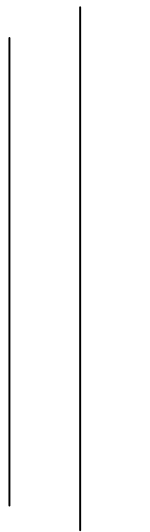


**An Experience on  
Cooperation Between Commercial Banks and Local MFIs  
For  
Lending in Solar Home Systems**



An Experience Sharing Paper  
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*Experience from Existing Co-operation Between Banks and Local MFIs for Lending  
in Solar Home Systems*

ABSTRACT

This paper highlights the experience and outcome from existing cooperation among the solar companies, commercial banks, local cooperatives and Alternative Energy Promotion Centre/Energy Sector Assistance Program. The subsidy policy was conceived, keeping in mind that the users' contribution is necessary for sustainable use of Solar Home Systems as it covers the total cost between 30% and 50%. Moreover, subsidy from donors is not ad infinitum. The household that can pay remaining amount are accessing to subsidy for SHS installation and poor households which cannot generate the remaining amount are excluded from benefits of subsidy. Rural people might be able to pay the system cost in installments but payment of total cost at once is difficult for most. Various studies have revealed that many rural off-grid households can pay monthly installments to purchase SHS on subsidy as they are purchasing conventional energy sources at a cost. These households are willing to pay for better energy resources. Micro-finance is one way of doing this. With micro-credit readily available from finance institutions, locally, it could be possible for those users to own SHS within two to three years without additional financial burden. In this context, AEPC/ESAP had initiated a piloting called "Credit Financing SHS-2065". Winrock International, National Cooperative Federation of Nepal and Sana Kisan Bikas Kendriya Sangh formed a consortium in order to successfully carry out the project. The project was successful in achieving all the targets.

## **Introduction**

The Government of Nepal has been promoting the use of renewable energy technologies, specially, in rural Nepal with the help of subsidy.

Energy Sector Assistance Program (ESAP) is one of many such programs under the auspices of Alternative Energy Promotion Center (AEPC), the Nepal Government's executing agency. ESAP promotes Micro-Hydro Projects, Solar Home Systems (SHS) and Bio-mass Energy with the help of subsidy, capacity building and awareness programs. SHS is one of such technologies for which there is provision of subsidy between 30% and 50%, depending upon the size of the system and the geographical location of the user.

The un-electrified rural households in Nepal need basic source of light and the best way to provide them the lighting facility is via SHS. It is estimated that roughly 60% of the total population are still deprived of electricity and spend their life under darkness. The high costs associated with connectivity via micro-hydro projects or even the national-grid, make it more feasible for a stand-alone SHS which can be installed at the will of the household as against the will of the whole community needing electricity.

## **Background**

The Subsidy is envisaged to enhance the rural poor users' purchasing capacity to install SHS where the government has not been able to provide electricity via national grid or any other means. However, the experience thus far show that only the relatively well-off segment of the rural population have been able to purchase the system, contributing the balance on their own. This has prompted AEPC/ESAP in devising a way where the targeted poor people also get to use the system and realize the benefits of subsidy without putting additional financial burden on them.

Micro-credit could possibly be the answer to the problem. Studies show that the users spend about Rs. 300 per month to purchase other sources of energy such as kerosene, fuel-wood, battery, candle, etc. The time and hassles involved in buying the other sources far outweigh the high initial costs associated with buying a SHS. Therefore, a piloting, namely "Credit Financing SHS – 2065" was launched in order to search for a viable model which will enhance rural peoples' access to credit for purchasing the system.

## **Objectives**

The objective of the piloting was:

- To pilot a viable model of capacitating local financial institutions and credit financing SHS to have access and affordability of rural poor to purchase SHS via micro-credit.

Therefore, a viable model needed to be tested as a piloting project. It was envisaged that the demand for SHS would grow so high that the Local Micro-Finance Institutions (LMFIs) financing the systems would run out of funds, needing a bigger financial institution to support the necessary fund. This, in turn, would bridge the gap between the rural and the urban financial institutions, ensuring free flow of funds for any purpose.

There is a need for special intervention to create conducive environment for loan flow in those areas where AEPC/ESAP works. Micro-finance implies outreach of financial services to poor and low-income households whose inability to prove that they can actually pay without default generally excludes them from formal financial system itself.

Commercial & development banks have high liquidity and have shown interest in this market but they are not confident about the LMFIs' creditworthiness.

The quality aspect of the systems was equally important in winning the confidence of the users as well as the financiers. Therefore, the hidden objective was also to deliver quality services.

All the envisaged deliverables required consultants with strong rural and urban network, previous experience in the same/similar activities, good conceptual knowledge and proper implementation mechanism.

In the above-mentioned context, Solar Support Program (SSP) Component of ESAP had solicited the service of consulting organizations to identify LMFIs (Cooperatives) in the selected districts to implement a pilot model in credit extending in SHS. SSP found Winrock International (WI), National Co-operative Federation of Nepal Ltd. (NCF) and Sana Kishan Bikash Kendriya Sangh (SKBKS) to have fully understood the job and to have had certain strengths. All three were consulted to have a possibility to work together as the consortium and after reaching the agreement, it was decided to form a consortium of the three institutions to execute the project in the medium term perspective, of about three years.

WI, with proven experiences in developing conceptual framework in financing renewable energy technologies had already done projects in this field and working with commercial banks in financing rural energy technologies. NCF and SKBKS have strength of having huge networks of member co-operatives or financial institutions in the local level. They also have valuable experience in conducting training programs and capacity building activities.

It was decided to have WI as the Lead consultant and other two NCF and SKBKS as the implementing consultants. The lead consultant is mainly responsible for the designing the project and its different components/modules and implementing consultant will be responsible for the field implementation and monitoring of the project.

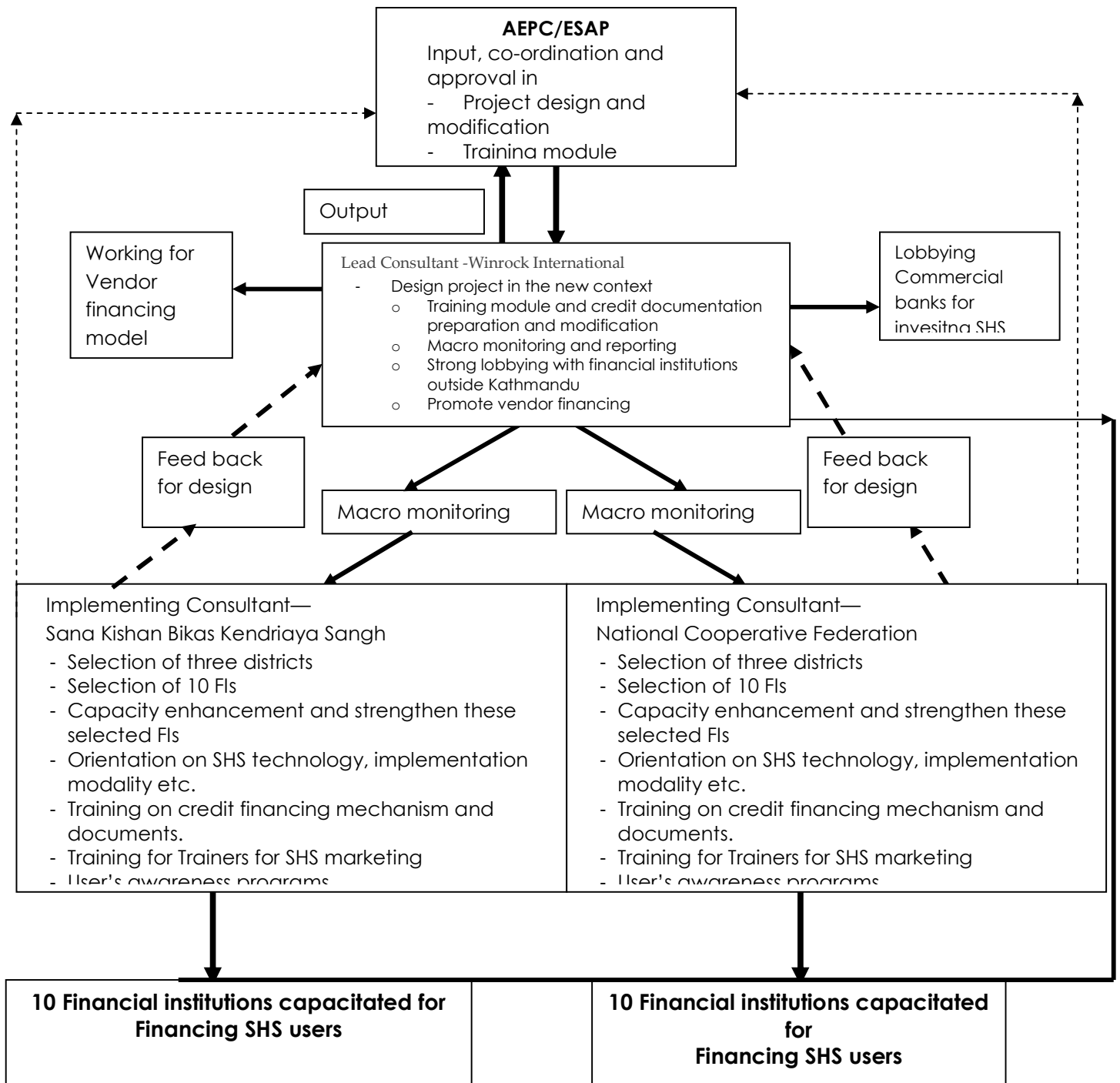
The strength of the synergy created by having a team of AEPC/ESAP, WI, NCF and SKBKS has been able to convince three banks in to actual lending itself. Several banks have shown keen interest on joining hand on the basis of this strength as well.

The consortium, along with AEPC/ESAP chose three districts from the Eastern cluster, namely, Sankhuwasabha, Bhojpur and Panchthar and chose three districts from the Mid-Western cluster, namely, Dailekh, Rukum and Rolpa.

The training programs and all the capacity building activities were launched, simultaneously at both the clusters.

## Scope

The following diagram depicts the scope of the work and the responsibilities of all the stakeholders.



To summarize the above layout, WI has been entrusted with the job of defining concept of the project, designing training module, monitoring, reporting and liaising with urban financial institutions.

SKBKS and NCF were entrusted with the job of conducting the trainings as per the design prepared and agreed by the other stakeholders.

WI introduced two models for the piloting. The credit financing model, along with wholesale financing from the urban commercial banks to the local cooperatives, is best suited approach for creating a linkage between the urban and the rural financial institutions. The concept, basically, tries to promote financing by the LMFIS and once their funds are exhausted, brings in the bigger financial institutions into play. At the end of the first year of piloting, this model was found to be more effective.

Vendor-financing implements the concept of introducing solar companies to the areas where there are no suitable LMFIs and urges the companies to do the door-to-door service. With a slide modification, the concept also tries to convince solar companies into providing systems to LMFIs on credit so that the LMFIs can sell the systems to their members providing loan. Vendor financing did not take off as it was expected because of reluctance of the banks to enhance the limit of the vendor company and also on account of vendor companies not having full confidence either in the rural users or the LMFIs.

### **Review of Relevant Literature**

Program Document [ESAP Phase II Program Document, 2007] envisages the need for creating access of the renewable energy technology users to credit for purchasing the technologies. For Solar Home Systems, micro-finance is the answer as the loan required by an individual user is very small (between Rs. 3,000 to Rs. 9,000).

Studies [IT Power India Report, 2006] show that rural people use at least two liters of kerosene for lighting and spend some more money for purchasing battery, fuel-wood and other sources of energy. If a mechanism can be set in order to tap this monthly expenditure on other sources of



energy for purchasing a Solar Home System, people with lower purchasing capacity can also access SHS.

The report [IT Power India Report, 2006] also suggests that the local partner organizations offering finance to the users, who in turn get refinanced by bigger financial institutions, have been successfully implemented in Bangladesh. The involvement of eligible solar companies to ensure quality and quantity was also very important.

Studies [TRUST Report, 2006] show that the cooperatives' presence in the hills area are limited whereas, the potential for solar energy is higher in hilly and mountainous regions.

Therefore, the piloting of "Credit Financing SHS – 2065" envisaged a viable modality to disseminate SHS via micro-credit on a larger scale, supported by a good quality control mechanism and regular supply of funds.

### **Data Analysis/Interpretation**

There was no analysis of data and interpretation per se as this is a case of piloting and the Program Document of ESAP Phase II had already felt the need for an intervention which would increase the purchasing power of the rural users. However, a lot of valuable experiences have been gained while implementing the project.

The following calculations show how a SHS user will be paying the installment without any additional financial burden:

Current expenditure on different sources of energy:

Amount in Rupees.

Source	Price	Consumption	Total expenditure
Kerosene	~Rs. 80/ltr.	1 ltr. Per week	Rs. 320.00
Battery	~Rs. 20	Per month	Rs. 20.00
Total			Rs. 340.00

Source: field visit

Amount in Rupees.

Capacity	Price	Subsidy	Equity	Average Loan	EMI (2 years @ 20% p.a.)	EMI (3 years @ 20% p.a.)
20watt Peak	20,000	5-10,000	1-3,000	7,000	356.27	260.15

Source: loan calculator

If we compare the above two table, it can be clearly seen that a three year repayment plan with an interest rate of 20% p.a. will be suitable for those users who are spending as much as Rs.340 Per month for different sources of energy. It is up to the users to decide whether they need a 20wP or a 10wP capacity for their use.

With this single logic and a potent weapon, piloting was launched in order to find a viable replicable model.

Several rounds of interactions, meetings, seminars and workshops were done in order to convince banks that the rural financing is worth trying. Similar activities were also done in order to convince solar companies into vendor financing.

Urban banks raised the issue of security, costs related to monitoring and follow-up and the capacity of the LMFIs to adopt the systems and procedures provided during the capacity building sessions.

In order to gain confidence of the project, the project had hired a local field mobilizer who would do all the necessary follow-up, reporting, awareness creation and monitoring of the LMFIs.

The wide network of NCF and SKBKS was also utilized to organize programs at short notices. NCF being the apex body of all the federations of cooperatives, it has its district level office throughout the nation. Similarly, SKBKS has its grasp in the eastern region and the network of SKBKS was also equally important.

### **Key Findings and Conclusions**

The piloting found the following:

There is immense demand and market for SHS in remote areas. However, the districts to be chosen have to have financial intermediaries, such as cooperatives and MFIs.

There is also a need for involving urban banks from the beginning of the project, specially, in cooperative selection because it will enhance the possibility of building long-term partnership. The need for having as many manageable partners as possible is also very urgent and imperative because of multiple benefits that the sector can have. The field verification is also equally important as the cooperatives in the first phase were found to be less credit-worthy during the visit later on than they were found during the desk study of the documents.

Income generating activities, alongside promotion of credit for SHS market creation was also felt necessary as it will ensure sufficient cash generation to repay the loan without fail. While promoting IG activities, building capacity of the solar companies and financial institutions is worthwhile for a long term partnership.

The emphasis is to be given on security of loan. Tools such as credit insurance, accidental insurance, enforceable procedures for confiscation of financed solar panels in case of default and involvement of local administrative body would be necessary in order to gain confidence of urban financiers.

Remoteness and un-electrified areas make it difficult. Therefore, field trip costs can be shared among the stakeholders so that the timely monitoring, follow-up and inspection is carried out and the status of the LMFIs and the repayment of loan can be ensured.

Only few LMFIs duly registered should be taken as a partner because the central bank recognizes loans being disbursed in these LMFIs as loans in Deprived Sector. Moreover, it is more hassle trying to form a group of individuals to disburse the loan.

Many also did not apply for several reasons. The program had announced the program via FM radio and asked all the duly registered local cooperatives to apply for the SHS financing project. Many bigger and more viable LMFIs did not apply as they did not want to go into the new area. Many also thought that the selection process would be too stringent for them to be able to qualify. Therefore, finding cooperatives is a difficult task in these areas.

Implementation at LMFIs is very difficult. The LMFIs don't have basic infrastructure such as computer, fax, or any means of communication. Some of them don't even have regular supply of electricity.

The education level of the board members has also to be considered at the time of selection. Without the board members being educated enough to understand the benefit of a SHS, micro-credit and free flow of funds (with a little bit of additional effort), the MFIs may not be all that willing to venture into a new area.

The preparation of a business plan, on behalf of the LMFIs was a crucial input. As soon as the business plan was prepared, several banks started looking at the project in a more serious way.

The concern of the banks was such that the project would not be renewed, leaving them having to do all the hard work of recovery, follow-up and monitoring.

Vendor financing, though it was thought to be the more appropriate model in rural areas before implementation, was less effective. Solar companies did not want to wear the shoes of a financing institution. Moreover, in providing credit to LMFIs, the companies needed more funds from their banks. Additional funds were also needed for door-to-door sales. Banks, without firm plan, commitment and perhaps, additional collateral from the solar companies did not wish to enhance the limits already enjoyed by the companies.

The team devised tools such as the loan calculator, cash flow calculator, credit manual and various training tools. The trainings covered aspects such as SHS and its technical components, subsidy policy and services. Book-keeping, business planning, marketing, micro-financing, governance, management information system, interest rate practices and regulatory frameworks were the other topics covered by the whole training packages.

### **Recommendations**

Based on the key findings and conclusions, the following are recommended:

1. Target the kerosene using users.
2. Final selection of cooperatives must be done after physical verification.
3. Locally established solar company must be given priority for supplying the systems.
4. Constant follow-up and monitoring to be done in order to make sure that the cooperatives implement all the tools, systems and procedures which were provided during the training sessions.

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[2] Program Document, Energy Sector Assistance Program, 2007

[3] Report on “Study on Credit Financing Solar Home Systems” in Nepal, IT Power INDIA, 2006