Microfinance for Clean Energy Product Lines

The Case of Ulaanbaatar, Innovation, and MicroFinance

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Enhancing Regional Distribution of CDM Projects
Manila, Philippines
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Microfinance for Clean Energy Product Lines - Mongolia

- Project type: Small-Scale CDM PoA
- Coordinating and Managing Entity: MicroEnergy Credits
- Partner Organization: XacBank
- Location: Mongolia

Climate
- Coldest capital city in the world
- 8 Month Heating Season
- Average Winter Temperature: -20C

Poverty
- 60% of the city population lives in the Ger Districts
- Average household income is 500,000 MNT
- Low-income families spend 40% of their monthly winter income on heating fuels.

Pollution
- 2nd most polluted city in the world
- Ger district households burn 5.2 tons of coal per year.
- Pollution linked to cardiac and respiratory disease epidemic, birth defects, and cancer.

Sources: Energy Efficient and Cleaner Heating in Poor, Peri-urban Areas of Ulaanbaatar
World Bank Consultant Summary Report on Activities, October 2008
WHO, 2011.
Addressing Market Barriers

- Financing
- Products
- Marketing/Distribution
- Long Term Program Sustainability

Improved Heating Systems

Example: Heating Stove

- Designed to circulate and draft heat for longer periods of time
- Retains heat longer
- Fuel savings 40-50%

<table>
<thead>
<tr>
<th>Total Cost</th>
<th>Interest</th>
<th>Monthly Payment</th>
<th>Fuel Expenditure w/o Stove</th>
<th>Fuel Expenditure with Stove</th>
<th>Fuel + Loan Payment</th>
<th>Monthly Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>152,000</td>
<td>17%</td>
<td>7,550</td>
<td>136,500</td>
<td>68,250</td>
<td>75,800</td>
<td>60,700</td>
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</tbody>
</table>
Improved Insulation Systems

Example: Highly Insulated Ger Blanket

Six components:
- Roof insulation covering
- Wall insulation covering
- Roof opening insulation
- Wall lower edge strip
- Door insulation
- Water proof covering

Approx. 30% fuel savings

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</thead>
<tbody>
<tr>
<td>550,000</td>
<td>17%</td>
<td>27,190</td>
<td>136,500</td>
<td>95,550</td>
<td>122,740</td>
<td>13,760</td>
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</tbody>
</table>

Product Center Model

Product centers are also key for carbon monitoring.
1. Every product is monitored at time of installation via smart phone (GPS is collected and installation is confirmed as active)

2. XacBank follows up every three months with 100% of clients through phone or an in-person visit
PoA Timeline – 2012

25 January: PoA Webhosting; start date of CPA

18-21 April: DOE Validation Site Visit

August – planned submission to Executive Board

24 April: Host country LoA received

July: DOE Technical Review

August – planned submission to Executive Board

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