

# Sector Strategy: Renewable Energy

## Context

---

The following challenges and opportunities for small solar emerged through SOBA market research:

### **Business Enabling Environment**

Solar market in Sierra Leone is still in its infancy. To strengthen and grow the sector and elevate its comparative attractiveness with competing sub-regional and regional markets, a number of key policy and regulatory changes were required – namely with respect to taxes.

In recognition of this, the Government of Sierra Leone (GoSL) entered into partnership with the UK Government through the Energy Arica Compact (May 2016) and subsequently launched the “Sierra Leone Energy Revolution.” Key outcomes of these efforts include:

#### **Policy & Regulations**

GoSL extended fiscal concessions to quality solar importers - those bearing Lighting Africa, IEC certifications. Concessions included the elimination of the import duty waiver, the latter incorporated into Sierra Leone’s Finance Act 2016, while Sierra Leone’s Finance Act 2017 addressed elimination of GST (sales tax) on quality solar products. Both Acts have been ratified. To follow, the design and implementation of policies must be streamlined, coordinated, and timely implemented in order to ensure a favorable environment that reduces actual costs and perceived risk that are necessary for attracting more business and investment throughout Sierra Leone.

#### **Industry Advocacy**

Sierra Leone’s first-ever renewable energy private sector trade and industry association formed at the onset of regulatory reform and Compact discussions – Renewable Energy Association of Sierra Leone (REASL). As an association focused on advocacy, REASL has the potential to give voice to businesses in an emerging sector and has, to date, won the attention and support of GoSL officials. However, as a young association, continued professionalization and ongoing positioning will be required to demonstrate value and maintain influence.

#### **Limited Market Information**

Alongside limited capacity, the private sector is also plagued by a dearth of timely and relevant market information to guide targeted business operations and investments.

#### **Nascent Mobile Sector**

Advanced telecommunications, including mobile and payment infrastructure, were critical to the growth of solar markets in other regions. Mobile payment infrastructure enables access to pay-as-you-go (PAYGO) services and payment platforms that improve affordability for quality, solar products at scale.

Sierra Leone’s mobile and mobile payments sector is in its infancy. There are few prominent telecommunication providers, notably Airtel (recently acquired by Orange), Africell, Sierra Tel, and Splash. Airtel boasts the largest customer base with nearly 373,000 subscribers. Airtel also offers services for electricity, television, fuel station, and supermarket payments. Africell also offers payment services for salaries, electricity, and school fees. However, because Africell’s system launched recently, it is still largely untested and will need time to work out service issues and to grow integrations. Overall, consistent payment processing challenges and periodic systems failures result in service access delays or cancellations, loss of payment,

and/or repeat transactions (if credited) that collectively dissuade mobile money use. However, in order to offer PAYG options to customers at scale, improved mobile and mobile payments infrastructure will be required.

## Consumer Energy Market

### Energy Expenditures

On average, Sierra Leonean consumers spend SLL 26,000 (USD 3.4) a month on batteries for torchlights locally known as ‘Chinese Lights.’ Compounding costs, the lights themselves are typically replaced on a monthly basis. On average, consumers spend SLL 20,000 (USD 2.7) for new torchlights— amounting to SLL 240,000 (USD 32) per year. For low-income consumers, this can represent more than a third of their disposable income spent toward non-cooking energy expenditures. Consumers could replace poor quality torchlights and batteries with quality, certified solar, and, after just three months, consumers would begin to accrue savings.

### Consumer Awareness

However, quality and affordable solar products are only beginning to enter the market in force. Consumer awareness of the benefits of uptake and the availability of pico and solar home systems is still low. Moreover, the Sierra Leone market is filled with poor or unknown quality solar products imported by many local retailers. The persistence of these sub-standard products on the local market often undermines consumer confidence in solar products more broadly and results in ‘market spoilage’.

Those solar distributors that offer certified quality solar (REASL members, for example) typically also provide 2-year guarantees to consumers to try to differentiate their products. Guarantees are also new to the market; more time will be needed for consumer education and trust.

## Renewable Energy Businesses

### Low Firm Capacity

At the onset of the Sierra Leone Energy Revolution activity, there were only a few solar distributors based in Sierra Leone who imported certified (Lighting Africa, IEC) solar products. Most had reached the market by distributing to or in collaboration with NGOs.

The number of distributors of quality solar products is on the rise. However, these distributors are all challenged by limited experience, capital, and capacity. Most lack strong financial and business management practice, which prevents their businesses from growing. Moreover, there is a shortage of a skilled workforce and professional services required to accelerate solar business growth, particularly in terms of maintenance, distribution, and marketing.

### Limited Professional Services

Business support functions such as marketing service providers are in their infancy in Sierra Leone. Those catering to the needs and budgets of small and growing businesses (SGBs) are even more limited. Often, such firms cater to corporates, government, and NGOs – that offer larger contracts and higher margins. Firms often overlook the significant opportunity that exists to service SGBs. A myriad of factors, including: 1) limited understanding of the needs and opportunities of this market; 2) challenges in right-sizing business models to cater to and service this growing sector; and 3) perceived high-risk of this market, all limit willingness to target SGBs – including those in the renewable energy market.

### Financial Services

Most businesses in Sierra Leone are small, poorly capitalized, and limited in capacity – including solar distribution businesses. However, in order to grow, solar companies need both import large volumes of

product while managing long-term customer credit. In other words, solar distributors require significant working capital – and patient capital – in order to grow.

Unfortunately, financing options are also quite limited for businesses in Sierra Leone.

- Hard currency loans are challenged by significant inflation.
- Local currency loans from Sierra Leonean commercial banks, especially for SGBs, often comes at high interest rates and for just short periods. Banks require significant collateral. They also require strong and consistent performance track record over several years, making it difficult for start-ups to qualify for loans.
- Sierra Leone doesn't attract investors easily. Sierra Leone is a small market, with just under seven million people. With a challenging economic track record that includes a prolonged civil war and Ebola crises, few investors consider Sierra Leone a target country.
- International solar suppliers are unwilling to provide trade financing. At best, they may offer a percentage payment on an order and a final payment on arrival in port.

Consumer financing is equally limited. Recently, microfinance institutions (MFIs) have started to engage solar distributors with limited motivation and willingness to develop tailored lending mechanisms to increase affordability for solar products. PAYGO platforms could be an alternative solution to facilitate customer repayment options, and albeit nascent, the market is trending in this direction despite challenges in the mobile money ecosystem.

### Investment Interest

Investors consider Sierra Leone a high-risk country with limited attractiveness. It is a small market, boasting just under seven million people, most with limited purchasing power. High inflation and the recent Ebola outbreak have further undermined investor confidence.

High-quality international suppliers often highlight the comparative attractiveness of Ghana and Ivory Coast boasting populations of more than 25 and 22 million respectively and stable governance and macroeconomic conditions. Though the Sierra Leonean market could be well-served via regional hubs established in Ghana and Ivory Coast one day, suppliers suggest decade(s)-long expansion plans that would leave Sierra Leone in the dark for years to come.

## Strategy

---

To accelerate access and uptake of **affordable** renewable energy options through improved business and market performance, SOBA prioritizes actions and investments across the following objectives:

**Objective 1: Facilitate the development a *competitive business enabling environment* via implementation of energy reforms outlined in the Sierra Leone Energy Access Campaign Compact.**

### 1- Fiscal Incentives

- Cement fiscal incentives (duty and GST waiver) outlined in Energy Africa Compact (2016 and 2017 Sierra Leone Finance Acts)

- Improve and streamline coordination surrounding implementation of the fiscal incentives, creating a unified roadmap and strategy for the implementation of the duty waiver and GST (sales tax) exemption, clearly defining roles and responsibilities among stakeholders involved.

## 2- REASL Capacity Development

- Ensure REASL is self-sustaining and strategic, with a sound and visible value proposition for actors in the solar market that facilitates public-private dialogue and regulatory advocacy on behalf of renewable energy industry.
- Bolster REASL-GoSL engagement.

## Objective 2: Improve solar uptake, growing *access to and affordability of* quality household solar products through improved business performance.

### 1- Identify and collaborate with well-positioned and motivated local solar distributors to redefine competitive norms and restructure markets

- Risk capital and business advisory support for local market actors to design, trial and scale *innovative and cost-effective route-to-market strategies*.
- Targeted *marketing and sales strategies* to increase brand and product awareness, and accelerate demand from and sales to low-income consumers.
- Strengthen business and financial management practices that underpin growth.

### 2- Strengthen and foster linkages between solar firms and business support service providers (mobile, transport, marketing)

- *Pay-as-you-go (PAYGO) Landscape*.
  - Complete research to elucidate best practices in the PAYGO ecosystem in sub-Saharan Africa while assessing the PAYGO landscape in Sierra Leone (i.e., mobile money penetration, willingness of TELCOs and mobile money operators to collaborate with solar solution providers etc.)
  - Showcase opportunities and entry-points for collaboration between mobile money operators and solar companies
  - Provide guidance to solar businesses on consumer financing structures/mechanisms for low income consumers, particularly through PAYG and mobile mechanisms.
- *Transport and Logistics*: Outline the business opportunity for service offering and/or the development of a new business to coordinate and consolidate smaller volume shipping.
- *Marketing for Base-of-Pyramid Energy Consumers*:
  - Inform local distributor and marketing firm strategies and tactics best aimed at increasing consumer uptake among base-of-pyramid markets while optimizing customer acquisition costs.
  - Foster mutually-beneficial partnerships between marketing service providers and solar distributors well-positioning marketing providers to: 1) Offer nuanced insights on high-priority solar customers; 2) Design tailored strategies to reach base-of-pyramid consumers; 3) Provide data analytics to improve firms' understanding of marketing return on investment; and 4) Calibrate marketing firms' service offerings to fit budgets of small and growing businesses

Objective 3: Define *investment case and roadmap* to attract investment into Sierra Leone, leveraging a sub-regional, Manu River Union<sup>1</sup>, strategy.

1. **Demonstrate investment opportunity in the MRU sub-region**, to attract large-scale solar suppliers and smaller, hungrier competitors, alike.

## Interventions

---

### Objective 1: Business Enabling Environment

***Policy Intervention: Streamline implementation of fiscal incentives as outlined in the Energy Africa Compact and extended in the 2016 and 2017 Finance Acts (legalizing tax exemption for solar)***

- List of solar energy products supplied to relevant ministries, departments and agencies (MDAs) for approval and input in the Automated System for Customs Data (ASYCUDA) in preparation for implementation of 0% GST (sales tax) on imports
- Evidence-base case built outlining developmental benefits associated with fiscal incentives spanning increased corporate tax base; improved investment ecosystem; and larger addressable market size as a result of increased affordability
- Hold a Compact Reform & Finance Act Implementation Forum the purpose of which will be to: 1) Clarify roles and responsibilities of import and clearing processes for all relevant stakeholders; 2) Map a clear path for importation processes following the approval of the Finance Act 2017. The result of this forum will be a unified roadmap and strategy for the implementation of the duty waiver and GST exemption, clearly defining roles and responsibilities among the MDAs.

***REASL Intervention: REASL is a self-sustaining and strategic association that gives voice to solar industry actors through public-private dialogue and regulatory advocacy***

- Undertake organisational and capacity development of the Association, contributing to REASL's organisational design, outlook, and overall capacity on behalf of its membership.
- Enable REASL members to define REASL's value proposition
- Support the Association to develop and implement a communications strategy, creating visibility and buy-in to their vision
- Facilitate the process of designing and establishing a Memorandum of Understanding between REASL and the Ministry of Energy.

### Objective 2: Private Sector Strengthening to improve quality solar access, affordability, and uptake

***Distribution Intervention: Design, trial and scale commercially-viable, replicable and scalable route-to-market strategies for low-cost solar products in Sierra Leone***

---

<sup>1</sup> The Mano River Union is an inter-governmental institution comprised of Sierra Leone, Liberia, Guinea, and recent joiner, Ivory Coast

- *Upselling/Shortened Repayment:* Trial, with a well-positioned, motivated partner, upselling and shortened repayment tactics poised to build a creditworthy customer base with attractive repayment rates and yield high sales volumes leveraging PAYGO platforms improving affordability for low-income consumers (reference Easy Solar Investment Phase 1 Partnership).
- *Institutional Sales:* Design and trial route-to-market strategies that involve institutional sales to corporates, banks and other similar institutions for larger solar home systems leveraging employee asset financing extended by institutions to improve affordability for low- and middle-income households (reference BBOX Partnership Investment Phase 1).
- *Retailer Network:* Collaborate with resellers of quality solar products to design and trial route-to-market strategies that effectively convert and operationalize retailer networks comprised of lighting and electrical shops throughout Sierra Leone (market research pointed to high conversion potential). Test network capacity to diversify retailer portfolios and income streams and increase the reach of quality solar products toward low-income consumers (reference Energy Efficient Solutions Investment Phase 1 Partnership).
- *Productive use products:* Determine opportunities, including products and avenues, through which to sell to commercial clients through diversification of solar portfolio to include productive use, charging stations leveraging PAYGO clientele and customer creditworthiness established therein (reference Easy Solar Investment Phase 2 Partnership).

***Marketing Interventions: Determine commercially-viable marketing strategies and approaches that grow low-cost solar product uptake for various consumer segments***

- *Brand awareness:* Design above-the-line marketing campaigns via radio, TV, and social media, to establish product and brand awareness of high-quality, solar products raising awareness of warranty and after-sales service offers (reference BBOX Investment Phase 1 Partnership).
- *Above- vs. below-the-line marketing:* Determine optimal marketing mix to effectively support wider geographic reach / company expansion while assessing effectiveness of distinct tactics, including murals in highly trafficked areas, radio, local newspaper vs. community demonstration, door-to-door, referral rewards and special promotions improve return on marketing investment (reference Easy Solar Investment Phase 2 Partnership).
- *Below-the-line promotions:* Trial a mix of marketing tactics and incentive structures including night promotions and solar product demonstrations to promote and attract potential retailers as resellers of quality, household solar products (reference Energy Efficient Solutions Investment Phase 1 Partnership).
- *Engagement and strengthening of marketing service providers*
  - Identify and support motivated local marketing firms with an interest in diversifying their portfolio to service small and growing businesses starting with Sierra Leone’s growing renewable energy sector. Provide firms with technical and advisory support spanning: 1) marketing and sales expert review and guidance; 2) provision of solar marketing information beyond the research findings as available and relevant to improve understanding of solar value proposition; 3) facilitate linkages with relevant solar market actors; 4) supporting firms to better understand household solar product specifications and offerings

- Collaborate with marketing firms in: 1) developing tailored marketing solutions, based on solar marketing research, to accelerate demand, increase uptake, and reduce customer acquisition costs for household solar products; 2) engaging with local solar distributors to demonstrate the value of investing in, adopting, and trialling developed marketing solutions; 3) fostering long-term collaborations between marketing providers and solar firms in supporting solar companies to implement tactics emerging from marketing research findings and track marketing return on investment.

***Transport and Logistics Intervention: Assess opportunities for shared importation of quality solar products via the Shared Container Model practice***

- Assess the challenges and gaps in existing import practices employed by solar companies
- Outline the business opportunity for service offering and/or the development of a new business to coordinate and consolidate smaller volume shipping via the Share Container Model
- Uncover opportunities and appetite to employ Shared Container Model including via REASL, existing transport/logistics firms, and / or a separate business entity
- Provide hands-on advisory support to firms to coordinate and operationalize Shared Container Model

***PAYGO/Mobile Money Intervention: Trial mobile PAYGO instruments to facilitate customer repayment and to improve affordability for solar***

- Assess, analyze, and showcase successes and failings of previous efforts for development of PAYGO mechanism/platforms for solar products in Sierra Leone.
- Establish a business case for mobile money operator and solar company collaboration including via showcasing best practices of successful solar companies/distributors to increase their use of mobile money
- Delineate and showcase entry-points and partnership opportunities that serve the larger solar community including with guidance on PAYGO integration and application

**Objective 3: Attract investment to Sierra Leone**

***Sub-regional, Manu River Union, Investment Roadmap:***

- Develop a sub-regional investment roadmap and implementation strategy that will support the acceleration of renewable energy policy reform, cross-border trade, and wide investment that would attract international suppliers and investors to the sub-region and through Sierra Leone
- Partner with complementary and well-positioned Energy Revolution partners, such as Africa Governance Initiative, Rocky Mountain Institute, and GiZ to identify the process of stakeholder engagement required to develop the roadmap; define follow-on recommendations for operationalizing the roadmap moving ahead, including identifying key implementing actors/stakeholders; and identifying key indicators against which progress should be measured.

***Targeted investor outreach:***

- Promote high potential, investment ready firms – showcasing successful investment to date.
- Engage a wide range of international suppliers that offer high-quality, certified solar products, such as M-Kopa, Greenlight Planet, and Off-grid Electric, as well as smaller, hungrier competitors, alike, and renewable energy investors pitching the solar investment opportunity in Sierra Leone via the sub-regional business case.
- Engage investors, such as Acumen and Cordaid, to encourage investment in the sector.