon credits in 2008
- But less than 1% of that was spent on renewable energy in developing countries
- High transaction costs make these projects unattractive
- MEC is an aggregator that tracks small clean energy investments and packages them for sale on the carbon markets
- **2.5 Billion people** live without access to modern energy
- They survive on traditional fuels which create over 600 Million tons of CO2 emissions per year.



Who is doing it?

FINCA Uganda



XacBank Mongolia



Spandana India



Aryavart Gramin Bank India



"I was inspired by what you do. We shall definitely work with you." Ingrid Munroe, Jamii Bora
"Micro energy credits partnership will add a great value for MFI clients and Grameen Koota."
Suresh Krishna, Grameen Koota



The role of partners

ECO SECURITIES



- EcoSecurities sells the carbon offsets to the carbon markets, companies and individuals
- EcoSecurities (LSE: ECO) purchases the carbon offsets aggregated by MEC, and securitizes them for the carbon markets
- MEC purchases carbon offsets from MFIs



Step 1: Carbon purchase agreement

- The agreement says that MEC will purchase the carbon offsets created when an MFI lends for clean energy
- It includes an estimate for the annual volume of carbon offset created by each product, and the dollar value of the project
- No upfront transaction costs or minimum project size, and no liability if the project does not expand as planned
- The agreement should be signed before the project starts



Step 2: Clean energy product marketing



Best practices to successfully scale up a clean energy program include:

- Identify products that provide great value to clients through market research, surveys and/or pilot tests
 - Develop a business plan to justify upfront investments in project development including marketing activities
 - Hire or allocate a dedicated project manager and energy officers
 - Choose trustworthy suppliers
 - Take advantage of technical assistance
- More best practices:
- Engage women, and the community
 - Support local job creation
 - Create a robust quality assurance process

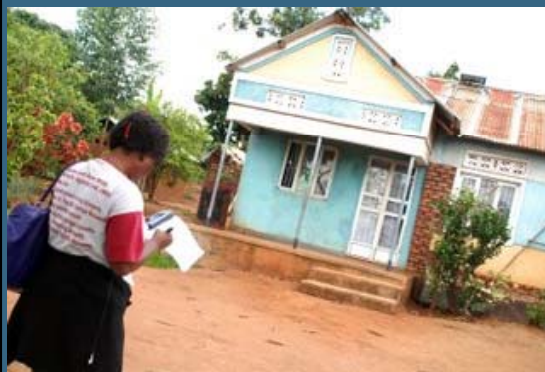
Step 3: Receive carbon revenues



- Upon receipt of the sales data from the MFI, MEC will conduct the first audit
- Once the audit results are received, MEC will start making payments to the MFI on a semi-annual basis
- At any point the MFI can see its balance with MEC
- The MFI can use the carbon revenue for purposes such as:
 - Hiring a project manager or energy officers
 - Expanding marketing to reach more clients
 - Client education and awareness
 - Technical assistance
 - Lowering interest rates or principal costs
 - Funding on going customer service







Step 4: Monitor the clean energy systems



- The carbon credit is renewable for every quarter of a year that the client continues to use the clean energy system.
- The MFI provides monitoring data indicating that the client continues to use the clean energy product
- MEC has developed an internet technology using mobile phones and GPS that is free to its MFI partners
- Monitoring is simple, and can be done by:
 - Loan officers
 - Energy officers
 - Energy suppliers
 - Local agents hired by the MFI



Some sample clean energy products

	Product	Description	Cost	Lifetime	Carbon Offset (tons over 5 yrs)	Payment/ System
   	Solar Light 50 W	5 Lights 4 hrs per day, tv and cell phone charger	\$552	20 years	2.3*	\$19*
	Solar Light 100 W	7 lights 6 hrs per day, tv and cell phone charger	\$978	20 years	4.9*	\$41*
	Efficient Stove	Reduces wood or charcoal consumption by 50%, efficient cooking	\$38-\$76	10 years	7.5*	\$49*
	Biogas Digester	Uses cattle or poultry manure to provide clean cooking gas, light and electricity	\$ 567	15-20 years	14.7*	\$96*

Future products include solar water heaters, tree planting, efficient boilers, efficient housing, cooking gas

*Based on data from Bangladesh and Uganda. Actual payments will vary.



Conclusions



- Simple energy products can **improve the quality of life** of microfinance clients
- Renewable energy is **affordable**; spending is close to what MFI clients already spend on kerosene, fuel wood and charcoal
- **Carbon revenues** are available to help MFIs bring these products to their clients
- When all of us offset our carbon footprint we can also help **end energy poverty**



Contact



1752 NW Market St. No. 105
Seattle, WA

info@microenergycredits.com

Phone: +1 202 549 7190

Fax: +1 866 880 8093

www.microenergycredits.com

- **CEO, MicroEnergy Credits**
April Allderdice
april@microenergycredits.com
- **CTO, MicroEnergy Credits**
James Dailey
james@microenergycredits.com
- **MFI Client Relationship
Manager**
Tamar Azous
tamar@microenergycredits.com



APPENDIX: HOW DO CARBON MARKETS WORK?



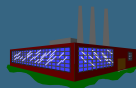
5. In the **voluntary carbon markets** individuals and companies purchase carbon credits. \$100 Million were sold in 2007

4. Carbon offsets generated in the developing world can be sold and traded on **regulated exchanges**



1. 174 nation states have signed the **Kyoto Protocol**

2. Industries are given emissions **allowances**. They must either reduce or purchase "**credits**" They purchased \$180 B in 2008.



3. The **Clean Development Mechanism** allows carbon offsets generated in developing countries. \$3 B were sold in 2007

The Kyoto treaty recognizes the need to help developing countries to get on a different energy path as they make new investments

