

## Case Study - Strategy to enable Green Micro-finance

*Shakti Sustainable Energy Foundation (SSEF) is a not for profit organization committed to support India's developmental and energy security objectives. SSEF commissioned Intellecrap Advisory Services to enhance access to finance for decentralized renewable energy (DRE) enterprises by providing requisite advisory support to such enterprises. As a part of the program, Intellecrap is supporting DRE enterprises in designing solutions for existing business related issues that impact scale and sustainability as well as in implementing strategies for expansion and growth so as to guide them towards investment readiness. This document draws the key learning's of working with the DRE enterprise and captures the context, key challenges faced, solutions recommended and the expected outcomes over the near to medium term.*

### **Company overview**

Shikhar Microfinance Pvt. Ltd. (SMPL) is a non-deposit taking, Non-Banking Finance Company – Micro Finance Institution (NBFC-MFI) regulated by the Reserve Bank of India.

SMPL provides a wide range of microcredit and other financial services that bring about economic stability and contribute to the overall socio-economic development of their customer base, which comprises mainly of the underprivileged segments of society. The company's core comprises of microfinance loans ranging from INR 15,000 to 80,000, repaid over a period of 12-36 months.

### **Context**

The nine-year old company, operating in five states of India (after their recent expansion into Rajasthan and Haryana), has experienced significant growth in its portfolio over the last five years. Given its vision of achieving financial inclusion beyond microfinance, the organization wanted to explore alternative options for portfolio expansion.

Intellecrap engaged with SMPL to help the firm in exploring and developing an energy lending portfolio. As a part of the engagement, demand for distributed renewable energy (DRE) products was assessed and energy-specific loan products were designed for SMPL's existing and new consumers.

### **Key industry challenges**

The microfinance industry faces several challenges such as customer retention, high costs of capital, limited innovation, and risks inherently associated with growth. These challenges are equally faced by SMPL as well.

#### *Customer retention*

The NBFC MFI market is highly fragmented, with the presence of over 50 NBFC MFIs and several NGO MFIs. There is additional competition from institutions such as small finance banks and SHG bank linkage program that cater to the underserved markets. This makes customer

retention one of the major challenges faced by NBFC- MFIs. Common customer retention tactics in the industry such as giving top-up loans before previous loans are repaid and pushing small product loans worth INR 1,500-2,000 before enabling a financial loan of INR 15,000 – INR 20,000, make market entry challenging for new players.

### *High cost of capital*

Most MFIs are able to access funds only from certain private sources or apex MFIs, as public-sector banks prefer lending through the SHG-bank lending model. The available bank funds are typically short-term (2-3 years). In addition, banks tend to sanction and disburse loans to MFIs around the end of the accounting year in pursuit of their targets, thus forcing MFIs to take loans from NBFCs and other institutions at higher interest rates during rest of the year. Even where banks lend, they charge comparatively higher interest rates from small MFIs (typically in the range of 12.85% to 16.83%). The high cost of capital impacts MFIs' cost of operation and limits their ability to grow.

### *Limitation in product innovation*

NBFC MFIs face a cap on interest rate (currently 25.71%) that they can charge from their customers. This limit is not imposed on other non-banking financial companies (NBFCs). Further, there is an additional cap of 10% on the difference between average borrowing cost and lending rate. This again serves as a deterrent in developing high risk loan products as administrative costs for small and micro-loans are significantly high and therefore often unviable due to the 10% cap.

### *Hurdles to growth*

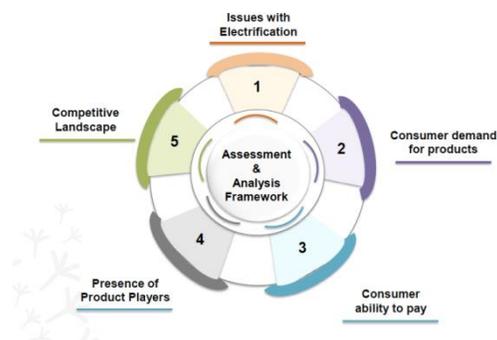
Defaults in loan repayments are also hurdles in the growth of MFIs. Resistance from local people or religious institutions as well as regressive mindset pose significant threat to loan repayments. For instance, local politicians sometimes issue ad-hoc loan waiver proclamations in a bid to garner votes. Such events eventually lead to mass default in loan repayments. Arcane regulations add to the challenge – for example, RBI regulation specifies that the tenure of a loan shall not be less than 24 months if the amount is over INR 30,000. For lenders, increase in tenor often increases the risk of repayment default and therefore deters MFIs from advancing high ticket sized loans.

## **Solution themes**

Energy is a livelihood enabler and can have a positive impact on borrowers' propensity to repay. Hence top-up loans for energy needs can be structured innovatively to make them attractive for SMPL's customer base.

With this background, a five-point analysis framework was designed that included:

- Evaluation of the electrification issue in the



region

- Understanding the demand for energy products by existing borrowers
- Assessment of consumers' ability to pay
- Assessing the presence of enterprises supplying clean energy products
- Understanding the competitive landscape for SMPL

Post discussions with SMPL, field visits and end-consumer surveys were held in Rajasthan, Haryana, and Uttar Pradesh to understand consumer requirement for energy products. Discussions were also held with energy product suppliers and investors to further understand market perception on financing for such products.

### **Findings from consumer surveys and field visits**

Limited supply of electricity and water in the focus regions (especially in Rajasthan) indicates a good potential for low cost solar energy products with low or zero operating costs. A majority of SMPL's customers are small farmers who pay INR 5,000-7,000 per month for electricity supply at farms. Certain regions have limited supply of electricity (less than 10 hours a day). In those regions, the demand for electricity is met from high cost alternatives such as inverters (inverters cost INR 15,000 - 20,000 initially and also result in high monthly electricity bills).

Interactions with energy product suppliers in the region highlighted a pressing need for customized financial products to increase penetration of efficient solar energy systems- especially high cost solar pumps and larger home lighting systems- as their use results in improved livelihood and living conditions. However, innovation in loan products and marketing of such innovative products are a pre-requisite for market penetration. This can only happen if MFIs can access capital at low cost since these loan products would have to be priced appropriately to make them affordable to the target consumers and they must also be placed strategically with varied offerings across regions.

Post analysis of various energy products (highlighted by consumers during interaction), it was identified that SMPL can look to support solar pump and home lighting systems initially due to high consumer demand for these products and economic benefit of these products for

	<u>Demand</u>	<u>Cost</u>	<u>Margin to MFI</u>	<u>Economic Benefit</u>	<u>Investor Requirement</u>	<u>Impact on Quality of Life</u>
<u>Home Lighting System with Fan</u>						
<u>Home Lighting System with Cooler</u>						
<u>Solar Pumps</u>						
<u>Solar Sewing Machine</u>						
<u>Solar Polish Machine</u>						
<u>Electric Vehicle (solar rickshaw)</u>						

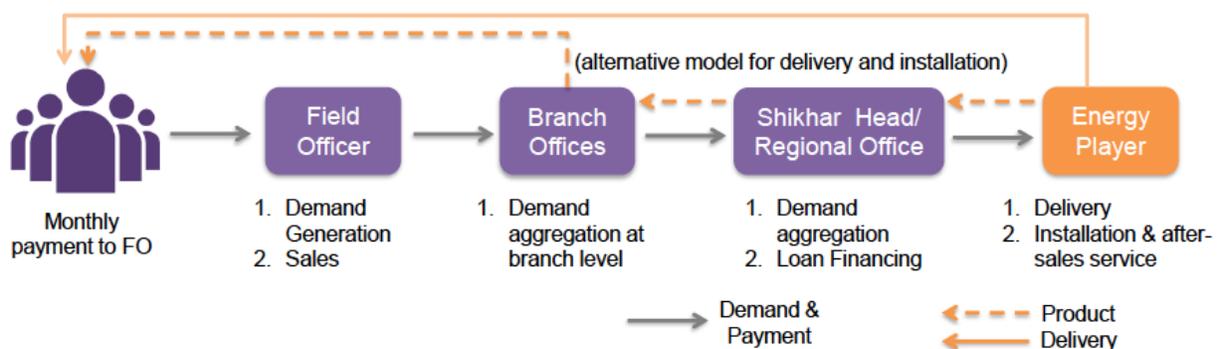
the consumers.

### **Recommended strategy for product development**

SMPL can introduce region-specific products based on demand assessment from surveys and field visits. The Rajasthan market would welcome solar power water pumps for farms and solar home lighting systems with fans. In Haryana, home lighting systems with fan and cooler should be piloted. In Uttar Pradesh, consumer requirements indicate a need for solar pump for farms and home lighting systems with fans.

### **Proposed model for piloting solar energy products**

Given the high cost of borrowing and small customer base, it was recommended that SMPL should explore a model where the energy product suppliers remunerate SMPL for resolving last mile connectivity and logistics by providing a margin on product sales.



SMPL can initially follow an operational model where a field officer is responsible for the sale of energy products as well and collection of payment from consumers. Eventually, post successful implementation of pilot and growth of energy product portfolio in subsequent years, an energy officer with relevant technical knowledge may also be hired.

### **Loan products**

Two types of loan products – one each for solar pumps and solar home lighting systems – were recommended for the initial pilot phase.

A one-year loan product in the range of INR 10,000 - 20,000 (price varies across regions) was recommended for solar home lighting systems. State subsidies for solar pumps range between 20-50% translating to a cost of INR 50,000 – 2,00,000 for the end consumer. As such, a 2-year loan product was suggested for solar pumps. Loans with longer tenures (greater than two years) could pose an operational risk and carry greater chances of becoming non-performing assets (NPAs) over time due to the rapidly evolving nature of the sector.

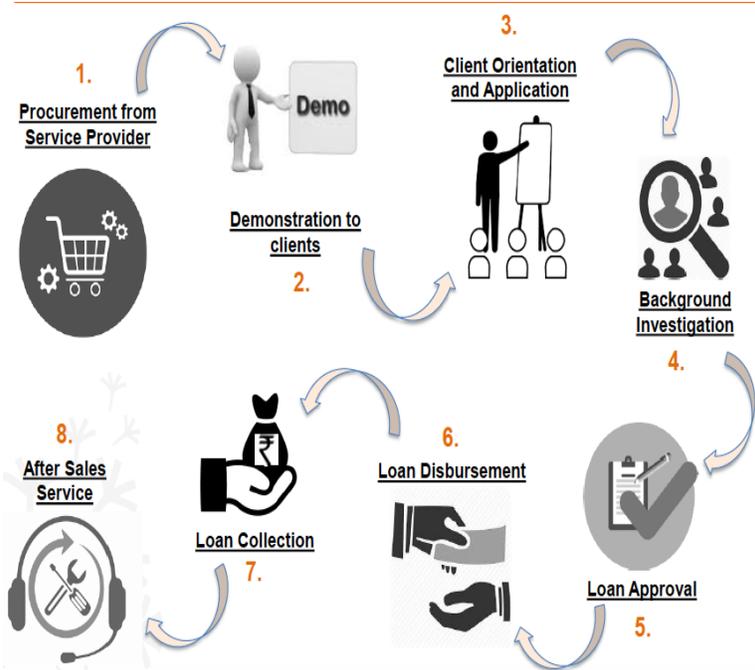
### **Roll-out plan**

To roll out loans for solar home lighting systems and solar pumps, a five-point strategy was suggested:

- **Attractive incentives for staff and consumers.** Disbursal of two-thirds of the incentive amount monthly, and one-third as an annual Incentive (with delinquency deductions) to the field staff on sale of energy products, target-based prizes for field staff in partnership with energy product players (laptop, tablet, domestic trips, etc.), lotteries for clients, etc. should be explored to incentivize staff to support energy financing beyond their normal work as well as to incentivise customers for availing such loans.
- **Investment in training of staff.** Designing and implementing training sessions on an ongoing basis to identify problems quickly, honing problem-solving skills, as well as recognising talent and updating skillsets are some important training related recommendations. The training modules should cover technical aspects as well as sales and marketing components to enable the staff to enhance both customer service and sales productivity.
- **Focus on optimum level of after-sales service.** Training field staff for efficiency in on-the-spot problem solving in case of basic issues related to wires, plugs, sockets, etc., maintaining a 24x7 dedicated consumer help line for consumers, and establishing a prompt product replacement strategy are also some of the after sales service related recommendations that should be explored for success.
- **Focus on the pilot by choosing suitable regions/branches.** Ensuring on-going qualitative research during the pilot, including professionally-guided focus group discussions with the consumers, will allow SMPL to make timely changes to its business model and loan product portfolio. SMPL can also utilize surveys for gaining customer insight regarding product success/ failures and draw on it to modify strategies for increasing market share.

- **Choose the right energy product enterprise partners.** SMPL should ensure that partner enterprises share SMPL's vision, are reliable, and have a good reputation in the industry. Requisite capacity to meet estimated demand, ability to provide technical training to customers and MFI staff, and financial solvency to maintain product inventory on credit with SMPL are some of the qualities that SMPL should seek in its partner. The partner should also be able to arrange for logistics for product deliveries and

Process Flow: Overview



should provide strong after-sales support with up to ~15-20% margin to SMPL, as per prevailing industry standards.

### ***Risk mitigation strategies***

Some of the suggested risk mitigation strategies include:

- Start pilots in the areas where electricity supply is limited;
- Choose the latest technology to ensure product obsolescence does not cause for a dip in market share.
- Protect SMPL's investment by including a clause covering replacement in case of manufacturing defects.
- Train loan officers to screen potential borrowers for suitability.
- Study the competition in target regions and tweak loan products (interest rate, moratorium, etc.) to make them attractive.

### **Way forward**

As per estimates, SMPL can disburse an additional 20,000 loans for select energy products in the aforementioned three regions. After a successful pilot, SMPL can expand operations to other regions and can also include DRE mini-grids, solar rooftop installations and income generating products such as flourmills, rice hullers and sewing machines in its loan product portfolio based on the demand assessed in the regions.

The prescribed energy lending portfolio could result in an additional ~INR 60 crore in loan disbursements and also has the potential to contribute an additional 11% to SMPL's total interest income as well as contribute ~20% to SMPL's total income from operations. This would translate into a return on assets (RoA) of ~15% with commensurate interest yield and lower operating expenses.

As a next step, SMPL should focus on exploring partnerships with energy product suppliers and launch pilots in the three focus areas as per recommendation.