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Business Plan



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Description of our Eco Inclusive Venture

Kukula Solar is an Eco Inclusive Social Venture based in Zambia. We distribute life-changing products to people who need them most: the millions living in poverty in rural Zambia. We make this possible by distributing the products through our Rent-to-Own model, allowing families living on less than \$2 a day own durable, warranted and money saving solar products. To make sure we reach the people who need the products the most, we make sure that we recruit solarpreneurs who go with the products straight to families' doorsteps, educating customers about products and providing a payment plan to fit their budget. To learn more about our Eco Inclusive social venture you can visit: www.kukulasolar.com

Value Proposition & Opportunity

Our value proposition is very unique because we help people living on less than \$2 a day transition to clean solar energy by removing the financial constraints that can make this transition challenging. Through our Rent-to-Own model, we make solar lanterns and solar home systems available to poor and low-income families at the price of kerosene they no longer need. We also partner with traditional leaders in rural communities to set up solar recharge stations to enable families, regardless of their income, to access solar lanterns and to therefore displace kerosene lamps forever. ***Kerosene lamps are unhealthy, dangerous, expensive to run and bad for the planet. Many of our products do more than produce quality lighting. For example, charging of cell phones and other devices as well as powering built-in radios.***

Products & Services

Kukula Solar offers a range of solar products to improve the lives of households in rural Zambia. In partnership with Greenlight Planet, we have continued to distribute Sun King Pro, Sun King BOOM and Sun King Home 60. Through our Rent-to-Own model we are making electricity affordable initially at a price if the kerosene no longer needed and cost-free in less than a year when the lamp is paid off.

Target Market

Kukula Solar's target market is rural communities which make up over 60% of Zambia's population. There are currently over 10 million people living in rural communities of Zambia and this number is rapidly growing. Conditions in these rural communities are unfit for people to live in. Many rural communities are not connected to grid electricity forcing people to go without, or to resort to unsafe products. Families rely on harmful kerosene for their lighting needs. ***Without electricity, these families are disconnected from their country and important news including market conditions for the produce they grow.***

Most of these families are not informed about new, better lighting alternatives. These families have no idea how these alternatives could be used to improve neither their lives nor how to access high-quality products.

Families in rural communities generally earn income from farming and therefore have highly fluctuating and seasonal earning. They have no access to credit financing that would enable them to purchase the “capital” products or appliances that they need. Consequently, these communities often opt for low-cost solutions for lighting that are poor in quality and lack a useful warranty. The companies that sell these low quality products do not provide after sales servicing.

The Need: Why we do what we do at Kukula Solar

1. **Effects of the Use of Kerosene:** Villagers buy around 5-6 liters of Kerosene per month for the purpose of lighting kerosene lamps. The kerosene lamps emit a poor quality of light. One kerosene lamp is not enough to light up the entire home, keeping parts of the home in darkness. There is existing danger of burning kerosene lamps overturning and drinking of kerosene by children. This has even been responsible for deaths in some cases.
2. **Education:** A child's after school work is not seen as a priority when light is needed to feed the family. The lack of electricity and light and the high costs of kerosene enable most households to afford only one lamp. This lamp is used for cooking and other household chores. As a result students are unable to study post sunset, which in turn impacts academic results and leads students dropping out of school.
3. **Livelihood:** Lack of light results in the loss of productive working hours as the villagers are forced to stop work and return at dusk. Shopkeepers find it difficult to cater to customer requirements after sunset due to lack of adequate lighting in the shop. Farmers are unable to prevent wild animals and stray cattle from encroaching fields during the night due to the inability to survey these fields in the dark. This results in a loss of agricultural productivity, in turn hampering their income.
4. **Health:** Due to inadequate light, villagers end up inadvertently consuming a number of small insects and flies while having their meals which result in them suffering from a number of illnesses. There have also been cases of villagers being bitten by snakes due to lack of light as they walk outdoors for various purposes.
5. **Environment:** Kerosene lanterns emit high level of CO₂ gases. The use of one kerosene lamp emits enough CO₂ a year to affect the environment. In a village of 100 households, if each household used a single kerosene lantern for a year, the village is emitting 500 tonnes of CO₂ per annum from their lanterns alone.
6. **Social Security:** Women in these villages are required to leave their homes post sunset for a host of reasons including sanitation, water collection among other chores. There is a great deal of concern due to the inadequate sense of security. A mere kerosene lantern does not suffice in situations where one's safety is in question.

Social, Environmental & Economic Impacts

Since we founded Kukula Solar, we have had tremendous impact socially, environmentally and economically. The most notable impacts are:

1. Social Impact:

Kukula Solar is on a mission to distribute 1 Million solar lanterns to women and girls living on less than \$2 a day. These women and girls use kerosene lamps which are not only expensive but very unhealthy for them and their unborn babies. Unfortunately, sub-standard battery torches are also common in these communities but these are every expensive, not bright

enough and not warranted. Kukula Solar partners only with manufacturers such as Greenlight Planet, who meet the World Bank Lighting Africa standards for solar products. Eliminate kerosene smoke which causes lung and eye diseases. Eliminate open flames that cause burns and fatal house fires.

Since we started our operations, we have distributed over 3,000 solar lanterns to women and girls in hard-to-reach communities of Eastern Province. The distributed solar lanterns have saved families enough money to start vegetable gardens, to acquire domestic animals for rearing, and even to buy shoes and uniforms for their children. Women have also been employed as our solarpreneurs, giving them extra income and also helping them to gain self-confidence. The 3,000 plus solar lanterns sold to date, save more than 300,000 litres of kerosene every year and save over \$450,000 for these communities every year!

2. Environmental Impact

We are on a mission to reduce kerosene usage by roughly 10 million liters each year. Kerosene contributes to indoor air pollution and associated respiratory diseases. The environmental effect of carbon dioxide released to the atmosphere is climate change. The kerosene that we will eliminate corresponds to over 25,000 tonnes of CO₂ saved from the atmosphere every year. By achieving our target, we are helping reduce CO₂ emission and the damage it causes our planet. We will be protecting our environment for the future generations to come.

By displacing kerosene lamps and distributing over 3,000 solar lanterns, we have helped save more than 7,500 tonnes of CO₂ emissions from our environment. This has contributed to reducing the effect of climate change. We are working towards greatly increasing our contribution by over a factor of 30 to better slow down climate change. We hope the example we are setting will inspire other communities to use sustainable lighting technologies.

3. Economic Impact

Kukula Solar seeks to grow its network in all 10 provinces of Zambia and employ 500 youths and women as solarpreneurs to help distribute solar lanterns to last-mile communities. This will help our social venture to achieve its target of distributing 1 million solar lanterns by 2030 and help increase the social venture revenue. In the community, 500 jobs will be created, enabling women and youths to earn an acceptable income, plan for their future and invest in their communities.

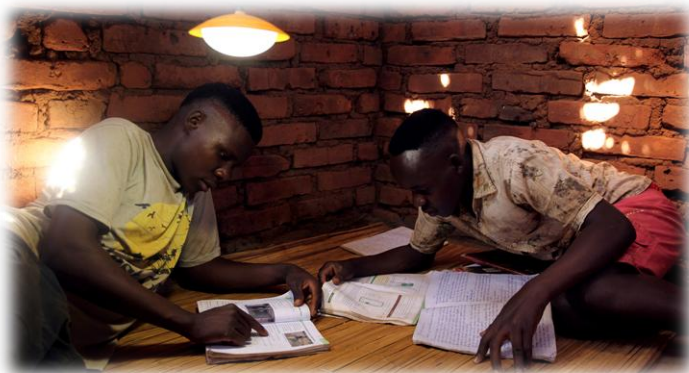
Since we started our operations, we have recruited and trained 10 solarpreneurs who have gone on to distribute over 3,000 solar lanterns. They have earned a total of over \$30,000 in salaries. Many of the youths have used their earned money to pay for their college education, to improve their nutrition and health as well as to start businesses in their villages.

Achievement & Milestones

Kukula Solar is on a mission to distribute 1 Million solar lanterns by 2030, recruit and train 500 women and youths as solarpreneurs, save families over \$15 Million which they can invest in their local economy, nutrition, education and build a thriving community and also save over 250,000 tonnes of CO2 emission every year to help reduce the effect of climate change.

To date, since we launched our social venture, we have achieved the following:

1. We have distributed over 3,100 solar lanterns
2. Saved families over \$450,000 every year by simply swicthing from kerosene lamps to our solar products
3. Have recruited and trained 10 solarpreneuers
4. Saved over 200,000 litres of kerosene every year
5. Saved over 750,000 Kilograms of CO2 emissions.



Budget for 10,000 Solar Lamps to 10 Villages of Eastern Province

Category	Description	Units Required	Cost Per Unit	Total
A. Infrastructure				
A1.				
B. Equipment purchases				
B1.				
C. Working Capital/Input				
C1.	Purchase of Solar lamps	1,000	\$40	\$40,000
D. Training				
D1.	Training for Solarpreneurs	4	300	\$1,200
D2.	Training for Community Members	8	200	\$1,600
D3.	Training of Traditional, CIVIC and Religious Leaders	8	200	\$1,600
E. Technical assistance				
E1.				
F. Administrative Support				
F1	Transport Cost to Project sites	12	200	\$2,400
F2	Utilities	12	250	\$3,000
F3	Village Road Shows	2	100	\$200
TOTAL				\$50,000