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How Solar Connect Association sustains the solar cooking business

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Introduction

First of all, I thank SCI for enabling me to attend this conference.

Today's pollution has locked us in 100 years of warming. We are now locked into the crazy weather that is on the news every night. Our generation and those younger than us, global warming is all we have known. But through intensive solar cooker promotion, we are contributing to its prevention. During this conference, we have to dig deep into our imaginations and find more innovative ways to unlock all the potential of solar cookers –in terms of efficiency, fit in the social context, adoption and daily use. For SCA, despite difficult odds, solar cooking is a business that we are doing profitably and for a long time.

How ?

- We incorporate a good margin on sales to cover operating and overhead expenses and remain with a profit. Only work in areas where there is affordability.
- One of the things we stopped doing is donating solar cookers. But revolving fund is available.
- We persist and are not discouraged in cases of negative return on expenditure.
- Stay in targeted locations for more than 2 years to create visible impact (livelihoods, status, etc)
- Maintaining a good relationship with a network of stakeholders has helped us to make continuous improvement qualitatively and quantitatively (PUM, SCI, SCN/Kozon,)
- We strive to maintain sound financial management practices,
- We have good customer complaint handling practices (return/exchange, repair, teach how to use).
- we retain staff for long periods and we engage reputable village women as marketers.
- Our marketing style is: home visits, group cooking, daily demonstration, open weekly local markets.

Results

Sales of integrated Solar Cooking (ISC) Appliances from year 2007 to 2016

ISC Appliances	2007 Year	2008	2009	2010	2011	2012	2013	2014	2015	2016
Cookit Sets	1,939	1,577	1,860	3,366	2,897	2,285	3,372	3737	3625	4,112
WAPI	1,110	1,389	1,878	3,367	2,897	2,285	3,372	3,737	3625	4,112
Hay Baskets	158	352	942	2,820	2,364	1,181	1,944	2164	1684	2120
Solar Box Cookers	10	15	34	99	94	109	116	72	97	82
Lorena stoves	20	523	927	1,646	2,462	961	1003	1147	980	996
Rocket stove	26	539	1,024	1,990	2,142	2,167	2,390	2,001	2,590	2,315
Sauce pans	250	2,862	1,841	2,508	3,118	2,520	3,400	3,640	3,820	4,120
Water kettles	0	500	2,957	3,770	3,838	1,244	958	1,260	1,407	1,150
Parabolic cookers	12	10	15	48	96	117	101	109	112	97

- Targeted customers: rural, sub-urban and refugee settlement people susceptible of using charcoal and firewood to cook food.
- We sold about 30,000 solar cookers from 2007 to end of 2016. Substantial quantities were sold from 1994 to 2006.
- We have trained 145 trainers from East Africa, Ethiopia and Mali.
- We have shared our experiences through contribution to newsletters, radio and television discussions locally and internationally.
- We now employ a total of 42 people of whom 91% are female.
- In the past 5 years, we have been managing to break-even and make profits. We generate revenue from sales that cover all expenses and remain with some money that we put back to grow the business without donor funding. We fabricate cook kits, Solar Box Cookers, hay baskets, and distribute rocket stoves and Lorena stoves (Integrated cooking appliances). We also make WAPIS. With a subsidy from our partners, we constructed a permanent building called Renewable Energy Centre(REC). The REC has a big production area, offices and a shop and is fitted with solar electricity with assistance from partners. All production and training, sales and demonstration activities take place in here at Biharwe. We also have a Distribution Centre in Kampala that serves all districts around the capital city.

- People's incomes are increasing and propensity to spend on integrated cooking appliances is high due to steep charcoal prices and increased environmental awareness. We only operate in areas where people can afford to pay.

Actions we implement that make solar cookers a viable and profitable business

- **We practice what we preach-** All our staff often use solar cookers in their homes for daily cooking. Staff lunch is solar cooked at place of work.
- **We have several distribution partners** who display and sell our solar cookers in groceries/shops in rural areas.
- Every working day, we display and **demonstrate solar cookers in the open at 2 shops**, one in Kampala and another in Mbarara. We solar cook every sunny day foods like vegetables, cassava, goat meat, rice, green bananas and boiled eggs as well as tea for staff.
- **We sell at a profit:** There is a margin on every item we sell..
- **Revolving Fund:** Clients can buy on credit and SCA uses the revolving fund to pay its self. The client refunds the debt to the revolving fund. Again here women marketers are critical because they offer surety on behalf of the client as they are often known to each other and live in same locations. In the past 5 years, we have had only 2 people defaulting on the solar cooker loan. In principle, we moved away from solar cooker donations because it is not sustainable in business terms. But subsidy works.
- **Group Cooking:** Once a month, SCA organizes a group cooking session. Group cooking is the assembling of all solar cooker owners from several villages in one place mostly a public place like a community center and they solar cook using their solar cookers. The objectives are to share ideas, tricks on cooking different foods, solve problems in regard to solar cookers that may have been encountered, know each and celebrate. This event attracts community and sometimes district leaders and environmental activists and increases exposure and awareness. It results into selling solar cookers to new people. Music and drinks are also often sponsored by local leaders who look forward to next political elections and are interested in environmental conservation.
- **Home visits:** Every two weeks, village women marketers visit a home of a new participant after an announcement on a community public loud speaker. Potential customers assemble in one home to witness how solar cookers work. Training on how to use solar cookers along with awareness on environmental conservation. Food is cooked on solar cookers in the presence of potential customers. Often this results in some solar cookers being sold.
- **Once a week market days:** We visit trading centers on once a week market days. We sell and do awareness campaigns.
- We **fabricate** solar cookers and hay baskets. We also stock and sell efficient charcoal stoves from other producers. In that way, we diversify sources of income. Remuneration of fabricators is per piece and women marketers get a basic pay and a small commission per article sold.
- **Product improvement:** We have been improving the quality of solar cook kits for many years using information from SCI and technical support from SCN-Kozon. Cook kits are now produced in three different colors:- red, yellow and light green. We make quality WAPIS and

hay baskets. We have diversified into energy saving cook stoves that use charcoal to increase income.

- **Manpower and organisation**

1. **Our staff are full time employees** and we also have volunteers and part timers. People working for SCA are its main asset. Most important of these are village women marketers. These village women marketers are recruited from the villages in which we intend to operate. The women marketers reach a lot of people and they are trusted in their communities. They sell door-to-door after working in their gardens. They also use solar cookers in their homes. They organize home visits. These create awareness and often result in sales.
2. **We have team work:** We have explicit goals that are challenging but not difficult. We set production targets every month. Our staff have a balance of skills, diversity in knowledge and views. Their age and gender helps our team to be more creative. Team members have autonomy in managing work.
3. **Support to our employees is through:-** Training, material resources required for the job as well as a modest reward system that reinforce performance.
4. **We have a shared mindset among team members.** Everyone at SCA is genuinely interested in promoting solar cookers. This fosters common identity and common understanding. Everyone feels valued for his/her contribution at SCA's goals. We all believe in solar cookers from head, heart and soul.

- **We maintain good working relationship and stay in touch with international stakeholders.** Throughout the 22 years of promoting solar cooking, we have maintained good working relationship with partners abroad. These partners provided seed funds that have propelled SCA activities to greater heights. The partners helped us a lot to improve business management by sponsoring our employees to do short courses in production, finance and marketing. They have assisted in technical advice and subsidized construction of a building that is now our new Renewable Energy Centre in Mbarara (see photo). They visit our projects from time to time to monitor and evaluate our performance against our goals. The result is improved product quality and market expansion.

Future Plans

We plan to expand solar cooking activities to the rest of Uganda starting with Gulu District in March 2017. This year we shall distribute 700 solar cookers in Nyakivale and Oruchinga Refugee Settlement. In the last 3 months of 2016, we sold 300 solar cookers in the above mentioned refugee settlements. Women in Kampala markets are using more parabolic solar cookers to boil drinking water that they sell. We plan to expand this activity to more markets around Kampala. We are going to entice other women entrepreneurs cooking food near hospitals to acquire parabolic solar cookers to boil water they sell to patients and save money on charcoal. We want to diversify to solar lanterns now that rural people know about solar

electricity. In that way our social enterprise will be fully integrated in terms of solar energy appliances.

Challenges:

- Banks are reluctant to provide loans to solar cooker ventures.
- In the case of Uganda, rigid mindset and behavior change of people is still a challenge to solar cooker expansion.
- Retaining the best minds is not easy because of average remuneration in this sector.
- We have so far failed to penetrate the carbon market because of the strong entry barriers in place.
- We lack know-how on institutional solar cookers and back-up for night cooking. .
- We lack an expert who can test the efficiency and performance of the solar cookers that we fabricate. The product need standardization and certification.

What we can do collectively to improve household access to solar cookers

- More effort should be exerted to achieve change of mind set and attitudes towards solar cooking.
- Research on cheap storage of solar cooking energy for night use needs to be enhanced.
- Solar Cooker promoters need to come nearer each other using the internet to communicate and share experiences. SCIA activities should be supported by all of us here.
- We call on government leaders to formulate and implement renewable energy policies that will enable the clean solar cooking sector to grow and prosper.
- We should think of transformative ways on performance tests and standardization of solar cookers.

Conclusion

More now – than ever, we need conversation, perspective and diverse voices in support of implementing ideas related to solar cookers. That is why we are here.. Finally, we welcome collaborative efforts from any of you to support solar cookers in refugee settlements in Uganda.

Photo page.

Hay Baskets



Workshop



Distribution Centre –Kampala



Renewable Energy Centre Biharwe



Shop Bihawe



Group Cooking Session



Boy collecting firewood



Solar cooked food served



THANK YOU FOR YOUR ATTENTTION