



ENVenture Fellow Report

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1. Project Details

Location: Arua, Uganda

Partner: Rural Initiative for Community Empowerment West Nile (RICE-WN)

Duration: 2nd August to 15th September 2015

With the support of ENVenture, RICE-WN was responsible for establishing a sustainable enterprise that will retail ENVenture approved solar lights, water filtration devices, improved cooking stoves, and energy-saving briquettes. For the duration specified above, an ENVenture Fellow worked with a local RICE-WN employee to develop and implement the enterprise.

The vision of the enterprise is to empower rural and peri-urban communities with modern technologies to ensure a safe, healthy and sustainable environment.

The mission of the enterprise is to provide rural and peri-urban communities with the knowledge and tools to improve their livelihood while conserving the environment, by being the lead promoter and distributor of clean energy products in the West Nile Sub Region.

2. Market Research

Before any progress could be made on the sustainable enterprise, it was essential to understand people's current living situation, the means through which they cook, obtain water and lighting as well as the current product offerings available in Arua. Hence, two market research studies were conducted.

The first was the customer market research. A total of 30 interviews were conducted. The following methodology was followed:

Methodology

1. Visited nearby rural and peri-urban areas during the day and night
2. Observed current behaviors in relation to cooking, water and lighting
3. Asked a list of questions¹ in order to:
 - Find out about people's frustrations and pain points
 - Understand what people value
 - Identify current products being used
 - Find out what are some constraints to seeking alternative solutions
4. Took photos of current products being used

¹ Refer to Appendix A for the list of questions asked during the interviews.

Below are the main findings from the customer market research:

Cooking
<ul style="list-style-type: none">• 28 out of 30 households use 3-stone fire for cooking• While slightly over half of the households possess a charcoal stove, many rarely used it• The average monthly amount spent on fuel is UGX 86,000.• The biggest complaint about traditional cooking methods is the excessive smoke produced while cooking• Most people have heard of clean cook stoves but have never seen one and do not know where to get one
Water
<ul style="list-style-type: none">• Almost all households collect their water from springs• Almost all households do not boil the water• Time and lack of fuel are the primary reasons for not boiling water• Many people have fallen ill as a result of unclean water• Most households have heard of water filters but have never seen one and do not know where to get one
Lighting
<ul style="list-style-type: none">• 12 out of 30 households have solar lights• Majority of the households still rely on paraffin lamps• The biggest complaint about traditional lighting is the expenditure on kerosene• Households spend an average of UGX 7764 in a month on kerosene.• Most people consider solar lights too expensive

The second market research study was that of competitors. The following methodology was followed:

Methodology

1. Visited electronic shops in Arua town center
2. Identified what clean energy products are currently being sold
3. Compared the prices of the products
4. Asked about the demand for the products (best seller, most popular etc.)

There are many shops in Arua Town selling solar products. However, they mostly deal in solar panels and other components that a solar home system is comprised of – inverters, charge controllers, batteries, wires and bulbs. The components have to be bought individually and then either be installed by a technician or by the customers themselves. If a technician is hired, extra fees have to be paid. If the customer does the installation himself or herself, it is likely he or she will make mistakes in the process. Given the low technical knowledge most people have about solar, it is also very likely that customers (in a bid to reduce costs) will forget to procure essential components like the charge controller for their solar home systems. Not having a charge controller increases the chances that the home solar system will be damaged. As a result of the aforementioned reasons, the experience of purchasing a home solar system can become unpleasant, frustrating and unsatisfying.

Moreover, customers tend to overpay at these shops for a couple of reasons. Firstly, customers need to purchase the components of the solar home system individually. The costs add up. Secondly, customers are unaware of their power needs and often buy oversized systems. For instance, a customer may want to power a few bulbs but ends up buying a 50W panel. As such, there is a misconception that solar power is exorbitant.

The findings from the competitor market research informed our decision to retail mostly portable solar lanterns. Such solar lanterns either have integrated components or come with easy to set-up parts. This will take away all the confusion and hassle of purchasing individual components and having to install them. Such solar lanterns are also significantly cheaper than buying a panel and the various components, and this addresses the misconception that people have about solar lanterns being too expensive.

As for clean cook stoves and water filters, there are almost no distribution channels in the Arua district. Or at least, almost no channels that people know of. Hence, there is a high chance we have first mover advantage in the region.

3. Store Setup

Store Infrastructure

As RICE-WN was already renting a store space for its Internet café business, Slick Links, there was no need to search for another store space for the sustainable enterprise. It was agreed upon by the Executive Director of RICE-WN and the employees at Slick Links that the sustainable enterprise would share the store space. The existing furniture at the Slick Links store was rearranged to make space for the sustainable enterprise². New display shelves were built and a new signboard³ was installed.

Marketing

A few channels and platforms were utilized to market the sustainable enterprise. A new signboard with photos of clean energy products was installed. A flyer⁴ was also created to promote awareness. Product catalogs with basic information about the prices and benefits of the clean energy products were distributed to RICE-WN employees, who would function as informal marketers as they spread the word about the sustainable enterprise to their friends and family.

² Refer to Appendix B for the original layout of the store and the new layout of the store.

³ Refer to Appendix C for the design of the signboard.

⁴ Refer to Appendix D for the design of the flyer.

For the launch day, temporary marketers were hired. These temporary marketers were stationed at various parts of Arua town and their job was to advertise the launch of the sustainable enterprise and direct people to the store. They were given flyers to hand out as well.

In addition, there were live demonstration activities at the store. Two female RICE-WN employees cooked a dish of Irish potatoes using our improved cook stoves as well as a 3-stone fire and a traditional charcoal stove. The purpose was to enable passers-by to compare the cooking process between the improved cook stoves and traditional cooking methods. It was obvious that the improved cook stoves used less fuel and produced less smoke. Solar lanterns and kerosene lamps were placed next to each other inside a box that was painted black to imitate a dark space. Many people stopped to look inside the box as the kerosene lamps produced a lot of smoke while the solar lanterns shone brightly without any smoke. Again, the benefits of solar lanterns were obvious to passers-by. The live demonstration activities played an important role in attracting people to the store and in facilitating the RICE-WN employees in their sales pitch to potential customers.

First Order and Budget

In order to decide which products to purchase, the first week was spent on researching the various suppliers of clean energy products in Uganda. The suppliers⁵ were reached out to via emails and phone calls and information about the products and their prices⁶ were obtained.

Findings from the market research studies were used to decide how to apportion the first order amongst solar lanterns, improved cook stoves, water filters and briquettes. There was great interest and demand in solar lanterns and improved cook stoves; hence most of the first order budget was spent on those products. Much less was spent on the water filters, as many did not express interest in buying one. An excel sheet was also created to help configure the first order against the budget. A total of UGX 4,433,050 (approximately US\$1,270) was spent on the first order of products and this amount was taken from the loan provided by ENventure.

A budget⁷ was created to estimate the costs that RICE-WN would have to incur in setting up the sustainable enterprise. The initial start-up costs were estimated at UGX 1,059,500 (approximately US\$302). This included the costs for the new shelves, launch day activities, transport of products from Kampala to Arua, marketing materials such as flyers and the signboard and other miscellaneous items. In reality, a total of UGX 468,400 (approximately US\$135) was spent.

⁵ Refer to Appendix E for the list of suppliers and their contact details.

⁶ Refer to Appendix F for the information and prices of products.

⁷ Refer to Appendix G for detailed budget.

File Management System

A file management system was created in Microsoft Excel to keep track of all sales transactions, discounts and promotions, product orders and inventory stock level. An additional feature called “Sales Analysis” was also included to analyze the sales and profitability of products. The file management system was designed to be as automated as possible. The store manager would input the data electronically at the end of every business day.

Sales Analysis										
[Company Name]										
Along Adumi Road, Plot 43, Arua Municipality										
Product Name	Unit Cost	Retail Price	Margin	No. of Sales	Rank	Revenue	% of Sales	Total Profitability	% Profitability	
EzyStove	45,000	55,000	10,000	0	5	-	0.00%	-	0.00%	
SmartHome Stove	23,000	27,000	4,000	1	3	27,000	25.14%	4,000	28.90%	
Briketi EcoStove Size 1	17,000	20,000	3,000	2	2	40,000	37.24%	6,000	43.35%	
1 packet of 1.2KG Briquettes	760	900	140	6	1	5,400	5.03%	840	6.07%	
Tulip Water Filter (Table Top)	66,000	75,000	9,000	0	5	-	0.00%	-	0.00%	
dflight S2	26,000	28,000	2,000	0	5	-	0.00%	-	0.00%	
dflight S20	32,000	35,000	3,000	1	3	35,000	32.59%	3,000	21.68%	
Sun King Solo	44,310	49,000	4,690	0	5	-	0.00%	-	0.00%	
Sun King Mobile	70,945	79,000	8,055	0	5	-	0.00%	-	0.00%	
Sun King Pro 2	83,790	115,000	31,210	0	5	-	0.00%	-	0.00%	
Sun King Home Value	174,615	195,000	20,385	0	5	-	0.00%	-	0.00%	
Total				10		107,400	100.00%	13,840	100.00%	
Total after Discounts and Promotions						104,200		10,640		
Total after Transport Costs						21,400		72,160		
Grand Total						18,200		75,360		

Example of Sales Analysis

Preparation for Launch

In the days leading up to the launch of the sustainable enterprise, many things had to be settled. Firstly, the products had to be collected from Gaa Gaa’s office and transported to the store. This required two separate trips with RICE-WN’s white vehicle. The furniture in the store had to be rearranged to make room for the new shelves. The signboard was installed, the shelves were built and a bulletin board was installed next to the new shelves. Requisition for the funds to purchase items required for the launch day was also made. Receipt books and data books were also bought.

Secondly, some of the products were brought to RICE-WN’s office for testing purposes. Several food items such as Irish potatoes, onions, tomatoes, cooking oil and salt were bought for the cooking demonstration. Nancy and Agnes, two of RICE-WN’s employees, prepared dishes using the improved cook stoves as well as a 3-stone fire and a traditional charcoal stove, while a stopwatch kept track of the amount of time required to cook a dish using each cooking apparatus. Notes about the cooking experiences and amount of smoke were also taken throughout the entire activity. Several boxes were painted black on the inside to create a dark space in which solar lanterns and kerosene lamps could be compared. To minimize the risk of the boxes catching fire, the boxes were sized such that there was ample space between the flames from the kerosene lamps and the interiors of the boxes. One water filter was also put together and tested by pouring tap water into the top container, observing the flow rate and noting how much time each filtration takes. The tests improved RICE-WN’s employees’ understanding of the products and helped them to craft more convincing sales pitches to customers as they could draw upon their own experiences.

Thirdly, five temporary marketers were recruited for the launch of the store. A proposal was drawn up and presented to the Executive Director of RICE-WN before any action was taken. Upon approval of the proposal, a briefing was held the day before the launch and the temporary marketers had to sign a contract that specified the terms of engagement and the compensation amounts.

Lastly, three RICE-WN employees were approached to help out on the day of the launch. To get them up to speed, a briefing was held and reading materials were sent to them.

4. Launch of Shop

At 8am on 4th September 2015, every one met outside the Slick Links store. The temporary marketers were told to meet there to collect their compensation and flyers. They were then given the locations that they had to be stationed at. By 9am, all the temporary marketers were at their locations. A total of 4 spot checks, conducted every 2 hours, were planned. However, only 2 spot checks were conducted due to lack of manpower. During the spot checks, all the temporary marketers were seen at their specified location talking to passers-by – an indication that they were working.

A table was placed on the veranda outside the store and the solar lanterns were displayed on the table. Prices were written on pieces of masking tape and stuck near the products. The water filter was placed outside as well. The improved cook stoves were positioned some distance from the table, as more space was required for the cooking demonstration. The boxes with black interior were also placed on the veranda. A sound system, borrowed from RICE-WN's office, played music throughout the day. RICE-WN employees also spoke through the microphone and constantly mentioned the benefits of the products as well as their prices.

Two cooking demonstrations were carried out on the launch day. One, comparing the EzyStove and a 3-stone fire, took place in the morning and the other, comparing the SmartHome, Briketi EcoStove and a traditional charcoal stove, took place in the afternoon. Irish potatoes were cooked for both demonstrations. The cooking demonstrations attracted passers-by and many gathered around the stoves, which gave RICE-WN employees the opportunity to pitch to potential customers. The fact that the improved cook stoves produced less smoke than the traditional cooking methods was undeniable to the crowd. The lighting demonstration was also a hit. Many were curious to see the smoke coming from the boxes and upon closer inspection, they could see the solar lantern placed next to the kerosene lamp (which was producing all the smoke). The benefits of solar lanterns were obvious to the crowd as well. Overall, the demonstrations were effective in conveying the benefits of our products. In particular, the lighting demonstration was easy to set up and straightforward to carry out. Although the cooking demonstration aided the verbal explanation of

RICE-WN employees, it required a lot more resources and time and often, people would not stop to watch the entire demonstration.

To entice people to make purchases on launch day, a discount of UGX 500 was given to the first 10 customers of solar lanterns. In addition, anyone who purchased a cook stove also received a free packet of briquettes that cost UGX 900. As the people in Arua were unfamiliar with briquettes, the intention was to let them try the briquettes out.

By the end of the day, more than 100 people (our target) had visited the store. The temporary marketers directed many to the store. A total of 4 sales were made on launch day: 1 d.light S20, 1 SmartHome Stove, 2 Briketi EcoStoves and 1 packet of briquettes.

5. Areas of Concern

Throughout the 6 weeks, a few areas of concern have surfaced. Moving forward, these issues would need to be addressed in order to ensure the success of the sustainable enterprise.

Transport and Delivery of Products

There were many problems concerning the transport and delivery of the products from Kampala to Arua. Firstly, the Gaa Gaa representative in Kampala (Jamal) was not a reliable agent. He gave differing answers about the quantities of products at his office and often gave confusing messages about which products he had received from the suppliers. A lot of stress was created as a result.

Secondly, unnecessary fees were paid to the men who loaded the products at Kampala and off-loaded them in Arua. The clerk in Gaa Gaa Arua office stated that no money should be paid to those men as they are paid by Gaa Gaa to do the job. However, the men would not load our products in Kampala until UGX 10,000 was paid to them via mobile money. The men who off-loaded the products in Arua also asked for money. These unnecessary fees eat into the profit margins of the sustainable enterprise.

Lastly, Gaa Gaa employees did not handle the products properly. Many of the products arrived in Arua with scratches and some dents. In addition, they were all very dirty. The products were not in the best condition. Furthermore, 3 SmartHome stoves were missing and unaccounted for. Fortunately, for the first order, the damaged products could be used as display and demonstration items. But such damages cannot be tolerated for future orders. As both Gaa Gaa and the suppliers claim that they are not liable for the damages, a new system for transporting the products from Kampala to Arua with as little risks and damages as possible has to be figured out.

Plausible solutions

- Perhaps RICE-WN could arrange to pick up products directly from the suppliers in Kampala if another RICE-WN employee and the organization's vehicle have to travel to Kampala anyway.
- When the sustainable enterprise matures and orders get big, RICE-WN could work with the suppliers to hire a truck that will specifically transport our products from Kampala to Arua.

Management

To ensure the success and growth of the sustainable enterprise, the people leading it must exhibit drive, initiative, enthusiasm, innovative thinking, and responsibility. Throughout the 6 weeks, there have been many instances when the actions, or inaction, of the RICE-WN employees working on the enterprise raise doubts about their ability to manage and lead the enterprise.

The two RICE-WN employees will continue to receive guidance and support from the ENventure Fellow. However, it is advisable for RICE-WN management to decide as soon as possible whether to invest in resources to train the two RICE-WN employees or to hire another more capable individual to manage and grow the enterprise.

Security

The products will be displayed on the veranda outside the store for at least a couple of weeks after the launch of the enterprise. This is to capture people's attention as they walk pass. The products are also displayed on the newly built shelves inside the store. Most of the time, there is only one RICE-WN employee overseeing the products. When a customer intends to purchase an item, the RICE-WN employee will guide the customer into the shop to fill out the receipt and the sales record book. While this happens, there will be no one overseeing the products. Anyone could walk away with one of the products without the RICE-WN employee knowing. The risk of theft is high. Hence, measures must be put in place to improve the security of the store.

Plausible solutions

- The RICE-WN employee could fill out the receipt and sales record book while stationed outside the store. He could also keep the cash with him and only deposit the amount into the cash box either a few times a day or at the end of the day. This is to minimize the time that the RICE-WN employee has to go into the store and leave the products unattended.
- A second RICE-WN employee could be scheduled to help out at the shop during peak hours.
- When the enterprise matures and the value of products kept at the store is high, a security guard might be hired.

6. Roadmap for Next Steps

Payment Methods

One of the main goals of the sustainable enterprise is to ensure the products that it retails are accessible and affordable to the masses and in particular, the low-income segment. While the enterprise only accepts upfront cash payment presently, this cannot be the only method of payment if the aforementioned goal is to be met. Even though our products are cheaper than that of competitors, it was obvious from the customer market research that many are still not able and not willing to spend a big sum of money in one instant. There are two main barriers to payment – most people lack the initial capital and most people have difficulties accumulating the capital. In other words, people find it hard to save. Most are aware of the economic benefits of our products in the long term, but the inability to save trumps the rational understanding that our products make financial sense.

Consequently, there is a need to explore other payment methods that would make our products more affordable and accessible. At the same time, there is a need to ensure that whichever payment method is adopted would be culturally acceptable and would not create accountability and cash flow problems for the enterprise. A study into various payment methods would have to be carried out in order to assess which payment method would be most effective.

Alternative payment methods include monthly cash installments, monthly mobile money payments, payments through village saving groups and more.

Sales and Marketing

The launch was a good start for the enterprise. The temporary marketers did their job by spreading the word around. The products would be on display outside the store and music would be playing for at least a couple of weeks after the launch. However, more has to be done if RICE-WN wants to reach out to the rural and peri-urban communities in the West Nile sub-region.

The next step in marketing the sustainable enterprise and its products would be to bring the products to villages, trading centers, schools and any other areas where people congregate and carry out demonstrations of the products. Instead of waiting for people to come to Arua town to visit the store, we ought to bring the products to people and educate them on the benefits of the products. For greater visual impact, visits could be conducted in the evenings so people can compare the brightness of the solar lanterns to that of kerosene lamps. RICE-WN employees should create a schedule of these visits for the next 3 months.

Another marketing strategy could be to arrange focus groups and have a respected figure from the community facilitate the session. During the focus group session, the facilitator could ask participants about the problems they face

with their current means of cooking, lighting and obtaining water. After understanding their predicament, the facilitator could introduce our products and explain their benefits. A RICE-WN employee should be present throughout the focus group session to take notes and offer assistance.

When the enterprise has reached a stage where its employees are confident in expanding the business, a network of sales agents could be recruited to increase sales. An arrangement where the sales agent gets a certain commission for every product sold could be worked out. The enterprise could even consider hiring local youths from villages to be sales agents. Of course, the sales agents have to be trained in order to sell the products properly. A system has to be put in place to ensure accountability of the sales agents as well, lest they damage or run away with the products.

An interesting sales channel could be through partnerships with other organizations that might make bulk purchases. For instance, partnering with an NGO that works in refugee camps, or an institution such as a hospital or school.

Training and Workshops

Spreading awareness about sustainable development and environmental conservation is one of the main goals of the sustainable enterprise. Hence, our efforts should extend beyond retailing clean energy products. Offering training and workshops on sustainable development and environmental conservation to locals could complement the sales of clean energy products. For instance, a course on briquette manufacturing could be conducted for the locals. A sign-up sheet could be placed in the store and brought along on demonstration field trips for locals to indicate their interest in participating in the course. Briquette making not only provides employment and another source of income for the locals, but it also results in cheaper briquettes for the locals as the enterprise no longer has to purchase them from Kampala, hence saving on the transport costs. One supplier, Green Bio Energy, offers partnership on such courses.

Another example would be entrepreneurship courses. Some suppliers, such as Barefoot Power Uganda and Nuru Energy, offer products that could be useful for budding entrepreneurs. For instance, Barefoot Power's Connect Charge allows a person to start a mobile charging business. Many more innovative enterprises could arise if locals are equipped with the knowledge and tools to get them started. Hence, partnerships with other organizations to offer entrepreneurship courses would be a good project for our sustainable enterprise to consider.

Customer Service

To truly establish our sustainable enterprise as *the* place to go to purchase clean energy products, there is a need to differentiate us from our competitors and one surefire way to do so is to provide excellent customer service.

Excellent customer service means the customer will have a good experience with our enterprise, will say good things about our enterprise to friends and family and will want to return to our enterprise in the future. “Good” is subjective and differs amongst countries, regions and cultures. Hence, there is a need for constant observation and collection of feedback from customers in order to pinpoint areas for improvement. RICE-WN employees in charge of the enterprise should have a customer service meeting once a month to assess customers’ happiness and satisfaction with the enterprise and discuss areas for improvement. Some considerations include providing delivery of products straight to the customer’s home and providing carrier bags for products purchased. Of course, basic services like providing accurate information about products and handling the return of faulty products should be a given.

7. Roles and Responsibilities

The roles and responsibilities of key RICE-WN personnel are detailed below:

Matua Yusufu

1. Day-to-day management of clean energy retail shop at Arua Town, which includes:
 - Handling sales transaction with customers
 - Taking orders from customers
 - Recording all sales transactions and orders into a log book
 - Explaining how the products work and their benefits to customers in store
 - Explaining the guidelines of warranty to customers
2. Responsibility of the File Management System, which includes:
 - Inputting the sales transaction and orders into the system on a daily basis
 - Analyzing the sales data and tracking contribution of individual products to revenues and profitability, on a weekly basis
 - Deciding on order quantities for each product (or new products), based on analysis of sales data as well as customer’s orders
 - Deciding if any products should be discontinued, based on analysis of sales data and market research
 - Tracking inventory levels
 - Produce an order sheet with product types, order quantities, and amount to be paid to each supplier (to be passed to Gift)
 - Tracking expenses of clean energy shop by inputting expenses into income sheet
 - Updating Income sheet, Cash Flow sheet and Balance sheet on a regular basis
 - Produce monthly and quarterly financial statements (Income and Cash Flow sheets more important than Balance sheet)
3. Oversee the logistics of products delivery, which includes:
 - Negotiating with Gaa Gaa Bus Company the transport cost for products

- Coordinating with Gaa Gaa Kampala Representative (Jamal) on the transport of products
 - Collecting the products from Gaa Gaa Office when they arrive in Arua
 - Checking the products for damages
 - Making the payments for transport to Gaa Gaa Bus Company at Arua after products are collected
 - Ensuring Gaa Gaa pays for any products that are lost
4. Management of After-Sales, which includes:
- Replacing faulty products with new ones (during the warranty period)
 - Keeping track of faulty products that are sent back to suppliers and ensuring a new product is sent back as replacement
 - Handling all complaints from customers
 - Recording all complaints and feedback from customers into a log book
5. Participate in marketing and promotional efforts, which includes:
- Working with Gift on all marketing-related activities
6. Responsibility of future plans for clean energy business, which includes:
- Coming up with innovative payment schemes that allow people to overcome the difficulties of saving money to purchase a clean energy product (installments, deposits, village savings group, mobile money etc.)
 - Coming up with innovative ideas to improve marketing, educational, and promotional efforts in order to reach more people
 - Coming up with innovative channels of sales and distributions (eg. Recruit youths as sales agents, partner with schools, clinics, hospitals etc.)
 - Coming up with any ideas that will advance our vision and mission

Ayikobua Gift

1. Management of relationships with suppliers, which includes:
- Maintaining good relationships with current suppliers
 - Update current suppliers about performance of clean energy shop in Arua on a regular basis
 - Carry out goodwill, such as sending suppliers photos of our operations or informing them of customer testimonials etc.
 - Obtain marketing materials and other relevant materials from suppliers
 - Seeking out potential new suppliers and building good relationships with them
 - Do regular research on the internet to find out about suppliers of clean energy products
 - Send introduction emails to those that could be potential suppliers
 - Receiving order sheet from Yusufu and informing suppliers of order details
 - Obtain approval from Executive Director to make the orders
 - Work with Finance Department to make payment to suppliers
 - Inform suppliers after payment has been made

- Inform Yusufu about confirmation of payment, so Yusufu can work with Gaa Gaa to ensure the delivery of the products
2. Management of relationships with partners, which includes:
 - Conducting outreach with potential partners and setting up meetings to discuss possible areas of collaboration
 - Creating partnership agreement contract for each partner, once partner organization has agreed to a collaboration
 - Having regular meetings with current partners to ensure synergies are achieved, update on performance of partnership, and brainstorm further areas of collaboration
 3. Responsibility of all marketing, educational and promotional efforts, which includes:
 - Conducting live demonstrations of products in different villages, trading centers, schools etc. on a regular basis (at least two in a week)
 - Coming up with new marketing strategies (flyers, posters, brochures, word-of-mouth, customer testimonials, advertise through village chairperson, radio announcements etc.)
 4. Responsibility of market research efforts, which includes:
 - Creating relevant survey questions for market research activities
 - Checking on customers who have bought clean energy products and getting their feedback on the products
 - Getting customers' testimonials on products
 - Organizing any activities to better understand any aspect of clean energy business
 - Recording and compiling all data and information in an appropriate format
 5. Responsibility of future plans for clean energy business, which includes:
 - Coming up with innovative payment schemes that allow people to overcome the difficulties of saving money to purchase a clean energy product (e.g. installments, deposits, village savings group, mobile money etc.)
 - Coming up with innovative ideas to improve marketing, educational, and promotional efforts in order to reach more people
 - Coming up with innovative channels of sales and distributions (e.g. Recruit youths as sales agents, partner with schools, clinics, hospitals etc.)
 - Coming up with any ideas that will advance our vision and mission (e.g. train locals to manufacture briquettes in Arua, so we not only provide employment and income to locals but we are able to obtain briquettes for lower cost than transporting them from Kampala)

Executive Director, Pax Sakari

1. Assess all major clean energy initiatives and activities and provide approval if appropriate, which includes:
 - Orders and amount to be paid for clean energy products
 - Partnership agreements with relevant organizations

- Any other major activities or expenses proposed by Gift and Yusufu to further the sustainable enterprise

Finance Department

1. Make payments to suppliers, upon approval from Executive Director
 - Work with Gift to finalize amounts to be paid to each supplier
2. Provide funds for expenses related to sustainable enterprise
 - Requisition to be made by Gift and Yusufu

8. Appendix

A. Survey Questions

Cooking:

- What is your method for cooking?
 - Charcoal stove
 - 3-stone fire
 - LPG
 - Improved cookstove
- How often do you cook?
- What do you typically cook?
- How long does cooking take?
- What are you using to cook?
- How much did you spend on the stove?
- How often do you have to replace it?
- What do you use for fuel?
- How much do you spend on fuel in a month?
- What about cooking bothers you?

Water:

- Where do you get your water?
- Do you boil water? If not, why?
- Do you do or use anything to sterilize the water?
- Has anyone in your family gotten sick from the water?

Lighting:

- What do you use for lighting?
- If kerosene or paraffin:
 - How much do you spend on fuel in a month?
 - How many hours of light do you get in a day?
 - Do you have any problems with this method of lighting?
- If solar:
 - How much did you spend on the system?
 - How many hours of light do you get in a day?
 - What other functions does it have? (radio, mobile charging etc.)
 - How important are those functions?
 - Do you have any problems with the product?
- What do you need the lighting for?

B. Current and New Store Layout

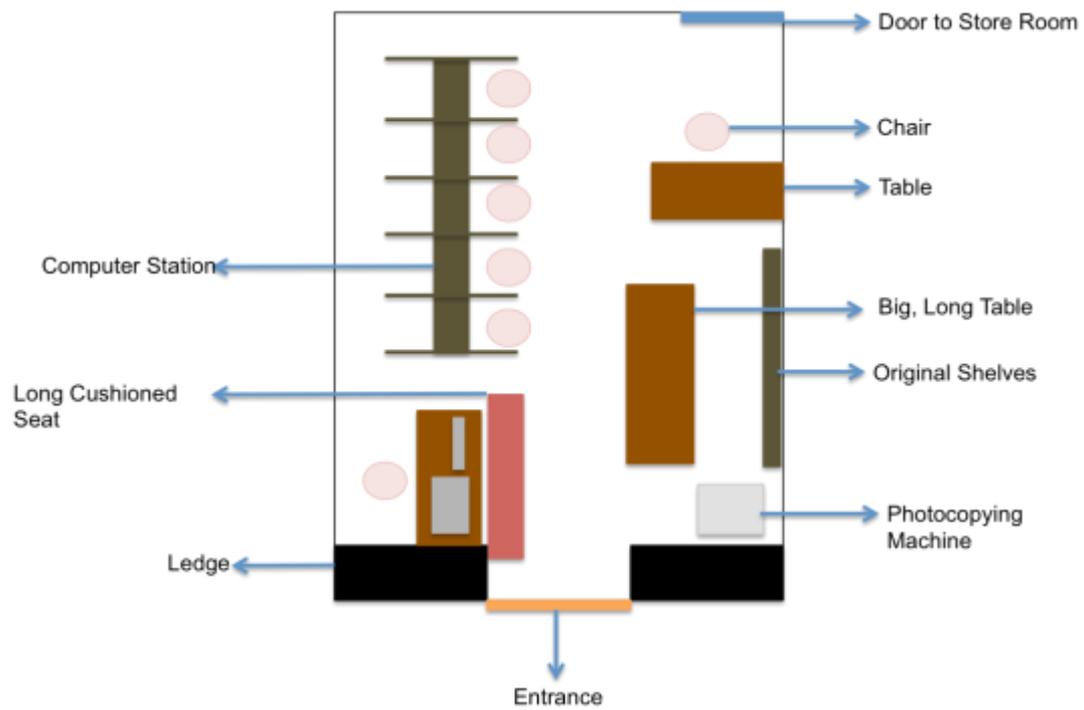


Figure 1: Current Store Layout

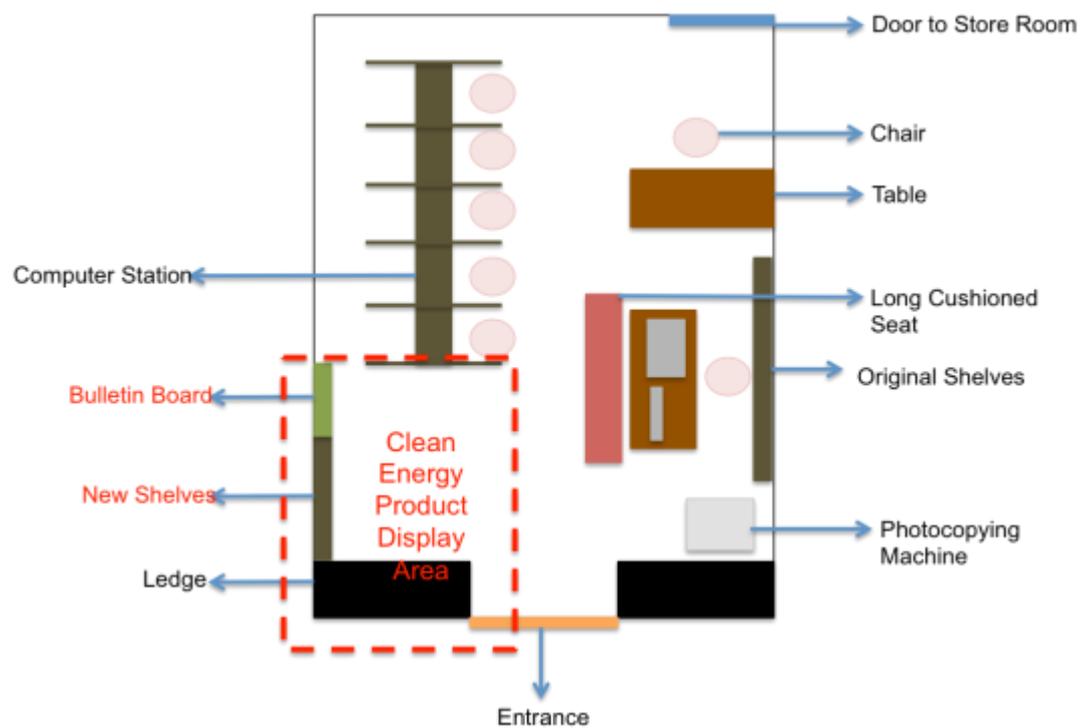


Figure 2: New Store Layout

C. Design of Signboard



Figure 3: Design of Signboard

D. Design of Flyer



Clean Energy Products For You and Your Family!

We sell clean cook stoves, solar lights, water filters, energy-saving briquettes and more!

Save Energy Save Environment Save Money



Find Us at:
Along Adumi Road, Plot 43, Arua Municipality
Opposite Vino Lounge/Orasea Building
Contact Number: +256 (0)785 674 746

E. List of Suppliers and their Contact Information *(First order from highlighted suppliers)*

Supplier	Products	Contact Information
Barefoot Power Uganda	Barefoot Power Solar Products	Contact Person: Joel Wentonyi Number: 0759212014 Email: joelw@barefootpower.com
Basic Water Needs	Tulip Water Filters	Contact Person: Tim Neville Email: tneville@impactcarbon.org
Green Bio Energy	Locally manufactured briquettes, improved cook stoves	Contact Person: Ziwa H. Number: +256 393 514 710 +256 751 680 638 Email: ziwa@briketi.co.ug
Greenlight Planet	All Sun King Solar Lanterns	Contact Person: Stephen Manyasi Number: +256 (0) 756 899 097 Email: stephen@greenlightplanet.com
Nuru Energy	Nuru Lights	Contact Person: Sameer Hajee Email: shajee@nuruenergy.com/sameerhajee@gmail.com
Tiva Water	Water Filter	Contact Person: Florence Number: 0782979796 Email: atayi.florence@gmail.com
Uganda Stove Manufacturers Ltd (UGASTOVE)	Charcoal Stoves Size 1 and 2, Wood Stoves, Dual Stoves	Contact Person: Rehema Nakyazze Number: 077 267-4267 Email: rahazze@gmail.com
UltraTec	dlight S2, dlight S20, dlight S300	Contact person: Edith Damali Number: 0772200007 Email: damaliedith@gmail.com
UpEnergy	SmartHome Charcoal Stove, EzyStove, Tulip Water Filter (Table Top)	Contact Person: Moses Amone Number: 256.774.198895 +256.701.198895 Email: moses@upenergygroup.com

F. Product Information and Prices *(Products in first order are highlighted in yellow)*

* Prices subject to changes from suppliers

Product	Supplier	Description	*Actual Cost per Item (UGX)	*Customer Price per Item (UGX)
Improved Cook Stoves				
Ugastove Charcoal Stove Size 1 (Small)	Ugastove	-	12,000	15,000
Ugastove Charcoal Stove Size 2 (Medium)	Ugastove	-	17,000	20,000
EzyStove	UpEnergy	(l/w/h): 330/330/304mm Weight: 2.8kg Material: Metal Fuel: Biomass, Wood Lifespan: 3 years	45,000	55,000
SmartHome Stove	UpEnergy	(l/w/h): 270/270/270 mm Weight: 12.0kg Material: Clay, Metal Fuel: Briquettes/pellets, Charcoal Lifespan: 2 years	23,000	27,000
Briketi EcoStove Size 1	Green Bio Energy	(w/h): 18/21.5cm Fuel: Charcoal, Biomass, Briquettes/pellets	17,000	20,000
Briketi EcoStove Size 2	Green Bio Energy	(w/h): 25/23.5cm Fuel: Charcoal, Biomass, Briquettes/pellets	19,000	26,000
Briketi EcoStove Size 3	Green Bio Energy	(w/h): 29/26cm Fuel: Charcoal, Biomass, Briquettes/pellets	25,000	32,000
Briketi EcoStove Size 6	Green Bio Energy	(w/h): 52/39cm Fuel: Charcoal, Biomass, Briquettes/pellets	250,000	300,000
Briketi EcoStove Size 8	Green Bio Energy	(w/h): 60/43cm Fuel: Charcoal, Biomass, Briquettes/pellets	300,000	350,000

Biolite Stove	UpEnergy	(l/w/h):270/270/310mm Weight: 8.0kg Material: Metal Fuel: Biomass, Wood, Crop Residue, Dung Lifespan: 5 years Provides USB Power output	190,000	210,000
Briquettes				
1 packets of 1.2KG Briquettes	Green Bio Energy		760	900
25KG Briquette Sack	Green Bio Energy		17,500	19,500
50KG Briquette Sack	Green Bio Energy		32,000	37,500
Water Filters				
Tulip Water Filter (Table Top)	UpEnergy	Capacity: 7 liters Bacteria removal: 99.995% Turbidity removal: 99% Protozoa removal: 99%	66,000	75,000
Tiva Water Filter	Tiva		240,000	250,000
Solar Lights				
dlight S2	UltraTec	Light Runtime on full charge: 4+ hours Lifespan: 60,000 hours Mobile Charging: No	26,000	28,000
dlight S20	UltraTec	Light Runtime on full charge: 4-8 hours Lifespan: 60,000 hours Mobile Charging: No	32,000	35,000
dlight S300	UltraTec	Light Runtime on full charge: 4-16 hours Lifespan: 60,000 hours Mobile Charging: 1 usb port	95,000	100,000

Barefoot Go	Barefoot Power Uganda	Solar Power: 2.5 W Light: 1 LED (135 lumens) Light Runtime on a single day charge: 6-60 hours Battery: 3.3Ah Mobile Charging: 1 usb ports	85,000	95,000
Barefoot Connect 600	Barefoot Power Uganda	Solar Power: 6 W Light: 4 LED (75 lumens) Light Runtime on a single day charge: 6 hours Battery: 4Ah Mobile Charging: 2 usb ports	320,000	380,000
Barefoot Connect Charge	Barefoot Power Uganda	Solar Power: 20W Light: 1 LED (75 lumens) Light Runtime on a single day charge: 6 hours Battery: 5Ah Mobile Charging: 6 usb ports	320,000	380,000
Sun King Eco	Greenlight Planet	Solar Power: 500mW Light Runtime on a single day charge: 30 hours Battery: 600mAh Mobile Charging: No Brightness: 25 Lumens	29,155	35,000
Sun King Solo	Greenlight Planet	Solar Power: 700mW Light Runtime on a single day charge: 24 hours Battery: 1000mAh Mobile Charging: No Brightness: 50 Lumens	44,310	49,000
Sun King Mobile	Greenlight Planet	Solar Power: 1.5W Light Runtime on a single day charge: 36 hours Battery: 1500mAh Mobile Charging: 1 usb port Brightness: 75 Lumens	70,945	79,000

Sun King Pro All Night	Greenlight Planet	Solar Power: 2.7W Light Runtime on a single day charge: 45 hours Battery: 2800mAh Mobile Charging: 1 usb port Brightness: 100 Lumens	83,790	99,000
Sun King Pro 2	Greenlight Planet	Solar Power: 3.3W Light Runtime on a single day charge: 36 hours Battery: 3000mAh Mobile Charging: 2 usb ports Brightness: 150 Lumens	83,790	115,000
Sun King Home Value	Greenlight Planet	Solar Power: 5W Fixed Lamps: 2 (100 lumens) Potable Lamps: 1 Eco Light Runtime on a single day charge: 24 hours Battery: 4.5Ah Mobile Charging: 1 usb port	174,615	195,000
Sun King Home	Greenlight Planet	Solar Power: 6W Fixed Lamps: 3 (100 lumens) Potable Lamps: 0 Light Runtime on a single day charge: 24 hours Battery: 6Ah Mobile Charging: 1 usb port	229,460	245,000
Sun King Home Plus	Greenlight Planet	Solar Power: 6W Fixed Lamps: 3 (100 lumens) Potable Lamps: 1 Eco Light Runtime on a single day charge: 24 hours Battery: 6Ah Mobile Charging: 1 usb port	238,350	259,000

G. Budget

FUNDING		Estimated	Actual	Under/(Over)
Loans				
	Bank Loan 1			
	Bank Loan 2			
	Non Bank Loan 1	7,070,000	7,070,000	-
	Total Loans	7,070,000	7,070,000	-
Total FUNDING		7,070,000	7,070,000	-

INCOME		Estimated	Actual	Under/(Over)
Sales				
	Sales - Qtr 1 (Sept 15)	5,168,000		
	Salee - Qtr 2 (Dec 15)	15,504,000		
	Sales - Qtr 3 (Mar 16)	15,504,000		
	Sales - Qtr 4(Jun 16)	15,504,000		
	Total Sales	51,680,000	-	-
TOTAL SALES		51,680,000	-	-

Cost of Goods Sold

Starting Inventory	4,369,930	4,433,050	(63,120)
Transport for Starting Inventory (1)	90,000	86,000	4,000
Total Cost for Starting Inventory	4,459,930	4,519,050	(59,120)
Average Monthly Inventory Purchases	3,500,000		
Average Transport Cost for Monthly inventory Purchases (2)	45,000		
Average Monthly Inventory Purchases Cost	3,545,000	-	-
x Number of Months	12		
Total Monthly Inventory Purchase Cost	42,540,000	-	

TOTAL COST OF GOODS SOLD	46,999,930	4,519,050
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GROSS PROFIT	4,680,070	(4,519,050)
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EXPENSES	Estimated	Actual	Under/(Over)
Non-recurring Expenses			
Advertising for Opening (Launch of shop)	288,000	114,100	173,900
Business Cards/Stationery (100 Flyers) (3)	300,000	75,000	225,000
Decorating (Fresh Coat of Paint) (4)	27,500	-	27,500
Office Furniture/Fixtures (New shelves)	197,000	74,300	122,700
Operating Cash (Working Capital)	20,000	-	20,000
Point of Sale Hardware/Software (receipt book, invoice book, a sales record book) (5)	37,000	20,000	17,000
Signage	100,000	100,000	-
Other 1 (bulletin board)		85,000	(85,000)
Total Non-Recurring Expenses	969,500	468,400	501,100

Average Monthly Operating Expenses

Advertising (print, broadcast and Internet)	50,000		
Employee Salaries and Commissions (Yusufu's salary)	300,000		
Employee Lunch	100,000		
Loan and Credit Card Interest & Principal (6)	11,000.00		
Miscellaneous Expenses	50,000		
Travel (assuming bike available, only spend on fuel) (7)	96,000		
Total Average Monthly Operating Expenses	607,000	-	-
x Number of Months	12		
Total Monthly Operating Expenses	7,284,000	-	-
Total Expenses	8,253,500	468,400	501,100
NET INCOME	3,496,570	2,082,550	1,414,020

Exchange Rate: 1 USD for 3535 UGX

- (1) Assume transporting 18 boxes of products at a cost of 5000 UGX per box.
- (2) Assume require transport for 15 boxes every 2 months to refill supply. Boxes cost 5000 USH each for transport and 1000 UGX each for on and off loading.
- (3) Cost of Flyer at 1000 UGX each
- (4) Assume require 5 liter of paint at 17500UGX and labour for painting at 10000 UGX. Need to consult with owner of shop.
- (5) Assume sales record book costs 12000 UGX, Receipt book costs 10000USH and invoice book costs 15000 UGX
- (6) Loan of USD2000 from ENventure has 2% annual interest
- (7) Assume make 2 trips a week, each trip consuming 3 liters of fuel, to result in a total of 24 liters consumed in a month. Assume price per liter is 4000 UGX.

