



CONSUMER NEEDS AND DEMAND ASSESSMENT FOR PRODUCT PORTFOLIO EXPANSION

CASE STUDY



1.1

Context

Shakti Sustainable Energy Foundation (SSEF) is a not-for-profit organization committed to support India's developmental and energy security objectives. SSEF commissioned Intellecap 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 this program, Intellecap 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 important findings 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

Frontier Markets (FM) seeks to meet the challenge faced by rural households in accessing quality, clean-energy products. While product solutions for rural markets exist, their penetration has been limited due to unavailability of rural touchpoints, as well as the lack of training and servicing facilities.

The company intends to bridge that gap by ensuring last-mile distribution of high-quality, relevant, clean-energy products and strategically placed service centres. It performs this task by mapping rural consumers' demand for clean energy products, educating customers about the need, benefit and usage of solar products, establishing distribution channels for products in remote areas and setting up accessible service centres. FM is present across 30 districts in Rajasthan; however, the target areas for this study included districts of Alwar, Dholpur, Jaipur and Jhunjhunu.

Context

The aim of this technical assistance was to help FM build a strategy for broadening its product portfolio so as to better meet the evolving customer demands. Key activities performed included:

- Prioritizing a list of products based on a preliminary scan of the market. This included assessing the potential role of appliances on customers' lives and understanding consumer needs and aspirations.
- Mapping customer preferences, exposure levels, buying processes, product features and usage patterns for the prioritised list of products based on a survey of 1000+ households.



1.2

Key Challenges

Some of the key challenges identified included low income levels of the consumers, low levels of product awareness and exposure, and low electrification rates in the focus regions.

Low income levels

Low income levels are a major deterrent for product sales

in the rural areas of Rajasthan. For instance, in FM's target regions, about 80% of households earn less than INR 1,00,000 per annum. Most families with income levels below INR 50,000 tend to own only basic appliances such as lighting solutions (bulbs or tube lights), fan, and sometimes, a television.

Utilitarian

- Typically have an annual household (HH) income of INR 0-50,000
- Either tend to be non-users or purchase extremely need based appliances



Figure 1: Consumer Profiles



Aspirational Buyer

- Typically have an annual HH income of INR 1,00,000- 1,50,000
- Tend to buy aspirational products-branded ones for high value products

Progressive Buyer

- Typically have annual HH income of INR 50,000-1,00,000
- Willing to purchase a few comfort providing or aspirational products
- May need access to finance



Village Elite

- Typically have an annual HH income of more than INR 1,50,000
- Tend to have most of the appliances of the best brands; mirror the urban high income households in terms of appliance purchase and usage

Source: Intellect analysis

Low awareness and exposure levels

Low purchasing power and limited awareness levels on potential ways to utilize appliances for income-generating activities and improving quality of life have resulted in limited penetration of appliances. For instance, the use of curd percolators can save time that could be channelled into income-generating activities. Similarly, households with sizable livestock numbers could use refrigerators to stock and sell dairy products.

Limited access to electricity

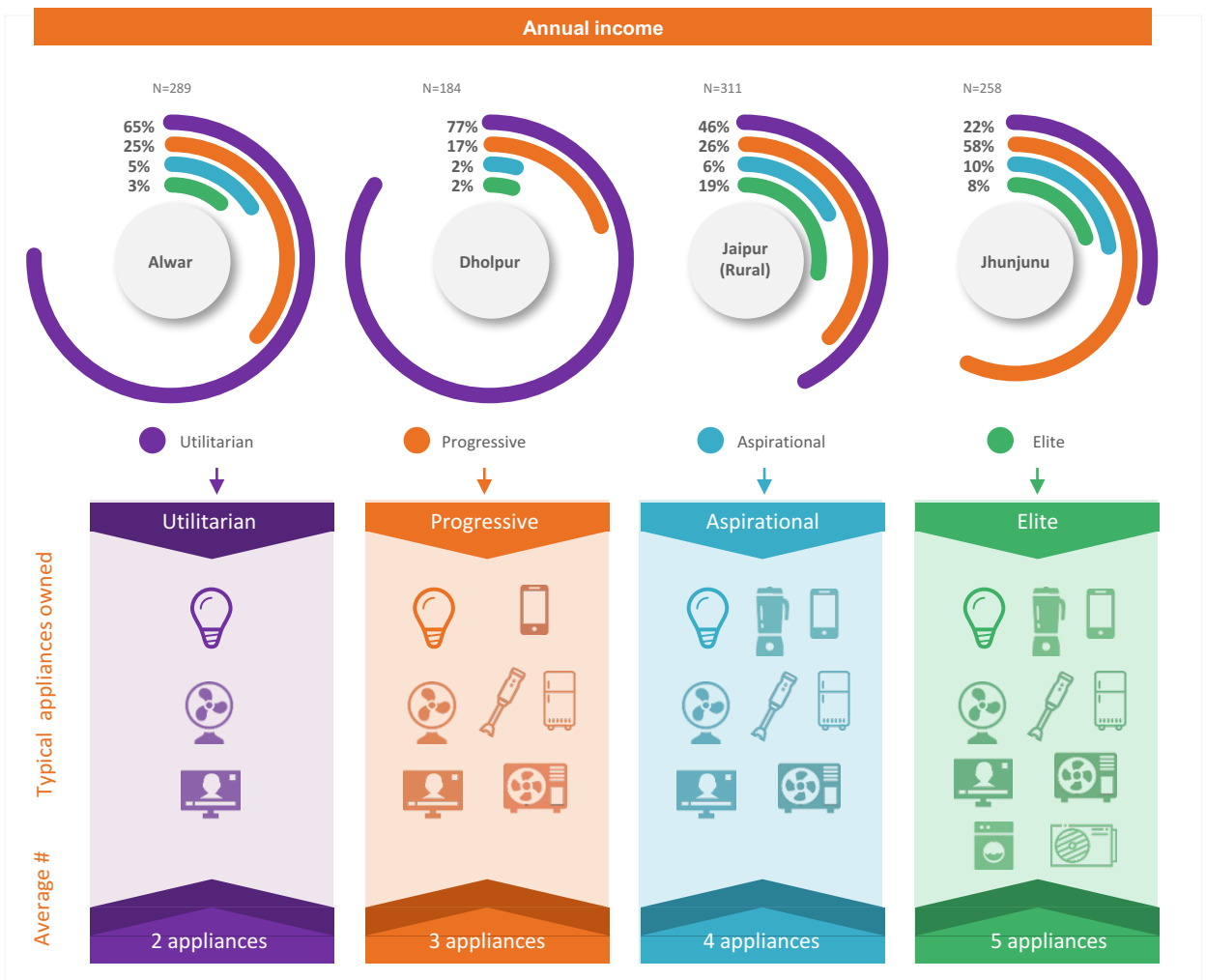
Most target regions receive only about 12-15 hours of electricity in a day. Limited availability of electricity, non-availability of cost-effective quality alternate energy products, and paucity of disposable income has resulted in low adoption of appliances.

These challenges, in the focus regions of Rajasthan, highlight a significant opportunity for FM. This is more so as the demand levels are set to increase with improving access to electricity, increasing income levels as well as higher awareness levels. FM can tap into the current and expected demand of the customers by adopting a focussed approach.

“Even up to 4-5 years back we got only 10 hours of electricity supply. But now we get about 15-18 hours of power supply a day. The situation is improving even in the nearby villages”

- Retailer, Dhursar

Figure 2: Annual income of household and appliance purchase pattern



Source: Intellect analysis and customer survey 2017

1.3

Solution Themes

The study identified relevant products and their features, purchasing pattern of customers, and a relevant distribution strategy to help FM in successfully expanding its product portfolio.

Products and features

Eight products were identified based on their prices, relevance for customers, consumer’s willingness and ability to pay, and the company’s core competencies. The products were fans, televisions, refrigerators, power banks, curd percolators (madhanis), flour grinding machines (chakkis), vegetable sorting and grading machines, and sewing machines. These products and their usage patterns were studied to identify desirable features.

The choice of products and their features were primarily driven by the needs of the customers as well as the pain points faced by current users of the appliances. For instance, table fans with a battery backup garnered interest amongst both customers and retailers. The main reason for high customer interest for the product was that most customers need fans during summers but the regions witness erratic and long power cuts. As a result, despite spending on fans, consumers are not able to use them when required. While solar home lighting systems can power DC fans, the high price of such systems renders them unaffordable for large segments of the target customer groups.

Figure 3: Products and Features

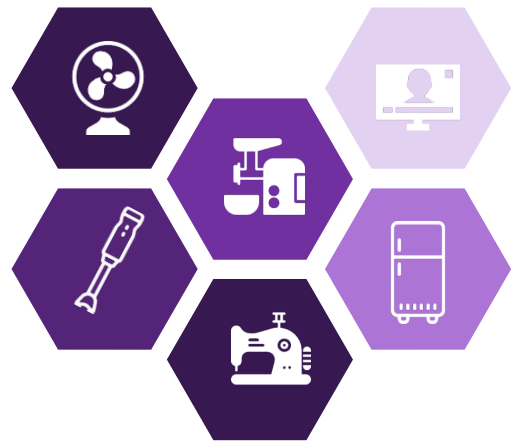


Table Fan	Power Bank	Sewing Machine
<ul style="list-style-type: none">• 3 blades• Aluminum body• Preferably with a backup- battery/ solar• To cater to a room size of 10*12 to 15*20 feet	<ul style="list-style-type: none">• Pocket sized• 2600-5000mAH• 2-3 charging points (1 for a smart phone and 1 for feature phone)• Should take less than 4 hours to charge a phone	<ul style="list-style-type: none">• Hybrid version that can run manually and on electricity• Ability to integrate with grid power

Source: Intellectap analysis and customer survey 2017

Similarly, an electric sewing machine costs twice as much as the manual version. However, the manual version is not as efficient as required by commercial users of the product, while the electric version does not work during power cuts, which are frequent in the region. Therefore, a hybrid version of the sewing machine generated interest among users, especially with those who use it for commercial purposes.

In case of aspirational products such as televisions and refrigerators, small to medium-sized options were being used and sought after more widely by customers. For instance, the survey highlighted the highest demand for 20-25 inch sized television sets and single door refrigerators with 100-200 litres capacity. Demand for products such as power banks is also expected to rise due to the improving penetration rates of smart-phones and the intermittent power cuts that create problems in charging these devices.

Promotion strategy

Figure 4: Purchase triggers



The study also identified specific areas, modes and time periods for FM to channel their promotion efforts. The study highlighted that most of the customers tend to

engage in event-based purchase of products. The events were related to weddings (November-February), the harvest season (April, July, and September) and festivals (October-November).

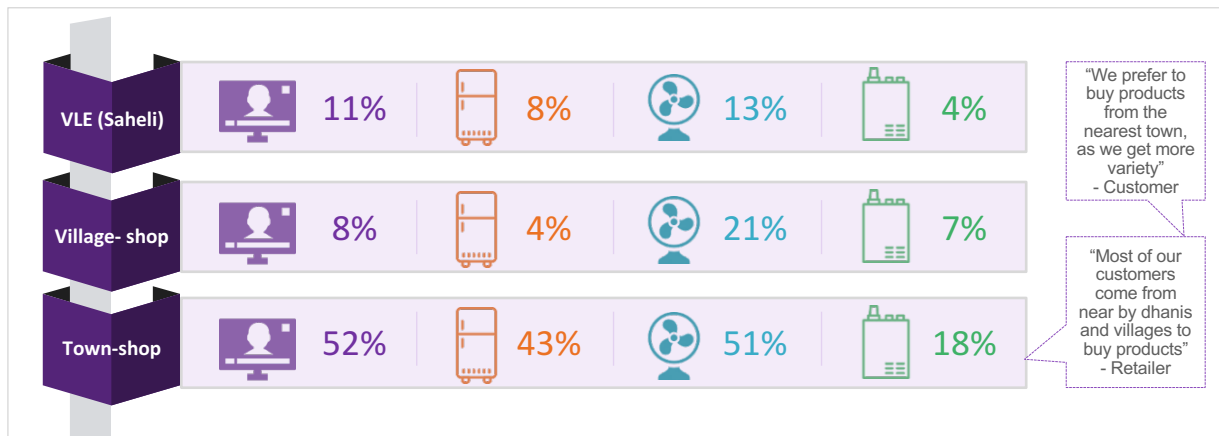
“My father-in-law mentioned that we will buy a refrigerator this Diwali; not during summers.”
– A customer

Distribution strategy

Customers prefer purchasing appliances from shops in their nearest towns. This is especially true for high-value products such as televisions, refrigerators, or comparatively advanced appliances such as power banks. For instance, as per the survey approximately 50% of the customers purchase their appliances from retailers in the nearest towns. However, customers were willing to buy need-based products, such as fans from village-level retailers. Hence, FM could utilize its network of rural retailers and dealers to strengthen its market footprint.

Customer needs, demands and preferences together with FM’s vision and existing capabilities indicated that back-up-enabled table fans, power banks, curd percolators and sewing machines were some of the prime products that could be added to the company’s product portfolio. FM’s network of over 2000 rural retailers and 1000 village-level women entrepreneurs could be used to ensure access to relevant solutions for low-income customers. The firm should also continue to partner with third-party manufacturers to launch in-house quality products, or partner with existing brands.

Figure 5: Preferred channels for purchasing select appliances





1.4

Way Forward

As per estimates FM can expect to increase revenues by INR 5-9 crores by addressing 2-3% of the approximate market size of fans, curd percolators and power banks in its focus geographies. This number can be increased by including products such as sewing machines.

As next steps FM aims to operationalize the plan by launching some of the aforementioned products in the target regions over the next six to twelve months, in partnership with some of the leading brands.

