

Microloans for Clean Energy

Achieving social and ecological sustainability through a climate friendly promotion of economic development: synergies of microfinance and carbon markets may provide an important contribution to this goal

Sven Braden (LIFE Climate Foundation Liechtenstein) und Alain Schilli (myclimate), December 2009

2.4 billion people depend on a traditional but not sustainable fossil fuel supply in order to cover their basic energy needs. The mother of four children in Cambodia spends three hours a day to collect firewood in order to provide one warm meal for her family per day. The farmer in Nicaragua who fails to pump enough water into his fields has to expect a poor harvest. And the children in Tanzania, who help their families on the field during day time have to learn how to write and read in the evening using a poor candlelight. Economic development is often directly linked to peoples accession to energy.

An instrument which proved to be remarkably successful in supporting the development of small business industries, especially within emerging economies could also be the key to a wide energy access for many people in developing countries: the allocation of so called microloans. Under this mechanism very small loans are granted to individuals who lack a verifiable credit history and therefore cannot meet the minimum qualifications to traditional credits. The payback quotas are said to be 97% the loss rate is around 1,1 % which is significantly under the average loss rates of traditional credits.

“Microloans as a key to energy access in developing Countries”

Microloans are allocated through so called microfinance institutes (MFI). The institutes are specialised, local institutions. Regarding their organisational framework MFIs are very flexible and therefore able to adapt their activities to the respective local conditions quickly. The allocation of microloans could be appropriate to finance the installation of decentralised and renewable energy systems (micro-energy credits). Improved cook stoves, household solar devices or small biogas digesters could be implemented and financed by these credits. However, compared to the traditional microfinance business, the allocation of micro-energy credits will not automatically spur entrepreneurship that generates a fixed income. Improved cook stoves and solar devices will only be bought if they are profitable. Whether the argument of saving fossil fuel or fire wood somewhere in the future will be enough to make a purchase decision should be questioned.

Within micro-energy credit consultations between MFIs and micro-lenders links to the generation of income should therefore be of mayor importance. The equator-based marketer will improve its sales even after seven o'clock in the evening if he can illuminate his goods. Higher sales rates will enable him to sooner satisfy his micro-energy debts.



Micro business in Uganda

However, in cases where the access to energy will not directly lead to the generation of income the interest rates should not be too high in order to avoid the indebtedness of the micro-lender. At the same time the respective MFI must still work profitable. With this respect the generation of so called carbon credits originating from the so called Clean Development Mechanism (CDM) may help to ease the microloan conditions. Companies from industrial countries invest in emission reduction projects in developing countries. These projects receive the carbon credits which companies can use to comply with their obligations under emissions trading schemes around the world, e.g. European Emissions Trading Scheme.

“CDM may help to ease microloan conditions”

Within the framework of the CDM it is possible to bundle many small emission reduction projects within one program. This program can then be registered as one single CDM project (also known as “Program of Activities”, PoA). The procedure is, however, very complex and involves high costs. Incorporating micro-energy projects into a PoA therefore only makes sense if the implementation of these projects takes place on a region-wide level and with participation of regional and/or national coordinating entities. With respect to the latter MFIs could play an important role.



There are several states which have already implemented national energy programs, for example Ethiopia and Nepal. The goal of the Ethiopian biogas-program for example is to implement 14'000 biogas digesters within five years in a first phase which corresponds to 2'800 digesters a year. The program is financed by official development aid of the Netherlands. The program's intention is, however, only to serve as an incentive for the private sector. In the mid-term the program should pay for itself. In order to achieve this goal, the financial streams originating from Dutch official development aid could be substituted by financial streams coming from the microfinance and CDM side. To provide a concrete example take the following simplified calculation.

The costs of a biogas digester are around 500 \$ US and generates around 3 emission credits which corresponds to the amount of 3 tonnes of CO₂ eq per annum. With respect to the biogas program of Ethiopia 2'800 digesters worth 1'4 Mio. \$ US would have to be financed upfront by the allocation of microloans. If every digester annually generates 3 credits and each credit would be sold for 15 \$ US, an annual revenue of 126'000 \$ US could be reached (without interests). This sum could enable MFIs to ease the conditions of micro-energy credits for their customers, for example by lowering the interest rates or by prolonging the payback time. A more attractive credit framework would enlarge the circle of potential customers.

The example also shows that a linkage of microfinance and CDM might be a suitable target for profit-oriented investment funds and other financial vehicles. As already experienced within the traditional microfinance sector, micro-energy projects could provide an interesting opportunity for institutional as well as for private investors.

"Still a long way to go – pilot projects needed"

Although theory shows promising synergies between the two mechanisms there is still a long way to go. In order to benefit from the abovementioned synergies a constant transfer of knowledge between both fields (microfinance and carbon markets) is necessary in the first place. Pilot projects are suitable to bridge the practical gap between microfinance and market based climate protection measures in order to make these synergies practicably accessible.

Contact:

info@climatefoundation.li

www.climatefoundation.li