

# Ethiopia

## Reaching out to Rural End-Users

Despite the impressive grid expansion in Ethiopia to date, the percentage of electrified households remains low at only about 33%. The Government's recently launched National Electrification Program envisions that by 2025, 65% of the population will be connected to the grid as they place a strong emphasis on scaling up connections in areas within short-term reach of the grid.

The other 35% – or around 7.7 million households – will need an interim off-grid solution while waiting for grid expansion, or even a permanent one where appropriate, such as in very remote areas where grid access will remain too costly and logistically challenging even in the long term.

### **STATISTICS & OUR IMPACT (JULY 2013 - JUNE 2018)**

## Population

**102.4**

Million

## Per Capita GNI

**660**

USD

## Electricity Access Rate

**12.2%**

Rural

**92%**

Urban

**27.7%**

National

**People Impacted<sup>1</sup>****11.4**

Million

**Quality-Verified Products Sold****2.2**

Million

**GHG Emissions Avoided****230**

Thousand Tons

**1**PEOPLE MEETING THEIR BASIC ELECTRICITY NEEDS AS PER THE MULTI-TIER FRAMEWORK**VIEW PRODUCTS** >

Without access to quality-verified off-grid lighting and energy products, these unconnected families are likely to continue to rely on hazardous lighting options such as kerosene lamps, firewood, and candles. A 2013 Lighting Africa Market Intelligence report found that over 85% of rural households rely on fuel-based light sources, predominantly kerosene, the fumes of which can cause serious health problems and damage to the environment.

## Mapping the Market & Supporting Businesses

To support alternative lighting and energy sources for the off-grid population, the Lighting Africa program began working in Ethiopia in September 2015 to mobilize the private sector to create markets for clean and affordable lighting products.

The Ethiopia market has the potential to quickly ramp up access, particularly if the public and private sectors can work together to support off-grid solutions in the market. The Lighting Africa/Ethiopia program is working closely with the government and the private sector to create sustainable off-grid energy supply.

–Aster Mihret Zwedie, Program Manager, Lighting Africa – Ethiopia

The Lighting Africa/Ethiopia program is funded by various donors including the Scaling-Up Renewable Energy Program (SREP) of the Climate Investment Funds, the Energy Sector Management Assistance Program (ESMAP), Canada, Italia and others, and was developed in conjunction with Ethiopia's government through its Ministry of Water, Irrigation and Electricity (MoWIE), and other partners. Key target groups include low-income, rural households and micro-businesses. To date, the program has provided valuable insights through market intelligence reports, supporting both existing players and new market entrants.

### Two Agencies – One Goal

Our program team in Ethiopia comprises members from both the World Bank and IFC, who's different areas of expertise complement each other. The overall joint goal of the Lighting Africa/ Ethiopia program is to accelerate the

development of off-grid solar lighting and energy markets by:

- **Improving the enabling environment** for the off-grid sector by adopting national quality standards and implementing the quality assurance market infrastructure to mitigate market spoilage from inferior solar products. In January 2016 a mandatory Ethiopian standard (CES 140), based on the Lighting Global quality assurance framework, was adopted covering off-grid solar lighting products. We are currently working with a number of government agencies to support the implementation of CES 140.
- **Supporting the scale-up and replication** of high potential businesses by providing targeted business development services and facilitating access to finance for local solar energy distributors to support their growth. Our program has provided business support to a range of private sector companies entering the sector, including basic business and technical training to retailers and MFIs entering the solar energy lending space.
- **Increasing demand** and addressing market development bottlenecks through a dedicated consumer awareness and education campaign. Consumer awareness of solar lighting products is relatively high in Ethiopia – knowledge on how to identify quality-products, however, lags behind. To address the issue, we launched a two-year consumer education campaign in 2015 targeting over 12 million Ethiopians, with a focus on those in rural areas. The campaign highlights the benefits provided by purchasing quality off-grid lighting, and helps consumers identify products meeting Lighting Global standards. Activities include mass media and door-to-door campaigns, which are tailored to address the specific needs of low-income households across the country.
- **Addressing policy barriers** that impede the development of the off-grid lighting market that undermine the competitiveness of off-grid lighting and energy products.

## Access to Finance for Quality Products

One key obstacle in the market is access to foreign exchange (FOREX) – this is a major bottleneck, impeding the import of off-grid lighting products. To address this issue, in collaboration with the Government of Ethiopia, the World Bank with Lighting Africa's support is helping households, private sector enterprises and small business to access financing through the Market Development for Renewable Energy & Energy Efficient Products Credit Line. This financing facility was established in 2013 with US\$20 million from the World Bank. This has since been doubled to US\$40 million due to the great success of this initiative.

The funding facility, which is administered by the Development Bank of Ethiopia (DBE), provides private sector companies with the foreign exchange working capital to import qualifying solar products that meet Lighting Global Quality Standards, while MFIs can access this line of credit aimed at household-level loans for qualifying products. An additional component, the Collateral Support Facility, was created to support companies in being able to meet the collateral requirements for accessing funding from the DBE credit facility.

To date, default rates on loans lie at a remarkable **zero** percent. These loans resulted in the import of over 850,000 quality-verified solar lighting products during the first 18 months this facility was in operation, providing roughly 1 million Ethiopians with access to modern energy services (number of products sold x estimated average household size of 5 people). As of June 30, 2017, eight private sector enterprises and 11 MFIs had been approved for loans from the second round of the facility, promising further expansion of these initial impacts.

As an additional vote of confidence, the facility was confirmed as eligible for carbon credits. If the DBE achieves its targets – import and distribution of 2.8 million solar lanterns and 214,000 SHS – they will receive US\$11.2 million in revenue from carbon finance.

The revenue from the Certified Emission Reduction (CER) generated will be used to discount the per battery replacement cost for solar home systems (40%), for the administration of warranty tracking and customer information systems, and operational and maintenance payments to certified solar home system technicians.

## Next Steps

The joint IFC-WB Lighting Africa program will continue to support the development of the stand-alone solar market in Ethiopia, in line with the Government commitment to achieve universal access to electricity service by 2025 through the simultaneous penetration of grid and off-grid technology solutions, as indicated in the National Electrification Program (NEP) – Implementation Roadmap launched in November 2017. The NEP estimates that off-grid technologies will constitute to 35 percent of the access rate by 2025 through joint private and public-sector delivery solutions, and indicated the Government commitment to develop an off-grid program, which is currently under design and would be integral part of the updated version of the National Electrification Program (expected to be launched at the end of 2018-beginning of 2019).

To support the NEP, the WB has designed the IDA US\$375 million Ethiopia Electrification Program (ELEAP), which earmarked US\$14.5 million for the off-grid program. This funding will be deployed to support the public share of the

off-grid program and pilot the incentive and subsidy mechanisms currently under discussion for their informed finalization. The WB and Development Partners may consider scaling-up their support for electrification to about US\$500 million, particularly for off-grid solutions (including a possible increase up to US\$50 million to scale-up the access to finance support provided by the credit facility at the Development Bank of Ethiopia for private sector development).

Informed by the best practices emerged internationally and the successes of the Lighting Global Program, the primary focus of the WB-IFC partnership will continue to tackle the major market bottlenecks preventing the off-grid market to reach the scale and speed in delivery adequate for the achievement of the off-grid target by 2025 and provide electricity services to the bottom of the pyramid; as well as establish an enabling ecosystem and incentives for private sector engagement.

The following are the program's strategic directions:

- **Quality Assurance.** Support the adoption and implementation of Lighting Global standards to develop a sustainable market for quality-verified solar products. Improve import procedures (preventing entrance in the market of counterfeit products) and establish a compliance enforcement system embedded in the legal framework to enable companies or public authorities (including customs) to persecute non-compliant agents. In support of quality assurance, a Warranty Tracking and Customer Information System is being developed at the Development Bank of Ethiopia to locate the distribution of imported technologies with a web enabled warranty tracking and customer information system. The system will create warranty tracking mechanism to replace defective products during the warranty period.
- **Business Development Support.** Support for the establishment of local entrepreneurs to the scale required for the achievement of the off-grid target, which will mostly rely on private sector delivery. This support



includes skills development and capacity building for SMEs, for the development of business plans adequate to the Ethiopia context, for reaching last mile customers. In conjunction with other Development Partners, training programs will also include adequate provision of after sales services in rural areas.

- **Access to Finance.** Strengthening and expansion of access to finance solutions (including the existing credit line at the Development Bank of Ethiopia) in support of the FOREX and working capital needs of PSEs; as well as MFIs on-lending to prospective customers. This support includes technical assistance and capacity building to increase information and usage of available financing solutions as well as possible design of new mechanisms.
- **Consumer education.** Expansion of consumer education campaigns as prospective customers should not only be informed about the services provided by off-grid technologies, but also quality standards, as well as their rights and obligations as customers. Consumer awareness campaigns are an important instrument for addressing market spoilage due to influx of low quality products. Education campaigns also key to improve the outreach of MFIs and Rural Savings and Credit Cooperatives (RUSACCOs) to perspective customers.
- **Market Intelligence.** Development of a targeted market assessment report based on the last supply chain survey conducted in 2016 which covered 30,000 retail outlets. The objective is to provide key stakeholders with an updated snapshot of the market and supply chain to inform retailers' next three-year plans.

*Page last updated June 2018*

*Impact data last updated October 2019*

# **Where We Work**

**Benin** >

**Burkina Faso** >

**Cabo Verde** >

**Cameroon** >

**Central African Republic** >

**Chad** >

**Côte d'Ivoire** >

**Democratic Republic of Congo** >

**Ethiopia** >

**Gambia, the** >

**Ghana** >

**Guinea** >

**Guinea-Bissau** >

**Kenya** >

**Liberia** >

**Madagascar** >

**Mali** >

**Mauritania** >

**Niger** >

**Nigeria** >

**Rwanda** >

**Senegal** >

**Sierra Leone** >

**Tanzania** >

**Togo** >

**Uganda** >

## Related Resources

**Case Study: Developing the Solar Supply Chain in Ethiopia** >

**[Video: Transforming Energy Access Through the Lighting Africa/Ethiopia Program](#)** >

**[Deep Dive Supply Chain Report, Ethiopia](#)** >

**[See All](#)**

## Related News

*08 October 2019*

**[Job Scam Alert](#)** >

*11 September 2016*

**[Off-Grid Solar Lighting Up Ethiopia](#)** >

*22 September 2015*

**[Lighting Africa – Ethiopia Launches Consumer Education Campaign Targeting Over 12 Million Ethiopians](#)** >

**[See All](#)**

## Subscribe to our newsletter

Enter your email address



**CONTACT US**

✉ **info@lightingafrica.org**

Legal Access to Information Products Disclaimer

© Copyright 2019 Lighting Africa. All rights reserved.