

# Solar Sister: Empowering Women of Nigeria with Economic Opportunity and Access to Clean Cookstoves

## Organization Profile

- Year Established: 2010
- Countries of Operation: Uganda, Nigeria, Tanzania
- Headquarters: USA
- Type of organization: Non-profit social enterprise that has a women centered distribution network for solar products
- Product(s) - Envirofit B1200 <http://catalog.cleancookstoves.org/stoves/28>
- Grant type and date of award: Pilot Innovation Fund Round I (PIF), 2013

## Organization Overview

Solar Sister recruits, trains and supports women entrepreneurs to sell clean energy products through an Avon-style distribution model, thereby increasing clean energy access in several African countries. Women use their community and social networks to build their micro businesses, offering customers a range of green products such as solar lights, mobile phone chargers and clean cookstoves.



Solar Sister is solving uptake and last mile distribution issues through their Solar Sister Entrepreneurs (SSE) who are equipped with a startup kit of inventory, training and marketing support to reach rural customers. The micro-consignment arrangement where the entrepreneurs earn commission and only pay for the inventory post sales is a scalable, flexible way to reduce start up financial risk for poor women who lack assets.

Solar Sister started in Uganda as a pilot project that trained 10 entrepreneurs, and the organization has now expanded operations to Nigeria and Tanzania. Overall, Solar Sister supports a network of over 1,200 entrepreneurs. The Solar Sister Entrepreneurs are often the only local sources for clean energy products in their communities and serve over of 100 new customers per year.

## Grant Objective

Solar Sister's PIF grant tests two main theories: (1) that cookstoves can be layered into existing distribution companies' product bundles and (2) that mobile micro-entrepreneurs can sell cookstoves within their communities. Cookstoves had historically been a challenge to distribute through mobile micro-entrepreneurs due to their size and weight. Yet, Solar Sister understood that cooking is an important part of the energy mix for their entrepreneurs. The grant was used to refine Solar Sister's

distribution model, by testing and evaluating the performance of a variety of distribution channels in order to create an evidence base of best practices for the scale-up of cookstove distribution across the growing Solar Sister network.

Solar Sister established a plan to train and equip five teams comprising approximately 50 entrepreneurs with and without prior experience selling solar products across Uganda. Each team was to receive training, support and financing related to cookstoves. The pilot period was to be used for developing and testing cookstove sales, marketing and distribution methods including:

- Event sales, direct sales, single distributor sales
- Online and classroom instruction, SMS text, brochures and mentor for training and support
- Flyers, brochures, SMS text and radio for marketing
- Carbon credit subsidies, microfinance partnership and installment plans for financing

The pilot program was meant to serve as preparation for planned scale up in Tanzania, South Sudan and Nigeria over the next two years. The grant was primarily budgeted towards personnel training and hiring costs, working capital for inventory and development of training marketing material.

### Achievements of Grant

Ahead of the PIF grant kick off, the geographic focus was shifted from Uganda to Nigeria. This decision was influenced by a number of factors including positive responses from a pre-pilot scoping trip and the interest of existing partners in Nigeria to pursue the activities listed in the grant application. Solar Sister worked with a local partner Sosai Renewable Energies Company and conducted training and support of women entrepreneurs to sell cookstoves in three states in northern Nigeria. It proved to be a successful trial of the Solar Sister women empowered distribution model. They also set up several partnerships with different groups for distribution. Overall, 48 women entrepreneurs trained in three states in northern Nigeria selling 600 stoves (approximately 12.5 stoves per entrepreneur). Many of the women were incredibly excited by the program. One state coordinator noted, “They are certain they can sell out over 2000 stoves in 4 months and are already asking if they can explore newer markets even outside their states.”

Achievements by the numbers:

- **48** women trained in Nigeria
- **600** stoves sold by Solar Sister Entrepreneurs
- Solar Sister has continued to distribute stoves to their entrepreneurs as part of their product offering in Nigeria and Uganda more than **2 years** after the grant

At the outset of the program, women were recruited, trained and supplied with necessary inputs to start businesses selling clean cookstoves including initial inventory and working capital financing. The program coordinators and state coordinators recruited the entrepreneurs through local networks of women’s groups and word of mouth. Solar Sister training material was translated into the local language and modified for local context. The business training included sharing of best practices and covered aspects such as record-keeping, sales practices, budgeting, communications, and technical training. The state coordinators were hired and trained by Sosai and serve as local trainers, manager and mentors for the teams of entrepreneurs. The inventory for each sales agent was comprised of six [Envirofit B1200](#) cookstoves worth 20,000 Naira. The women made an initial down payment of 10% of the total cost and paid the remainder after sales.

## Lessons Learned

**Education and awareness for new clients were crucial in order to drive the sale of cookstoves.** Solar Sister had experienced significant success in Uganda with its portable solar product mix. Thus, with the PIF grant, the objective was to test the conditions and suitability of integrating cookstoves into the product mix with Nigeria as the testing ground. Solar Sister noticed that it was easier to market the benefits of solar products since its usage was accompanied by the tangible benefit of cost savings from reduced kerosene purchase. However, depending on the type of cookstove and the existing pattern of fuel consumption, it was sometimes more difficult to see the immediate benefits of using clean cookstoves. Solar Sister worked closely with the entrepreneurs to understand and gauge the best way to create customer demand for cookstoves. **Messages around convenience and reduced smoke were the most persuasive with customers.** Further, educational and training material was developed for SSEs in order to spread more awareness about the benefits of cookstoves. This approach has since been scaled up not only in Nigeria but also in Tanzania.

**A Hub and Spoke Distribution Model works well for rural distribution.** Owing to vast distances and underdeveloped transportation infrastructure, product distribution posed a significant challenge. Additionally, the heavy and bulky nature of cookstoves impedes women distributors from carrying more than one or two when travelling by public transportation. Solar Sister addressed this problem by creating a hub and spoke distribution system, stocking inventory at three central points so that the women could pick them up closer to their collective markets rather than travel all the way to the central warehouse. Additionally, the Solar Sister Entrepreneurs were encouraged to collectively rent trucks to help with local transportation as well as targeting sales during market demonstrations and through groups in order to reduce the need to travel and visit individual customers on a one on one basis.

**A direct, in country presence was needed to continue training and support of local partners.** As Solar Sister started operations in Nigeria, they partnered with an organization to serve as their distribution partner. The arrangement was such that Solar Sister undertook a train-the-trainer model and supported Sosai staff to assist women entrepreneurs on the ground. Solar Sister found that Sosai was a committed organization with strong contributions to the partnership in the form of a well-developed distribution network and consistent dedication and effort towards mobilizing and empowering the women in their network. However, Sosai did require additional organizational support to improve their financial and administrative reporting. Through the course of the PIF grant period, Solar Sister gained key understanding about its priorities for partnerships and was able to translate this to a new partnership model wherein Solar Sister invested in setting up dedicated country teams. **Solar Sister found that the efficiency of operations in a country was positively correlated to the level of Solar Sister staff presence.** In Nigeria, Solar Sister now has a strong employee presence and while they continue to partner with women's distribution networks, Solar Sister holds the reigns with regards to decision-making and training support while the partners serve as local implementers. This direct, hand-on approach has been successful in affording flexibility and maintaining consistency and the quality of training given to SSEs.

**One time training of entrepreneurs is not sufficient to achieve sustained sales.** It is important to coordinate entrepreneur training in those areas where there is an existing supply chain. In addition to access to inventory, transportation networks, and customers, micro-entrepreneurs need additional

support like mentors, workforce development training and training on after sales service on an ongoing basis.