

SomLite

Energy for the Overlooked

September 20, 2020

GRANT APPLICATION

Rural Electrification in Eastern Somaliland

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I. INTRODUCTION

The lack of affordable, reliable, and accessible electricity in Somaliland is a significant social problem that we are solving. Electricity prices in Somaliland are among the highest in the world, a kilowatt of electricity in Somaliland can cost as much as US\$0.80 an hour, ten times more expensive than neighboring Ethiopia. Somaliland's energy sector was completely destroyed after the civil war. In urban areas power is produced by privately owned power generators and it is estimated that residents spend 30%¹ of their monthly income on their monthly electricity bills. This is because 85% of the electricity is produced by using imported diesel, inefficient power generators, and a poor distribution network with an estimated 40% loss².

In rural areas electricity is non-existent because rural market is not attractive to the private producers. Therefore, families spend up to one quarter of their income to light their houses with kerosene, rechargeable batteries, and low-quality solar products . In order to address rural energy

¹ <https://shuraako.org/publications/powering-progress-potential-renewable-energy-somalia>

² <https://assets.publishing.service.gov.uk/media/591d707de5274a5e4e000044/somaliland-pro-bono-case-study-final.pdf>

crisis, SomLite was founded in January 2018. SomLite is a social enterprise that its mission is to make high-quality solar lanterns and solar kits accessible and affordable for rural communities in Somaliland.

SomLite leverages local and international platforms to distribute and finance off-grid solar products sourced from proven manufactures including Greenlight Planet³. SomLite has introduced a financing model that utilizes a local mobile money technology to allow for incremental payments. We connected our local mobile money platform with Angaza designs' Pay-As-You-Go platform. Angaza⁴ is a San Francisco based company that provides a software platform that tracks payments and active solar units when payments are made. This innovation has unleashed the purchasing power of many villagers who would have been deterred by the upfront cost of a solar unit.



Figure 1: Angaza Design's Hub page & mobile app

In addition to utilizing existing technology to address local issues, we have developed a market entry strategy and partnered with local community sales agents to lower operating cost and de-risk the remote and off-grid market. Local community sales agents have the local market knowledge and, with our provision of market strategy and technical knowhow, together we increased market penetration. Our local sales agents have incentive to maintain a good relationship with SomLite, and therefore they influence customers to repay on a timely manner. This helps us maintain decent cash flow and achieve a default rate of less than 6%.



Figure 2: SomLite team using Angaza software

³ <https://www.greenlightplanet.com/>

⁴ <https://www.angaza.com/>

II. EXPANSION PLAN

SomLite, with the support of Oxfam's Youth-led Innovation Challenge grant money, will expand to the Eastern Regions of Somaliland. Around 400 units of GreenLight Planet's EB PRO2 will be co-financed by SomLite and grant money to launch distributions in two different locations in eastern regions. The two (2) locations identified as a starting distribution points in the east are Burao and Erigavo cities. These are urban locations that connects many villages surrounding them.

III. PROJECT IMPLEMENTATION

a) Product Procurement

We will place order with GreenLight Planet's office in Shenzhen, China and coordinate delivery to the Berbera Port. Usually it takes about a week for the supplier to prepare the order after they receive payment, and 2 to 3 days for our shipper to collect products from GreenLight Planet warehouse in Shenzhen. While the order is being prepared and shipped, SomLite will simultaneously prepare customs documents to ensure smooth collection of products from customs.

b) Sales Agent Identification

SomLite's Head of Operations will lead a community outreach to identify community-based sales agents in the two locations identified. The process of identifying sales agents will be the same as we do for our existing distribution centers. Our main criteria for a sales agent, is to have an existing retail shop within that community. We prefer someone with a retail shop because we can use their space to display and store our products so that we don't have to rent a new location. Additionally, someone with an existing retail shop is already familiar with the community and have a level of business experience.

c) Product Kiosk and Company SIM card Provision

Once the sales agents are identified and products are delivered to our warehouse, SomLite's kiosks for product storage will be installed in agent's retail shops. We will also purchase ZAAD SIM Cards specific to SomLite for our new sales agents to collect payments via Mobile Money (ZAAD Services). The SIM cards are linked directly to SomLite's parent ZAAD merchant account. The sales agent's ZAAD account can only receive payments and view balances. It is not

possible to transfer any funds electronically out of the account in either direction. Only SomLit's parent ZAAD account can pull any local agent ZAAD account balance directly for deposit.

d) Product Delivery, Training and Commissions

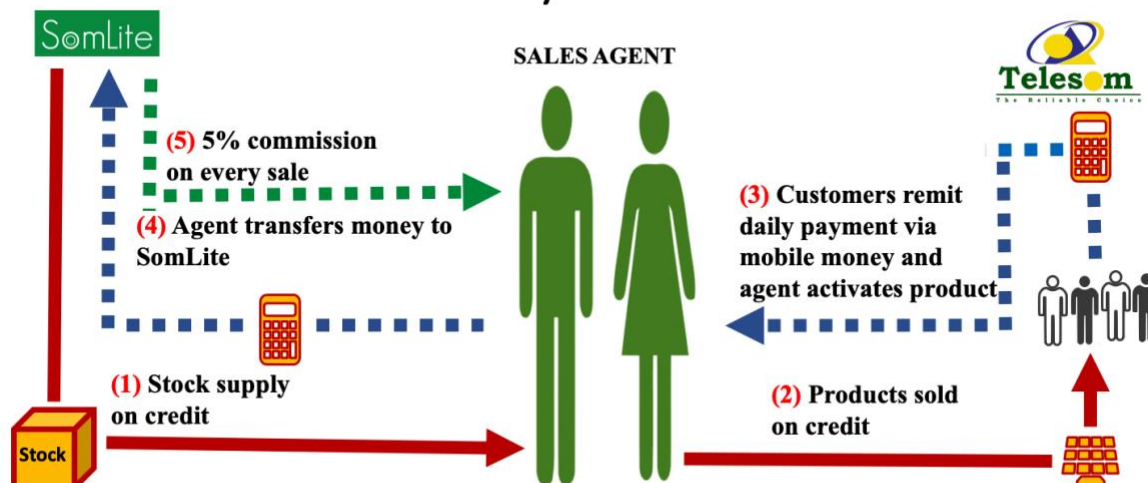
After the kiosks are installed in sales-agent's retail shops and SomLite's special ZAAD SIM cards are provided to sales agents, SomLite will supply products to sales agents on six months credit plan. Sales agents will sell products to customers on 6-month installment plans by using ZAAD platform as payment collection. After the sale, the customer makes a daily payment each night to SomLite's local sales agent ZAAD account equal to the remaining balance divided by the number of days over the ensuing six months. The customer has the option of reducing the ongoing payment by making a larger down payment.

A 5% commission is given to local agents. The agents earn this commission only over time as payments are successfully collected, until the product is fully paid-off by the customer. In this way, we have a mechanism to incentivize repayment. SomLite pays commission on a daily basis to ensure that sales agents are motivated to collect payments every day. Agents earn 5% of payments they collected from each customer per night.



Figure 3: SomLite team delivering product kiosk to agent's location

How Payment Plan Works



e) Project Implementation Timeline

Depending on how the grant timeline, the project timeline will be as proposed below.

Project Activities & Timeline	Oct. 2020	Nov. 2020	Dec. 2020	Jan. 2021
Project Initiation meetings				
Project Procurements				
Sales Agent Identification				
Project Kiosk and SIM Card provisions				
Training and Product delivery				
Launching sales				

IV. PROJECT FINANCES

The project will be co-financed by Brandeis's Spark and SomLite. SomLite will contribute US\$5000 and Brandeis Spark will contribute US\$ 5000. In this section we provided total project, and two years of sales and revenue projection.

a) Funding Contribution

Contributor	Amount (USD)
SomLite	US\$ 1,384
Oxfam – Youth-led Innovation grant	US\$ 10,000
Total Project Cost	US\$ 11,384

b) Project Cost Breakdown

Budgeted Expenses			
Description	Price	Quantity	Total
EQUIPMENT PURCHASES			
PRO EB	\$ 22.05	400.00	\$ 8,820.00
Product Kiosk	\$ 30.00	2.00	\$ 60.00
<i>Capital Equipment Purchases Subtotal</i>			\$ 8,880.00
PROJECT SUPPLIES (List category & describe)			
International Shipment	\$ 3.00	400.00	\$ 1,200.00
Customs Clearance	\$ 1.00	400.00	\$ 400.00
Product site delivery cost	\$ 0.50	350.00	\$ 175.00
Sales Agent Special SIM cards	\$ 2.00	2.00	\$ 4.00
Marketing	\$ 0.75	400.00	\$ 300.00
<i>Project Supplies Subtotal</i>			\$ 2,104.00
OTHER DIRECT COSTS (List & describe)			
Miscellaneous	\$ 1.00	400.00	\$ 400.00
TOTAL EXPENSES			\$11,384

c) Two-Year's Sales & Revenue Projections

Sales & Revenue Projection	Year 1		Year 2		Total
	Quarter 1	Quarter 2	Quarter 3	Quarter 4	
Project Sales (units)	330	450	560	630	1970
Price	\$ 60	\$ 60	\$ 60	\$ 60	
Total Upfront Revenue	\$ 19,800	\$ 27,000	\$ 33,600	\$ 37,800	\$ 118,200
Total Incremental Revenue	\$ 10,545	\$ 22,800	\$ 29,355	\$ 34,200	\$ 96,900

Detailed sales and revenue projections are available on the link provided in section 26 of the online application.

V. OUT IMPACT

a) Socio-Economic Impact

Our annual social impact assessments show that access to solar lighting significantly improves quality of life in rural villages. After one year of our operations, Abaarso Tech University (a local university) and students from HEC Paris (the prestigious French business school) evaluated the social impact of our program and found it had measurable and positive impact on the communities served. Our 4,000 distributed solar lamps allow small businesses to open two extra hours after sundown, young pupils to study an extra two and half hours during the night time, and household income has increased by an average of \$12.50 per month.



Figure 4: SomLite team, students from HEC Paris and Abaarso Tech during Social Impact Assessment

b) Environmental Impact

Additionally, from a global perspective, SomLite is also actively addressing the climate change by reducing the fossil fuel consumption. A kerosene lamp producing 37 lumens for 4 hours per day uses 3 liters / 0.79 gallons of kerosene per month, for 36 liters / 9.5 gallons per year. The EIA estimates that kerosene releases 9.8 kg of CO₂ per gallon of kerosene. Therefore, the average lamp releases 9.5 gallons * 9.8 kg/gallon or 93.1 kg of CO₂ per year. Assuming no adjustment for increased luminance, a single solar lantern replaces a single kerosene lamp offsets 93.1 kg of CO₂ per year. In other words, assuming one solar light replaces one kerosene lantern and one kerosene lantern burn 36 liters per year, our 4,000 distributed solar lamps displace 144,000 liters of CO₂ use per year. Our expansion effort will continue to maximize our social, economic, and environmental impacts

VI. LEADERSHIP

SomLite has a diverse, ambitious, and committed leadership that is leading our mission of bring clean and affordable energy to those who need it the most in Somaliland. For more information about our management and advisory board, please visit our website:

<https://www.somlite.org/leadership>



Nadira Ahmed

Co-Founder & Executive Director

Nadira Mohamoud oversees SomLite's overall operations and activities. As an Executive Director, she provides leadership and strategic direction to SomLite. Before her work at SomLite, Nadira worked at various organizations in both the public and private sectors. Nadira has an MA in Applied Economics at Jiangsu University in Zhenjiang, China. And a BA in Economics at Admass University in Hargeisa, Somaliland.



Shucayb Abdillahi

Co-Founder & Operations Director

Shucayb Abdillahi leads SomLite's operations and sales campaigns. He works to expand the company's customer base by identifying new markets across Somaliland. Prior to joining SomLite, Shucayb gained in-depth experience in the business sector during his work with Somaliland Beverage Industry (Coca Cola's Somaliland franchise). He utilizes his knowledge of local markets to connect with clients from urban, peri-urban, and rural communities and build SomLite's regional sales networks.



Naima Hassan
Communications Manager

Naima Hassan manages SomLite's communications. She is responsible for managing relationships with suppliers and customers. Before joining SomLite, Naima worked in the hospitality industry where she served customer relations manager at several companies. Naima brings extensive customer relations management skills to SomLite.



Abdishakur Ahmed
Co-Founder and Business Development Director

Abdishakur Ahmed leads SomLite's business development. He has many years of experience working in the energy sector and other infrastructure projects in the Horn of Africa. Abdishakur graduated with a B.A. in Finance from Abaarso Tech University in Hargeisa, Somaliland. And he has an MA in Sustainable International Development with a focus on Renewable Energy Development at Brandeis University in Massachusetts, USA.

Conclusion Statement

Thank you very much for your time and considering our application. We are looking forward to discussing with you about our work. And hopefully we will have the opportunity to partner with you on address electricity crisis in rural parts of Somaliland.

Sincerely

Nadira Mohamoud
Co-Founder & Executive Director