

1. What kind of solar products are you promoting? SHS and solar lanterns?

We promote all solar products of good quality available in each country. Lanterns as well as SHS ranging up to 100Wp. We furthermore advise importers on which products they should import and for which components we see a high potential.

2. Who selects the products?

The country coordinator in each country selects the importers/distributors that we want to cooperate with and that we link to the rural retailers. This is done based on quality of components and service, continuity of stock and motivation to expand its retail market share.

3. What are the selection criteria? Do you apply certain quality standards?

In each country the best importers/distributors are being selected. Products need to be of a good brand (Suntech, Kyocera, BP Solar, Victron, Xantrex, D.Light, Barefoot, etc.) and international standards (IEC 61215 ED, etc.). Note however, that REF cannot enforce retailers to buy certain quality. However, if retailers sell inferior quality, REF stops supporting them.

REF is currently establishing a hire purchase company (SolarNow) that will offer, through the SolarNow retailer network, solar home systems with a hire purchase facility. In this approach, which is currently operational in Uganda, and Burkina Faso, the company buys the products and has therefore full control on the quality of the components.

4. Are there any warranties for the products? How do you ensure these warranties? What happens, if a customer wants to replace his battery?

The systems are bought and owned by the end-users. The warranty agreement is up to the retailer and his customer. We train the retailers in providing service; we create insight in the value of providing good service and stimulate the use of service contracts. Retailers that do not show any progress are being excluded from the network and further support. We furthermore train retailers in providing clear information to the customers; how to use the system, and how to maximize the lifetime of components like batteries. This approach works; retailers increasingly offer warranty and an after-sales service agreement.

It is the responsibility of the customer to buy a new battery if it needs to be replaced. Retailers are stimulated to keep in touch with their customers in order to make sure the systems continue to operate satisfactorily.

5. Who is importing the products to Africa?

Local companies import the products. In most countries importers tend to focus on the project market, which implies their products are often too sophisticated and expensive for the retail market. IN some countries, we have mobilized companies to start importing solar products, while offering them a minimum sales guarantee during their first assignment. This has in many cases worked.

6. How do you identify and select the entrepreneurs/the suppliers? Do you make a tender or do you scout them directly with your local staff?

We usually scout them directly with the local staff. In most countries we are present for a number of years, so we know the market and its players. Sometimes suppliers or retailers approach us and show their interest to become part of the network, for example through the newsletters or trade fairs we organize.

Rural suppliers/retailers are being identified and selected based on customer potential in the area, motivation to cooperate and extend their business, technical capacity, quality of service and products offered (or the intention to improve this), and preferably an established business in related products or services.

7. In your paper you say that entrepreneurs are screened on entrepreneurial talent, technical and commercial skills and motivation. How do you screen them (through a test, or through the assessment of the local staff)?

If a retailer complies with the initial requirements (i.e. shows motivation, is located in an area with enough potential clients, is trustworthy, has a technical background (or access to technicians), is willing to adopt a service oriented approach (and, increasingly we look at retailers who are dedicated to solar PV), then we start a basic package of 3 months in which the basic trainings in technique, marketing & sales and business administration are given. This period is concluded with a test or exam and a general assessment by the business coach. This includes a field visit to 5 recently installed systems (proper products, after-sales service offered, warranty in place, is the client satisfied, has the client been informed well, is the system properly sized, etc.). Only retailers that pass the test and additional criteria, continue to the next phase of support, consisting of ongoing needs-based coaching, marketing activities and access to finance. At this moment they become part of the network and they get access to the SolarNow branding package.

8. How many suppliers are usually backstopped by one business coach?

An average team consists of 2-4 business coaches. They each coach 7-10 rural retailers, depending on distances and intensity of support.

9. How do you find qualified business coaches? Do you have a special training program for business coaches?

REF offices have three levels of staff: field officers (typically technicians who do basic trainings, after-sales visits and village demonstrations. The business coaches are responsible for one region and have sales targets. They determine the strategy per retailer and involve field officers if needed. Typically we recruit them from university and retain them by offering good trainings and international exchanges (mostly in other REF countries). They must have a commercial, no-nonsense approach. Most are also committed to their job as they can quite rapidly see the results from their work.

10. Do the business coaches regularly meet to exchange information about suppliers and discuss training measures?

Yes, all staff in each country meet for 3-5 days at the end of each month, led by the country coordinator, to complete the monthly reporting, get additional training and discuss experiences and progress. Business coaches visit other regions to learn from each other's successes and failures. They also visit REF operations in other countries on an annual basis for 3-5 week exchanges.

11. Who selects the sales agents? Who trains the sales agents?

Sales agents are selected by the business coach or proposed (on request) by the retailers. Sales agents are trained by the business coach or field officer appointed by the business coach who is responsible for the particular region.

12. Did you experience any kind of fraud when sales agents receive lanterns on commission-base?

There are few examples of fraud, but the exposure is limited to one assignment only. The best mitigation is to know where the person lives, where his/her family lives, and at least 1-2 friends. The more people are involved, the higher the barrier becomes to commit fraud. The sales agent approach is not everywhere up and running yet, a lot is still being learned through trial and error.

13. If sales agents have to finance at least part of the products beforehand, how can they raise the capital?

In our case, sales agents are typically small businesses (selling rice, sugar, Omo), who do not meet the requirements in terms of technical capacity and service, but who are suitable to sell over-the-counter products like lanterns and, over time, solar minikits. They also can refer customers who are interested in bigger systems to the SolarNow retailer. Most will not start the business without supplier credit.

14. If sales agents have to co-finance 50% of the costs of such promotion materials, how do they raise the necessary amount of money?

The promotion materials used are cheap to replicate (e.g. black and white photocopies of flyers). The first materials can be provided for free, depending on the available capital of the sales agent. However, REF's experience is that, the moment entrepreneurs have paid for a tool, they start using it much more seriously.

15. How do you identify and select micro-businesses?

During village demonstrations field officers demonstrate the use of solar by charging mobile phones, by using solar to shave people in front of the public. Retailers subsequently get requests from prospective clients who want to buy a system for phone charging, for shaving or for other productive purposes. REF supports to design the systems and offers loans to start the business. Solar business applications are excellent to create awareness and boost demand.

16. What exactly do you mean by developing credit solutions, so that entrepreneurs can buy stock and facilitate delayed payments to their customers? Who will give the credit to the entrepreneur (Solar Now or a bank or MFI)? What is meant by entrepreneurs (suppliers, sales agents)?

In different countries we have experimented with various credit solutions. The most successful pilot was in Uganda, in which our local subsidiary provided hire purchase facilities on solar home systems. In this case REF owns the system until it is fully paid over a period of 12 months. This business model is now being rolled out in various countries (Uganda, Tanzania, Burkina Faso, Mali and Senegal). In countries like Mozambique, however, the critical mass of service oriented retailers and customers is not yet in place to make this model viable. In these situations, we first investigate if there are MFIs or banks willing to provide credit to solar retailers. Experience learns that this is hard to make successful, even when we guarantee 50%. We can also involve distributors to provide stock on credit to retailers appointed by us, for which we guarantee 50%.

17. What will be the conditions of the credit?

For the hire purchase, a credit assessment is being done to ensure the client is willing and able to pay the monthly hire purchase fee. The systems function as collateral. The hire purchase can be offered at relatively modest rates, as transaction costs are limited. One of the problems with MFI loans is that MFIs maintain strict collateral criteria and impose very high interest rates. In Mozambique however, we have not started credit schemes.

18. What do you mean by SOLARNOW-MZ intends to develop end-user finance schemes, where local financial institutions and suppliers are stimulated (partly by a REF guarantee fund made available

to SOLARNOW-MZ) to invest in renewable energy as well? Who will provide the loan? Under which conditions the guarantee fund will be used?

Here, we mean finance schemes like the hire purchase facility (see 16), or loan schemes with MFI's or saving groups. However, in the mean time we discovered that the network in Mozambique is not yet stable enough and ready to implement this. It may still take 1-2 years of market development (availability, awareness) before the affordability challenge can be effectively tackled. Our experience in other countries is that banks and MFIs are very reluctant towards asset-based lending and hardly have presence in rural areas. We will first investigate further what the possibilities are to cooperate with local MFIs, such as Banco ProCredit.

19. How do you monitor your indicators:

- 25% off-grid rural population within 50km reach from qualified supplier in year 3
- 33% average annual growth of turnover of supported entrepreneurs [as compared to before the project]
- 243 people newly employed in the renewable energy sector by year 3
- 80% of the end-user are satisfied regarding the products bought and the services delivered.

1. Based on geographical data we will determine the population within 50km reach of each retailer in the network.
2. As part of the coaching we establish a retailer bookkeeping system. We request the sales figures of each retailer on a quarterly basis, and we collect this information in a database, in which we can monitor the progress.
3. Each retailer, each sales agent and each micro-business accounts for one new employee. On average, retailers hire one or two new staff members for sales or technical support. 243 people employed is a mistake that we unfortunately overlooked. This should be 185, as indicated in the log frame and in the document on page 15 and 16. So 30 suppliers, 75 sales agents and 80 micro businesses.
4. We execute after-sales visits to customers of all retailers. The satisfaction of the customers visited will be monitored in client assessment forms. The information will also be used to assess the performance of the retailers and to indicate training needs. Retailers that do not show progress will be excluded from the program.

20. You made some economic calculations. I think the calculation about economic savings of households is too optimistic. If households would have to replace the battery every third year, the net savings would drop below 100 €.

On average, solar home systems reduce weekly expenses on kerosene for lighting by USD 1.25 per households (IFC Lighting Africa 2010); it also reduces electricity expenses on phone charging, car battery charging (for watching TV) and dry-cell batteries by in total USD 1.50 per week per household. The total gross saving is estimated to be USD 143 per year per household. In the calculation in the proposal, we only included the savings on kerosene of €1 per week.

Around 25% of the solar home systems are used for productive purposes; around half of these systems are used to provide energy services to others (such as phone and battery charging, internet services, entertainment), and the other half to increase productivity of existing business (e.g. sewing machine, electric shaving or to extend business opening hours). These systems generate, on average, an additional income of USD 572 per year.

The total average weighted additional income per solar home system is USD 250 per year. Assuming an average weighted lifetime of the system components of ten years, the annual depreciation is USD 75. The net benefit per system sold and household therefore is USD 175 per year.

The price of the system of €300 is an average, a battery for this average system would cost maximum 50 euro, roughly 15 euro per year.

21. Do you have any kind of evidence for the data you are assuming for income improvement of households, suppliers and micro-businesses?

Household savings and other data is based on own experience in various countries and various research documents of IFC Lighting Africa, UNDP and household statistics of national bureaus of statistics .

Income improvement of suppliers is based on experience in other countries, especially increase of sales. The income of micro-businesses is based on field research on what people on average pay for charging phones or a haircut and our own pilot business installations.

REF is continuously assessing the end-users during field visits and promotion campaigns.