Ethiopia

Introduction

This note was developed by Global Off-Grid Lighting Association (GOGLA) with the support of the World Bank Group Lighting Global Program, the Energy Sector Management Assistance Program (ESMAP), the Shell Foundation, USAID, Power Africa, the UK Department for International Development (DFID) and Sustainable Energy for All (SEforAll). It is part of a series of briefing notes that provide a high-level overview of the status of different countries' off-grid solar markets, as well as relevant policies and programs[1].

Key statistics[2&3]

Demographics	
Total Population	104,957,438
Population Density per km^2	104
GDP per Capita	USD 767
GDP Growth	10.2%
Energy Access Deficit	
National Electrification Rate	45%
Urban Electrification Rate	85.4%
Rural Electrification Rate	26.5%
Number of households without power	13,500,000
Electrification Planning	
Electrification Targets[4]	Universal access by 2025

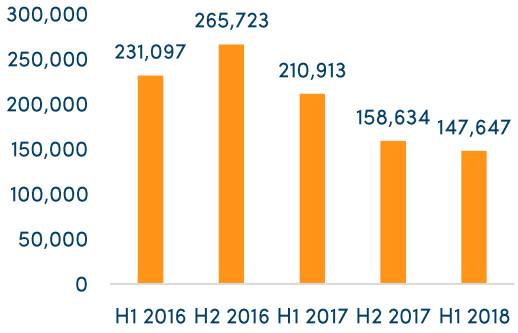
Impact[5]

4,426,171 people currently living with improved energy access – clean, safe solar light

8,366 people currently using their products to support an income-generating enterprise

98,045,903 additional light hours unlocked for study, productive tasks or leisure time

Sales (pico and SHS)[6]



Current status:

The National Electrification Program – Implementation Roadmap (NEP-IRM), launched in November 2017, indicates that by 2025, 65% of access will be provided through grid connected electricity and 35% through stand-alone solar and mini-grid solutions[7]. An off-grid implementation plan will be launched in March 2019 to deliver on this target.

Ethiopia has already achieved significant results in the availability and distribution of off-grid solutions. To date, about 24% of Ethiopian households – approximately 4.6 million people – use off-grid solar products as their primary source of electricity.

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[1] The information and views expressed in this brief are GOGLA's alone and are based on our current understanding of the policy situation in this country. We welcome any updates, revisions or clarifications at info@gogla.org.

[2] https://data.worldbank.org/

[3] Ethiopia - Multi-Tier Framework (MTF) Survey, World Bank Group, 2019

[4] Ethiopia Electrification Program, World Bank Group, 2018

[5] These impact numbers have been estimated using the revised Standardized Impact Metrics for the Off-Grid Solar Energy Sector. Data is drawn from the sales of off-grid solar products by GOGLA Members and IFC/Lighting Global affiliates since mid-2014. The impact of sales in previous years and by non-affiliated organizations are not included.

[6] GOGLA and Lighting Global Semi-Annual Data Collection. Data on a specific region, country or product category is only included when it has satisfied the three-data point rule, meaning that at least three separate product manufacturers have reported data for any single data point. When we have fewer than three responses for a region, country or product category, no results are shown to protect the proprietary interests of the companies who have supplied data in support of this industry report.

[7] https://www.lightingafrica.org/country/ethiopia/

However, 70% of these are relying on solar lanterns which do not provide the level of electricity access that the government is seeking to achieve.

Promoting Quality

Mandatory standards are in place for pico-PV systems (up to 15W), whilst voluntary standards – adopted by the Ethiopian Standards Agency – are in place for solar home systems up to 350W. Pico-PV standards are fully harmonised with IEC/Lighting Global quality standards since 2016, whilst a plan is being made for harmonisation of standards for solar home systems from 15W to 300W in 2019. A Pre-Verification of Conformity (PVoC) was approved by the Council of Ministers to enable the identification of quality products through the importation process and the exclusion of non-quality verified products. While this is expected to be scaled up in 2019, the Ministry of Trade has already stopped taking samples from every shipment, removing related testing fees and a previous 0.5% deposit based on shipment value.

Taxation

The off-grid solar industry benefited greatly from sales tax and import duty exemptions until 2016. From 2016 onwards, import duties and sales tax on solar lights, solar home systems and related appliances were introduced, as part of a change that was implemented across the East African Community, and the Ethiopian Revenues and Customs Authority (ERCA) usually charges up to 35% import duty and up to 100% excise tax on imported products. However, importers of solar products under 8W have been exempted from both, through a proclamation from the Ministry of Finance and Economic Development (MoFEC) on renewable energy. Larger solar home systems with quality certificates are also benefiting from this exemption. Discussions are ongoing on the possible extension of the exemptions to alternating current (AC) appliances.

Investments

In 2013, the Federal Government set up a financing facility, funded by the World Bank, at the Development Bank of Ethiopia (DBE) offering loans to private-sector enterprises (PSEs) and micro-finance institutions (MFIs) to enable the import, trading and consumer financing of quality-verified off-grid solar products. To date, the DBE credit line has supported the importation of approximately 170,000 solar home systems and 1.2 million Lighting Global certified solar lanterns. Cumulative loans to private sector enterprises amounted to US$18 million in August 2018 for PSEs, and to US$16.5 million to MFIs. The second phase of lending was oversubscribed within one year (2017-2018), and – with lending for solar home systems increasing from about 11,000 to 160,000 systems – in line with government policy to make 75% of earmarked funding available for this purpose.

Outside of the DBE facility, private investment has been limited owing mainly to challenges with obtaining foreign exchange, collateral requirements, and high interest rates charged by commercial banks on short-term loans.

Sector Support Programs

The World Bank supported DBE facility is the main sector support program. It has been providing access to foreign exchange and concessional local currency working capital loans. It is currently over-subscribed. However, to support the NEP, the World Bank designed the International Development Association (IDA) US$375 million Ethiopia Electrification Program (ELEAP), which earmarked US$14.5 million for the off-grid component and which will formally launch in March 2019[8].

Furthermore, DFID has worked with the Government of Ethiopia to develop an Energy Africa Compact, which clearly outlines steps to be taken to accelerate off-

[8] Visit Lightning Africa for more information.

grid solar market growth[9]. UNCDF is working to support poor households and micro-enterprises access low cost clean energy through microfinance. The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) has established an 'Energy Coordination Office' which is focused on technical training and product development in the major regions of the country. Lastly, as part the The Africa Enterprise Challenge Fund (AECF), the Swedish International Development Authority (SIDA) is providing US$42 million in funding to support renewable energy projects in seven countries among which Ethiopia[10].

Opportunities and Barriers

The design of an off-grid implementation program, including roles and responsibilities for sector institutions, investment requirements, business models for implementation, and the establishment of a policy framework, shows that the government is committed to achieve universal electricity access in 2025. As the program relies for a large part on private sector delivery, the program was developed in consultation with both local and international PSEs, as well as with development partners. In terms of barriers, it is vital that access to foreign exchange and local currency working capital is made available to the sector.

Further Information

- Ethiopia Energy Africa Compact, Evidence on Demand, 2016
- Ethiopia Multi-Tier Framework Survey, World Bank, 2018
- Ethiopia Fact Sheet, USAID Power Africa, 2018
- Off Grid Market Study – Ethiopia, Lighting Africa & Ipsos, 2016
- Lighting Africa Country Page - Ethiopia
- Regulatory Indicators for Sustainable Energy (RISE) - Ethiopia

[9] Ethiopia Energy Africa Compact, Evidence on Demand, 2016
[10] Visit GOGLA Bridge for more information.