Case Study: 100% Solar Village Concept
Case Story No: 19
Initiated in: Early 2000’s
Key terms: Solar village, financial linkage, margin money, cluster approach

Summary
The 100% solar village concept is a combination of a tactical operational strategy and financial innovation to reach more customers with energy solutions. Under this concept, SELCO partners with financial institutions like banks, MFI’s and community organizations to finance the lighting systems of its customers. Through a cluster approach, procedures are made more efficient for both the bank and enterprise when reaching rural areas. The true impact of this initiative lies in the inclusion & enablement of first time borrowers and customers who otherwise were excluded from the financial mainstream to be able to access loans for productive asset creating purpose.

Identification
Villages are identified at the branch level by branch personnel or are referred to the branch through partner NGO’s and Banks

Problem Statement
To provide solar lighting solution to nearly the entire households in an un-electrified village by leveraging the support of financial institutions like banks, MFI’s and also donors so as to make the solution affordable to poor households.

Banks are reluctant to finance individual scattered loans in an area with limited number of accounts due to high transaction costs and risks associated with such loans. Thus, leading to a large number of individuals and households being left out of the credit structure and remaining un-banked. For these households, accessing loans even for a productive purpose like acquiring solar light is extremely difficult

Villages in rural India, which lack basic access to uninterrupted grid supplied energy need innovative financing solutions to be able to afford and access alternate forms of energy. SELCO India has been successfully implementing the solar village concept in partnership with banks, microfinance (MFI’s) and community-based organizations in Karnataka. Under this initiative, SELCO identifies un-electrified villages in the state and works with a local financing partner to provide solar lighting systems with the objective of covering the entire village using a cluster lending approach. Importantly this approach offers the financial institution lowered risk from a collective community responsibility to repay loans and also lower transact costs by being able to retrieve recollections from previous loans and also in bringing in new customers.

SELCO has devised a set of approaches involving partners in banks, MFI’s donors and voluntary organisations for providing solar lighting systems. In this context, the 100% solar village concept has been adapted and replicated by SELCO for providing solar lighting systems to communities in diverse regions such as Bellary, Belthangady, Belgaum, Haniya, Chitradurga, Kundapur, Medhini in Karnataka. Crucially, this approach incorporates a cluster based lending format adopted by the local financing partners in order to service the customers of solar lights. By leveraging financial institutions and their networks in rural India, SELCO has been able to facilitate financing for covering and servicing entire households in a given community or village.
**Project nuances**

By taking a village cluster-level approach to roll out solar lights, SELCO is able to generate sales, increase coverage and easily service the entire village. Banks find it easier to finance through the cluster approach as it reduces transaction costs / risks and has a positive effect on the banks reputation in the community.

**System Design**

Typically the systems that are sold through the cluster-based approach under the solar village concept are between 1-light system to 6-light systems. This can vary according to the specific requirements of the household in any given village. Also, solar street lights have been installed in certain villages, where there has been support from donors and csr funds.

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**Partnering with Financial Institutions:**

Partnerships with financial institutions have been primarily based on the commitment to serve remote and rural villages and promote access to energy. However, banks and MFI’s do have a strong incentive in lending on a cluster-based approach because of the reduced risk and transaction costs. Other incremental positive effects include access to new customers, recovery of old loans and increased credit worthiness within the community.

**Loan Processing:**

Under the 100% solar village concept, the loans are generally processed for individual households. Typically, after identifying the first set of interested customers for solar lighting in a village, SELCO works with the customer and the bank branch to arrange the loan application and to process it respectively.

The loan documents in the case of individual loans submitted to the bank includes: Loan document (application), address proof, system quotation, and down payments (margin money). This can take anywhere from 1-6 months to complete. In addition to covering households with individual loans, financing through Self Help Groups (SHGs) or Joint Liability Groups (JLGs) will further help them in reducing work load, transaction costs and in recovery, due to group liability. It will be easier for the service provider also to attend to the after sale services, attending to complaints and helps reduce cost of servicing. Thus, bankers face reduced complaints regarding non-functioning units leading to decreased Non Performing Assets (NPAs). This will help the service provider to get the confidence of the Banks and may aid in further business and supporting finance in other villages etc.

**Key aspects:**

- **Bank Management:** There are instances where the push for lending to such customers must come from the management of the bank, so it will prove to be useful to get an MoU or cluster lending for solar lights sanctioned at the head office of the bank and then push the respective regional offices and bank branches to lend.

- **Cluster Demonstrations:** By coming together with the banks and local institutions and conducting demonstrations and other community based schemes or activities build credibility and trust among the community. This has resulted in new inquiries and repayment of bad loans.

- **Relationship with Bank Branch:** Relationship with the bank at the branch level is crucial. The bank manager has the discretionary power to approve or reject a loan. Hence, follow-up with bank branch manager on repayments and collections can bring trust to the partnership. Also, networking with new banks and bank officials can be facilitated through branch level targets.
Recollection & Follow up: Constant follow-up with the community from the branch personnel on their repayment behavior and defaults on payments can help create conditions for successful repayment of the bank loans and enhances trust from the bankers side.

Policy Influence: Efforts to pursue institutional implementation among banks by SELCO and a local NGO partner over 2-3 months lead to one national bank, Syndicate Bank, issuing an internal circular to 7 regional heads of the bank branches to explore the 100% solar village concept (refer Appendix 1). These circulars catalyze efforts to scale up such initiatives at the ground level as they are seen to be a stamp of support from senior management levels. This is then coupled with existing subsidy schemes such as the National Solar Mission by the Central Govt. to further enhance uptake by the end user.

### Impact
SELCO has been able to work and convert more nearly 100 solar villages.

**Access:** Almost all of the villages that SELCO has worked in, do not have grid electricity / have sporadic availability of power.

**Inclusion:** Solar loan beneficiaries are able to access additional loans after completing their existing loan, leading to mainstream financial inclusion.

### Table: Advantages and Value Proposition for Financial Partners to lend in cluster format

<table>
<thead>
<tr>
<th>Advantage</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Banks</strong></td>
<td>o New Customers: Access to new customers who can potentially qualify for other credit products overtime</td>
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<td></td>
<td>o Reduced Risk: Cluster Based lending reduces risk in relation to scattered lending</td>
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<td></td>
<td>o Transaction Cost: Lending to entire village reduces transaction cost for future loans as well</td>
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<td></td>
<td>o Recovery: Recovery of old loans and bad debts</td>
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<td><strong>MFI’s</strong></td>
<td><em>Value Addition</em></td>
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<td></td>
<td>✓ Able to drive asset creation in poorer customer segments</td>
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<td></td>
<td>✓ Building credibility of the organization in the community</td>
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<tr>
<td><strong>Donor’s</strong></td>
<td>o Supporting a crucial intervention: Access to energy is perhaps the strongest link to helping communities out of poverty</td>
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<tr>
<td></td>
<td><em>Value Proposition</em></td>
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<tr>
<td></td>
<td>✓ Building credibility of the organization in the community</td>
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Snapshot: Some of the 100% Solar Village projects