

Berlin, September 17th 2008

## MicroFinance & Energy

# Opportunities and Challenges in Microfinancing Improved Cooking Stoves

---

### *Content*

<b>1. INTRODUCTION TO MICROFINANCE .....</b>	<b>4</b>
1. 1 The Principle of Micro Credit	4
1. 2 Who offers Microfinancing & is ICS an option for them?6	
1. 3 Microfinance Products	7
<b>2. MICROFINANCE AND ENERGY .....</b>	<b>8</b>
2. 1 System Value and Business Costs for Enduser Financing	8
2. 2 Energize Microfinance Institutions	9
2. 3 Preliminary Identification of the Partner for ICS Dissemination	12
<b>3. DEVELOPING AN ICS PROJECT WITH AN MFI .....</b>	<b>13</b>
3. 1 Requirements for cooperation	13
3. 2 Finding the right MFI partner	13
3. 3 Institutional Assessment of MFIs	14
3. 4 Field and Market Survey	15
3. 5 Product Development	16
<b>4. CONSIDERATIONS ON POTENTIAL AND LIMITS .....</b>	<b>17</b>
4. 1 Potentials for a cooperation between MFI and ICS programs	17
4. 2 The Limits of MFIs for Energy Outreach Programs	17
4. 3 The risk for MFIs to go into an energy business	18
<b>5. LITERATURE &amp; WEBSITES .....</b>	<b>19</b>

---

MicroEnergy International  
Zentraleinrichtung Kooperation  
Franklinstr. 28/29  
10587 Berlin, Germany  
Tel: +49 (30) 201 799 68  
contact@microenergy-international.com  
www.microenergy-international.com

Since 2005 has been declared to the United Nations Year of Microfinance and Muhammed Yunus and the [Grameen Bank](#) got the Nobel Price of Peace in 2006, microfinancing became well known as a successful tool to reach the poor in regions with weak infrastructure and low incomes. Can microfinance play a role in expanding access to improved cooking stoves (ICS)?

Microfinance is not only an instrument that splits high investment costs into affordable monthly rates, it is offered through Microfinance Institutions (MFI) that entertain a whole network with close relationships to their customers. Credit clients have to be assessed, credits have to be disbursed, installments have to be collected and failures have to be followed up and, in this case, guarantees have to be recovered.

*Note: The instrument “microcredit” needs an institution in the background. It is not a tool by it self.*



Grameen Bank Meeting in Bangladesh

Up until today, only very few projects combining energy and microcredit have been implemented successfully<sup>1</sup>. The main reason for this is a lack in communication between the different stakeholders in the finance and in the energy sector. The following chapters intend to make a contribution to enhancing mutual understanding in both sectors and are specifically addressing the practitioners implementing ICS programs and supports them in order to better understand the microfinance point of view.

Currently, several thousand MFIs worldwide are offering credit to almost 133 million borrowers<sup>2</sup>. To keep this paper short, some generalization had to be made. Some MFIs may offer products not listed here or have procedures that have not been taken into consideration. In fact, the microfinance industry entertains good and effective global learning networks with the result of a remarkable standardizations in the sector<sup>3</sup>.

The following chapters give an overview and discuss the potential of microfinance within improved cooking stoves (ICS) projects. First an introduction into microfinance is given explaining the principle, the products and the main types of existing institutions. In chapter - **2. - MicroFinance and Energy** - potential and risks of micro financed ICS projects are listed de-

<sup>1</sup> Literature advise: Study: Using Microfinance to Expand Access to Energy Services – Published by *Citi Group Foundation* and *USAID*, Washington DC 2007 – Website: [www.hedon.info/goto.php/1207/news.htm](http://www.hedon.info/goto.php/1207/news.htm) [1]

<sup>2</sup> Literature advise: The Micro Credit Summit Campaign publish every year a report - Website: [www.microcreditsummit.org/pubs/reports/socr/index.html](http://www.microcreditsummit.org/pubs/reports/socr/index.html) [6]

<sup>3</sup> Some of the global networks are listed with their websites bellow:  
CGAP – Consultative Group to Assist the Poor – [www.cgap.org](http://www.cgap.org) [2]  
Micro Credit Summit Campaign - [www.microcreditsummit.org](http://www.microcreditsummit.org) [3]  
SEEP Network – [www.seepnetwork.org](http://www.seepnetwork.org) [4]

pending on the different kind of institutions. The next Chapter **3. - Developing an ICS Project with an MFI** - gives practical hints for project development and implementation with MFIs and the last chapter **4. - Considerations on Potential and Limits** - wraps up the potentials and risks from the point of view of the energy project and the MFI.

# 1. Introduction to Microfinance

This chapter starts with a short explanation of the main topics. Further it introduces the principal mechanism of micro credit, the different type of microfinance institutions and the variety of products in the sector.

- **Microfinance** refers to the provision of sustainable high quality financial services to poor or low-income clients for productive or consumptive purposes including not just micro credit but also savings, insurance and fund transfers.
- A **Microfinance Institution (MFIs)** can be an NGO or a regulated bank that offers microfinance services like micro credit, insurance or savings. The main role of the MFI is to assess the clients regarding their credit worthiness, disburse the loans, collect the installments and to follow up in case of repayment failures. A number of methodologies have been developed in the microfinance industry to support the MFIs becoming economical sustainable entities.
- **Micro credit** is a microfinance instrument. It means the extension of very small loans to poor or low-income clients who are not considered bankable. In general these individuals lack collateral and therefore cannot meet even the most minimal qualifications to gain access to traditional credit. This is why micro credit is often disbursed via a group guarantee methodology as a **group loan** where group members guarantee for each other. More wealthy clients that can offer a small collateral can also qualify for an **individual loan**.
- The majority of **MFI clients** are women – In most cultural contexts, men don't accept the group lending methodology so that they have to qualify for an individual loan. Furthermore, experience have shown that they are less reliable in repaying.

## 1.1 The Principle of Micro Credit

Micro credit can be considered as the most important microfinancing tool: This very small loan, depending on the local economical context maybe 10 to 100€<sup>4</sup> is given to a member of a lending group. The money can only be used for a productive, income generating purpose: The borrowers could, for example, buy stock for their shop, an oven for their bakery or a sewing machine.

*Note: A “regular” micro credit to buy an improved stove can only be given, if the return on investment is high and fast enough to pay back the regular rates – In other cases a special loan is needed as described in the further chapters.*

The main target group of microcredit consists of poor and very poor women who cannot offer any kind of security or asset as a guarantee. Those women are organized in local lending groups where members guarantee for each other.

The group guarantee is the most powerful and innovative instrument of microfinance that allows to offer financial services even to the income group with earnings below one dollar a day or to beggars<sup>5</sup>.

This is how it works in the Grameen Bank:

<sup>4</sup> The amount can also be higher, it depends on the local economical context. In an east European context, 1000 to 5000€ can be considered as a micro credit.

<sup>5</sup> Video recommendation: Jami Bora - <http://video.google.com/videoplay?docid=7351863330550836974>

1. The self-formed group of five women decides who will be the first one to get a loan
2. After repaying her loan, the second woman in the group will get a loan
3. The same procedure happens with the third, fourth and fifth one.
4. After all five have repaid their loans, they have accomplished their first cycle and start their second one: The first woman will get a new, higher loan.
5. By this way, the individual borrowers and their group can upgrade cycle by cycle and get step by step access to higher loans and other financial products.

The methodology differs from MFI to MFI. [FINCA](#) for example has groups up to 25 members and they have to save a certain amount of money before getting their first loan. In the group lending methodology, the strong social pressure replaces the usual personal asset-based securities.

**Table 1 – Properties of Micro Credit**

<b>Basic Properties of the Micro Credit</b>
Very small loans
No assets as guarantee
Mainly femal borrowers
Group lending mechanism
Short pay back periods
The loan must be used for income generating activities

Women are the favorite target group of MFIs as experience has shown that they feel more responsible for their families and for this reason show a stronger motivation for a sustainable investment into productive and less risky businesses. Furthermore, women are bound to their house and children and easy to find for the collection of the rates. Borrowing to men has proved to be more risky because they are less reliable, they tend to misuse the credit and invest more in personal consumptive items, are more mobile and difficult to catch in case of credit failure<sup>6</sup>.

The high quota of women reached through MFIs makes them a suitable partner for ICS programs. MFIs can not only promote ICS, they can also play a role in implementing and financing as described in the chapter 3. - **Developing an ICS Project with an MFI.**

Micro credits have to be repaid in regular rates in short intervals: Monthly, biweekly and in some cases even weekly. Loan officers supervise the groups and are responsible for collecting the rates and the disbursement of new loans. Loan officers have to be familiar to the local context they are working in, but strangers to the villages/areas they are serving. This staffing policy enables the officers to have enough empathy on one side and authority on the other side. To avoid corruption, a rotating system have shown a lot of success.

<sup>6</sup> Literature recommendation: Yunus, M., Grameen Bank, Banker to the Poor. Published by Public Affairs, New York 1999[6]

## 1.2 Who offers Microfinancing & is ICS an option for them?

Microfinancing can be offered by different kind of MFIs with a variety of entity shapes. They can have different formal status. For example be organized as foundations, NGOs or even as regulated institutions under the banking law of a country. Mainly these institutions have a private background, but in some countries they can also be public. As the entity shape have a coherence with the ability to finance special products like an ICS, the types will be discussed in the following.

Most MFIs start as a simple NGO disbursing loans. With increasing experience, client network and portfolio growth they aspire the more formal status of a regulated banking institution because in most countries, it is a prerequisite to be able to offer saving opportunities to your clients. “Regulated” means a high institutional transparency and an adaptation of the financial procedures to the national banking law. This is often limiting the flexibility: Regulated MFIs in Uganda for example, are not allowed to disburse loans with repayment periods longer than 6 months. On one side, it makes them more sustainable, on the other side, those MFIs can only finance businesses and assets with a half year return on investment period.

- *It is challenging for regulated MFIs to develop special programs like ICS programs as regulations are limiting their flexibility.*

Some NGOs discover microfinancing as a useful add-on to their social services – It makes them and their target group independent from additional partners if financing and ownership is an important factor within their projects. A typical example for this are NGOs working along an agricultural value chain that offers not only consulting and training but also credits to their members so that they can buy bigger stocks or better quality seeds, invest in tools and machines, build warehouses etc...

- *NGOs are much more flexible and open to new experiments like financing ICS.*

An other kind of microfinancing is the micro lending or micro leasing through supplier of specific products. Only few suppliers are able to offer this financial service as a large amount of cash flow is needed to pre-finance all the systems as well as a supplementary credit management department. Credit clients have to be assessed, credits have to be disbursed, installments have to be collected and failures have to be followed up and, in this case, guarantees have to be recovered. All those tasks need know-how, experience and infrastructure. Most suppliers are not able or not willing to develop this kind of “second business”. Thus, two experiments of this kind have started recently with two suppliers of solar products: *Solar Energy Africa* in Uganda and *Zara Solar* in Tanzania.

- *Microlending ICS means enabling a stove producer or retailer to give loans. This is only a suitable solution if they are large enough to handle an extra department for financing.*

As the microfinance industry has matured in the last 10 years, more and more **conventional banks** like for example [Barcleys](#) are discovering this sector as a new venture within their activities. In most cases they are targeting the active poor (**chapter 2 - MFIs targeting the active poor**).

- *For conventional banks it is even more unusual to give loans for a special product, especially as long as ICS are not standardized.*

An increase in quality and standardization on one side and a sensitization for the topic on the other side will enable more and more institutions to play a role in the dissemination of ICS.

### 1.3 Microfinance Products

In the following chapter, different microfinance product categories that can play a role in the dissemination of ICS are described:

**Micro credits** as described earlier in this chapter can be considered the typical core product of microfinancing: Small loans disbursed to women organized in groups as an investment for productive income generating activities.

- *Micro credits can be used to finance the purchase of an ICS.*

The good experience with microcredit and the growing competition in the sector is the reason why microfinance institutions have started offering other financial products such as **Individual loans**.

Individual loans are offered to entrepreneurs who are still excluded from the conventional finance sector but have credit requirements respective to their businesses that are much larger than what is usually disbursed in groups. In competitive situations, this kind of loans is also offered to clients that do not accept group lending methods: Mostly men and more wealthy entrepreneurs.

Individual loans are higher and the client needs guarantors or an asset as a security. In a lot of cases, MFIs clients upgrade from group loans to individual loans.

- *This loans can be suitable to finance institutional stoves, in regions with high cooking fuel costs, but also the production of ICS.*

If during an evaluation an MFI realizes that a big part of their clients are in need of a specific product, they have the opportunity to develop a partnership with a supplier and offer a special loan. It can be a product that supports the income generation like a bicycle or a cell phone or even, if the clients do not belong to the very poor, a product mainly used for consumptive purposes. In this case, it is often called **consumer lending**. Solar Home Systems are part of this category. Quality issues play an important role here because products must perform at least as long as the repayment period is going on. If the product has a high value for a longer period, they are considered an asset and financed through **asset loans**. In a next step, the client can use this asset as a guarantee for an individual loan.

- *This category of loans can be useful for financing expensive and high quality ICS like for example well manufactured solar cookers.*

A special and very popular form of asset loan is the housing loan. In general it is offered to clients after they have passed through multiple credit cycles. MFIs have experienced already in early stages that even if housing is not directly generating income, house ownership brings so much stability into a borrower's life that it has a very direct impact on the income of the families<sup>7</sup> – It's a long-term investment but the return is a precious component helping the family breaking the vicious circle of poverty.

- *An ICS component can be integrated into a housing loan program.*

Some MFIs have already specific “**Energy Loans**” or even energy programs led by departments of their own or subsidiaries like for example [Grameen Shakti](#) (Subsidiary of [Grameen Bank](#)) or the energy division of [SEEDS](#) in Sri Lanka. They can be directly approached for an ICS program<sup>8</sup>.

---

<sup>7</sup> Literature recommendation: Yunus, M., Grameen Bank, Banker to the Poor. Published by Public Affairs, New York 1999 [6]

<sup>8</sup> Other specific energy programs of MFIs are mentioned in [1]

---

## 2. MicroFinance and Energy

---

They are two ways of how energy and microfinance can be combined: In most cases, energy projects need an instrument for local suppliers or end user financing. In some cases, MFIs identify energy as an important need of their customers or discover energy as an attractive new venture.

In the first case, the energy project may hire a microfinance specialist and develop an adapted mechanism specifically for the project (see **chapter 3. - Developing an ICS Project with an MFI**). In this case it is important to integrate the microfinance specialist into the preliminary market research already because the criteria that specify the potential clients or ICS producer do not only include ability and willingness to pay but also their eligibility for a credit by measuring the risk of non-repayment.

- *In practice this is one of the most common problems: The project area and beneficiaries are identified and - in a second step - project managers start to search for a financial mechanism. Under certain circumstances, client assessment may result in only very few already identified end users worthy of an energy loan.*
- *Exactly the same can happen with potential ICS producer. They may fulfill important technical criteria but not the requirements of an MFI to get a loan.*

A microfinance system for energy requires a solid infrastructure in the background as offered by MFIs. In small and time bounded energy projects, it is difficult to organize such a system and to reach long term sustainability. The main barriers are described in the following chapter.

### 2.1 System Value and Business Costs for Enduser Financing

The main barrier in end user financing of energy is the price and financial requirements of an energy-financing tool: The development of a sustainable microfinance infrastructure is costly and time-consuming because:

- Field-, market research, business planning, monitoring and evaluation have to be financed
- Staff has to be hired and trained – Salaries have to be paid
- ICS stock has to be bought and managed
- Transportation has to be organized
- Logistics, maintenance and service create running costs
- The growing access to cash flow must be assured, as energy systems have to be pre-financed through the organization
- Capital for pre-financing has to be borrowed and interest needs to be paid

All those positions represent the business costs and are part of the service charge that the customer has to pay in addition to the price of the energy system itself. It needs a high number of clients to keep the running costs down and to get the break even.

For this reason, most microfinance energy projects start with a high value technology in a way that the turnover is higher and business costs do not exceed 30% of the total price: The problem of financing a lower price technology like cheap ICS in the initial phase is that the business costs are not depending on the system costs: The implementation of a 10€ stove is not



much cheaper than a 500€ solar system since the dissemination infrastructure and network which need to be developed, are the same.

- *Exactly for this reason, it is recommendable to implement low cost energy technology like ICS through already existing microfinance institutions. In this case, additional costs are only generated for the organization of the supply and partially for the technical service that may be required (if it is part of the business plan (see chapter 3.5. - Product Development))*

## 2.2 Energize Microfinance Institutions

It is the central role of MFIs to develop their networks and financial infrastructure and to reach out to target groups that are not yet served by the conventional financial sector. This target groups are usually also underserved regarding their energy needs: They may face problems with accessing modern energy facilities to improve their business or their home or they may spend an important part of their monetary income for energy sources due to the use of cheap and inefficient appliances.

Worldwide, several thousand institutions offer microfinance – Regarding the use of microfinance to expand access to energy services, it is helpful to look at six different aspects:

1. MFIs targeting the poorest
2. MFIs targeting the active poor
3. MFIs focusing on urban and peri-urban areas
4. MFIs focusing on rural areas
5. MFIs with NGO status
6. MFIs with banking status

Those aspects don't exclude each other; MFIs may fit some of them – For the energy project, it is important to identify their focus and the channel for the product.

### 2.2.1 *If the MFI is targeting the very poor*

Especially MFIs organized in the [Micro Credit Summit Campaign](#) have a commitment and experience with methodologies to reach out to the very poor. The most prominent programs are the beggar program of the [Grameen Bank](#) in Bangladesh and [Jami Bora](#) in Kenya.

For most of the MFIs reaching the very poor is already a special program as they are difficult to identify, motivate and integrate in groups. The loans are very small, in some cases just a few cents and repayment intervals are very short.

The programs are expensive and often cross-subsidized through other programs. The [Grameen Bank](#) beggar loan, for example, is interest-free – this way, a first barrier is removed and very poor people are given the chance to experience credit and repayment as a methodology and opportunity for investment capital – Thus, the program itself is not self-sustaining and needs the clients to upgrade step by step so that they can reach the conventional micro loan programs.

- *Potential and Risks for ICS Programs*

This target group of the very poor often does not pay for their cooking fuel, they collect it or even, in the case of scarcity, do not cook at all and just beg for cooked food.

ICS programs may get in touch with this target group through the MFI, but microcredit cannot be a financing instrument in this case because:

- There is no economical substitution potential as most of the end users are not yet paying for their fuel and saving time is not valued highly by this target group.
- Microfinance is mostly subsidized when it comes to reaching out to the very poor. ICS disseminated this way would need a further subsidy at least on the interest rate.
- “Reaching the very poor” is already a special program for most of the MFIs; combining it with ICS financing risks makes it “a special program in a special program”.

### **2. 2. 2            *If the MFI is targeting the active poor***

Most of the MFIs worldwide are targeting the active poor and developing financial services for them. The name “active poor” is given to people with a low income but who have already an ongoing small business. This target group is very big and easy to motivate and in tremendous need of investment capital to grow and develop their business.

#### **➤ *Potential and Risks for ICS Programs***

Expenses for cooking and heating in the household or within the businesses are often high and the time-saving aspect can be important for this target group as they are actively generating income and need to raise a revenue on their investments.

In fact, cooking appliances can be considered as the key energy product to finance for MFIs because their target group are active women entrepreneurs. Cooking is an issue for them within their household but often also within their businesses.

The biggest challenge is the requirements of MFIs in respect to the quality aspects (see chapter **3. 1 - Requirements for cooperation**).

### **2. 2. 3            *If the MFI is targeting urban or peri-urban areas***

Historically, microfinance has started in rural areas. Organizations like the [Grameen Bank](#) and [FINCA](#) have their roots in villages and have developed their methodologies based on rural, social, economical, and cultural structures. But the growing microfinance industry, especially in the African context, focuses on urban areas in their initial phases. The main reasons for this development are:

- Low population density in rural areas;
- Extreme poverty in rural areas that requires only very small loans or no loans at all because of a very informal non-monetary economy.
- Challenges of infrastructure conditions;
- Donor expectations looking for a fast return on investment and break even;

When established in urban centers, institutions start spreading out to rural areas, first along the main roads and then step by step into more remote areas.

#### **➤ *Potential and Risks for ICS Programs***

Depending on the local circumstances, urban or peri-urban MFI-customers face specific problems of lacking or limited access to cooking fuel but also specific living and business conditions that should be taken into consideration.

As MFI clients belong to the lower social classes, they are confronted with all the typical challenges of energy and poverty in urban areas. The shortage and price increase of biomass affects them in their home and, depending on the kind of income-generating activities, also in their businesses. As heating and cooking fuel is mostly purchased and not collected in urban areas, especially if it is used to run a small enterprise like a restaurant, an ICS will have a direct impact on the return of investment. In this case, MFIs have a high interest not only to finance, but also to actively promote ICS within their customer group.

#### **2. 2. 4            *If the MFI is targeting rural areas***

MFIs offering services in rural areas can mostly be found in the Asian context where population density is high enough or legal constraints have hindered microcredit to be spread to urban areas.

A stronger outreach to rural areas in the Latin American or African context could also be found within MFIs that focus on offering financial services along an agriculture value chain like cocoa, coffee or honey. Those can be considered the most viable partners in rural areas, because they often have a very close relationship to their customers offering them a wide range of financial, educational and advocacy services.

##### **➤ *Potential and Risks for ICS Programs***

Rural MFI clients often still have access to free biomass that they can collect. However, MFI clients along the main national roads are often involved in the commercialization of biomass through their businesses, collecting and selling wood or running a charcoal business. For these reasons, MFIs active in those areas can be an interesting partner for creating awareness for alternative development within biomass conservation programs.

#### **2. 2. 5            *If the MFI has an NGO Status***

Almost all MFIs start with an NGO status in their initial phase. It makes operations easier because they can develop new methodologies and go for experiments. As MFIs grow and become economically sustainable, they develop the ambition to upgrade to banking status (see chapter 1. 2 -Who offers Microfinancing & is ICS an option for them?).

##### **➤ *Potential and Risks for ICS Programs***

During the NGO phase, MFIs are much more flexible and can experiment with all kind of products without too many risks for their core business. Also, they can integrate all kinds of funds and grants into their activities more easily without starting separate accountings. This argument makes it easier for them to develop a special program for ICS dissemination.

#### **2. 2. 6            *If the MFI has a Banking Status***

MFIs that operate under banking regulations are often large and reach out to many clients, have easy access to funds and are economically sustainable.

##### **➤ *Potential and Risks for ICS Programs***

The operations of regulated MFIs are very standardized and they have limited flexibility only to adapt a financial mechanism to an energy product. In general, they can only offer general

financing to an ICS program without specific adaptations or subsidies. Also, they are not in a good position to cover parts of the supply chain and need a partnership with a supplier (so-called “two-hand-model”). It is often more helpful to outsource the energy project in a separate department or even in a new company.

### 2.3 Preliminary Identification of the Partner for ICS Dissemination

MFIs can cover different areas as shown below, what this can look like is described in the following table

	<a href="#">Grameen Bank</a> Bangladesh	<a href="#">Jami Bora</a> Kenya	<a href="#">FINCA</a> Uganda	<a href="#">Sinapi</a> Ghana	<a href="#">Barcleys</a> Uganda
MFIs targeting the poorest	X	x			
MFIs targeting the active poor	X		x	x	x
MFIs focusing on urban and peri urban		x	x	x	x
MFIs focusing on rural areas	X		x	x	
MFIs with NGO status		x		x	
MFIs with banking status	X		x		x

To identify the right partner, local MFIs can be analyzed regarding their focus and the largest client group category they serve.

---

## 3. Developing an ICS Project with an MFI

---

The following chapter gives an overview of project development requirements and steps to be taken when developing a partnership with an MFI.

### 3.1 Requirements for cooperation

As described in the upfront chapters, MFIs need a high level of technological standardization to be effective and economically sustainable. This is the reason why the few successful micro-finance ICS programs were disseminating LPG-Technology using standardized bottles withing a well working quality management system<sup>9</sup>.

MFIs have a long credit-relationship with their customers focusing their business (and not the household). The mutual trust, which is an important part of the relation makes MFIs to a powerful partner for awareness creation and marketing but on the other hand requires reliable products and producers. In the negative case this would also influence the stove image and dissemination, which due to the high organization level of MFI client networks bad news could spread rapidly.

For this reason, it is recommended to not disseminate ICS through MFIs as long as the stove is not well tested and quality control instruments are implemented. The stoves should first be tested regarding the following aspects:

- Ability of the producers to keep the quality standard within a measurable range:
  - o The rumor that products fail or do not save as much as promised will be spread out very fast within the MFI network and may lead to the failure of the whole project.
- Performance and performance changes of the stoves during the period of repayment.
  - o Obviously, stove efficiency will decrease while in use. The more the loans are adapted to a realistic saving fuel scenario, the more the good news will be spread out within the MFI network that “the product almost pays itself”.

### 3.2 Finding the right MFI partner

Depending on which kind of stove is to be disseminated, the appropriate MFI should be approached according to the category of clients they are serving (very poor/active poor, urban/rural) and the status they have (NGO/Bank) as described in chapter **2.2 - Energize Microfinance Institutions**

Almost all MFIs have available data regarding the categories of businesses they finance. A first evaluation of those data will give an insight into the relevance of cooking fuel depending businesses like for example:

- Restaurants
- Canteens
- Food processing
- Bakeries

---

<sup>9</sup> Those experiences are well described in the study “Using Microfinance to Expand Access to Energy Services” [1]

- Schools<sup>10</sup>

Some MFIs like FINCA ([www.villagebanking.org](http://www.villagebanking.org)), for example, already monitor the cooking fuel expenses of their clients. Depending on the relevance, the motivation of the MFI to go for an ICS project will be determined.



MFI Client in Ghana – Cooking for her restaurant

This assessment should also include an investigation for MFI clients that may become part of the ICS supply chain like producing and retailing. If the MFI data is not precise enough, these aspects have to be included in the market assessment as described later in chapter **3.4. - Field and Market Survey**)

### 3.3 Institutional Assessment of MFIs

The goal of this institutional assessment is the identification of the capacities of the MFI to develop, implement and evaluate an ICS project and to determine the required institutional support in capital, facilities and training. The following aspects should be taken into consideration:

- Organizational aspects
  - o How is the decision-making process organized? - MFIs often have a strict hierarchy and a board that will approve a new project only after market assessment and business planning has been completed.
- Available funding and capacities to access capital
  - o Make sure the funding and accessible capital can be used and is flexible enough for the ICS project – especially if the MFIs have a banking status.
- Human resources capacities
  - o Is there enough staff for the implementation of a new project?
  - o What are the professional capacities of the staff? Can their skills meet the requirements of an ICS project?
  - o Does the MFI has training capacities?
  - o What is the capacity of the MFI regarding the integration of staff with new professional background?

Finally, the experience implementing projects, especially if they concern another field than finance, should be also assessed.

<sup>10</sup> Rural schools are businesses sometimes financed by MFIs in countries that still have school fees.

### 3.4 Field and Market Survey

The goal of the field and market survey is the determination of the product requirements and the marketing strategy.

The methodology to be chosen for a field- and market survey depends on following factors:

- The (already available) socio-economic and cooking habits data that may have been collected during earlier project phases.
- The usual market survey methodologies of the MFI, as they should be integrated as much as possible already in this phase.

It is recommendable to start the market research with a qualitative approach as, on the one hand, it helps to adjust the research questions for a more quantitative study to the specific requirements of the MFI and, on the other hand, it can be considered as training and introduction of MFI staff to the topic of ICS. In some cases, the monitoring and evaluation instruments of the MFI are already so mature and highly developed that just a few questions need to be added.

- It is an important assessment aspect to differentiate between cooking habits and fuel relevancies for home and for business. Data that should be assessed for both categories are:
  - Cooking fuel supply habits (purchasing/collecting) of the social group represented within the MFI clients.
  - Microeconomics of cooking fuel including expenses and time spent for collection.
  - The business case needs an analysis of the competitive situation: In some business cases, it may not help to save money on fuel with an ICS if the technology hinders the entrepreneurs to be as fast as their competitors using a conventional solution.

Determination of the different roles within the supply and cooking process: Is it the typical MFI client or what is his/her relation?

- Who would pay for a cooking appliance?
- Who is cooking?
- Who is collecting the wood?
- Who is paying for cooking fuel?

Experience has shown that many MFI clients in Uganda delegate cooking to maids or daughters. The willingness to spend money for a stove in such cases is rather low and the time for collecting fuelwood doesn't have any relevance. However, in restaurants many MFI clients cook by themselves and buy their fuel. Thus, they have to be economic.

If the assessment is compiled with the usual monitoring and evaluation tools of the MFI, a lot of inter-sectoral correlations are possible and will be very helpful for the development of the marketing and awareness-raising program.

If the usual monitoring and evaluation tools of the MFI are not precise enough to further identify businesses that can play an important role in producing, disseminating and implementing ICS, this should be included in this assessment as well.

### 3.5 Product Development

The analysis of the results of the institutional assessment and the field and market research is the initial phase of product development. The outcomes play a major role in the decision-making process regarding which business model is the most appropriate approach:

- What role should the MFI play within the supply chain:
  - o Only financing? With which financial product (see chapter **1.3 - Microfinance Products**)?
  - o Awareness raising and marketing?
  - o Logistics? Stocking? The whole dissemination program?
  - o Quality control and management?

Depending on the results of this process, the project plan has to be developed including marketing tools, defining the starting branch, scaling up strategy and monitoring and evaluation methodologies.



## 4. Considerations on Potential and Limits

---

The greatest potential of a cooperation between ICS programs and MFIs are the shared target group *women* and the fact the MFIs enable access to financing. Other potentials are summarized below:

### 4.1 Potentials for a cooperation between MFI and ICS programs

- Market aspects
  - o Overcoming the financial barrier for investments in energy efficiency
  - o Bundling the demand and offering access to new markets
- Social aspects
  - o MFIs have a high interest in enhancing the income generation aspects
  - o MFIs focus on empowering women by enabling female entrepreneurship
- Quality aspects
  - o The long-term relationship with the customer that makes it possible to offer an additional service that may be needed for a sustainable implementation of ICS
  - o The MFI can become a central stakeholder in the consumer protection process as quality is a main aspect in the relationship with their clients
- Monitoring and evaluation aspects
  - o The performance of the MFIs clearly indicates the quality of their services
  - o MFIs have to monitor and evaluate their projects regularly through third parties to get access to finance.
  - o The monitoring methodologies of MFIs offer the opportunity to evaluate the impact of energy on the social aspects of life.

Furthermore, MFIs have an expanding market, reaching actually more than 133 Million borrowers worldwide ([www.microcreditsummit.org](http://www.microcreditsummit.org))

### 4.2 The Limits of MFIs for Energy Outreach Programs

Although MFIs are offering so much potential, some limits should also be taken into account:

- Only few MFIs discover “energy” as a matter by themselves.
- MFIs are bureaucratic and hierarchic organizations, they need time to move.
- To promote energy in a sustainable way, they need to internalize expertise; this expertise should be technology-neutral so that they are able to compare different products.
- A lot of training on different management levels is needed.
- Only few MFIs target the very poor.
- If they target the very poor, they generally do not offer special credits (see chapter 1- **MFIs targeting the poorest**)
- They do not, especially in Africa and Latin America, reach out to rural areas that much.
- MFIs work on a very standardized way

- Staff fluctuation, especially on operational level, is high.
- Profitability depends on the number of clients per credit officer and the repayment rates.
- MFIs finance only eligible clients, each MFI has its own criteria, as to how to identify them.
- For a larger investment, a long-term relationship (credit history) with the customer must exist or an adapted collateral is needed.
- The target group that does not have expenses for energy yet, for example if biomass is collected and not purchased, is normally not eligible for an energy loan.

MFIs always need to “bundle” their clients; this is why microfinance becomes more and more expensive, the more decentralized energy supply makes technically sense???

### 4.3 The risk for MFIs to go into an energy business

An energy project approaching an MFI for cooperation should be aware of the risks from the MFI's perspective.

- Developing an ICS program means to integrate partially new infrastructure, product-related services and incorporate parts of the supply chain.
- To go into an ICS program means a new investment and a jump into unknown business fields.
- A lot of new knowledge has to be internalized.
- Partnerships need to be developed and stabilized.
- A quality management system has to be introduced.
- Stock and logistics have to be developed.

All those risks should be addressed by the energy project as early as possible to encourage the MFI.

---

## 5. Literature & Websites

---

[1] Study: Using Microfinance to Expand Access to Energy Services – Published by *Citi Group Foundation* and *USAID*, Washington DC 2007.

[2] CGAP – Consultative Group to Assist the Poor – [www.cgap.org](http://www.cgap.org)

[3] Micro Credit Summit Campaign - [www.microcreditsummit.org](http://www.microcreditsummit.org)

[4] SEEP Network – [www.seepnetwork.org](http://www.seepnetwork.org)

[5] Kebir, N. & Philipp, D.; Ländliche Elektrifizierung auf der Basis von erneuerbaren Energien in Kombination mit Mikrofinanzierung am Beispiel von Grameen Shakti in Bangladesh; Published by *Peoples Globalization Edition*, Berlin 2004. Website: [www.gshakti.org](http://www.gshakti.org)

[6] Yunus, M., Grameen Bank, Banker to the Poor. Published by Public Affairs, New York 1999.

[7] Jami Bora Video - <http://video.google.com/videoplay?docid=7351863330550836974>

[8] FINCA – [www.villagebanking.org](http://www.villagebanking.org)

Further recommendations...

- Gross, R.; The Contribution of Microfinance to Achieving the Millennium Development Goals (MDGs) and the Programme of Action 2015 of Poverty Reduction, The Experience of the GTZ; GTZ: Eschborn 2004.
- Muhammad Yunus, Die Armut besiegen, Published by *Carl Hanser Verlag*, München 2008