

Kenya

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 programs¹.

Key statistics^{2&3}

Demographics	
Total Population	49,699,862
Population Density per km ²	87
GDP per Capita	USD 1,508
GDP Growth	4.9%
Energy Access Deficit	
National Electrification Rate	56%
Urban Electrification Rate	77.6%
Rural Electrification Rate	39.3%
Number of households without power	3,200,000
Quality-Verified Products	
% of quality-verified ⁴ (QV) vs non-QV products in the market ^{5&6} (H2, 2017)	QV: 88% Non-QV: 12%
Electrification Targets ⁷	
Electrification Targets ⁷	Universal access by 2022

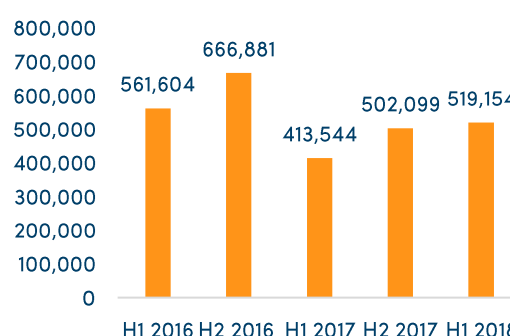
Impact⁸

11,625,226 people currently living with improved energy access – clean, safe solar light

310,000 people currently using their products to support an income-generating enterprise

4,346,903,001 additional light hours unlocked for study, productive tasks or leisure time

Sales (pico and SHS)⁹



Current Status

Kenya is a global front-runner in terms of the depth and dynamism of its off-grid solar market. The market began to emerge in 2009, when Kenya was selected as one of two pilot countries for the World Bank Group Lighting Africa program. Since then, 2.7 million solar lanterns and home systems have been sold, including more than 700,000 in 2015-16 alone. The proportion of quality-verified products in the market has also

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 <https://www.usaid.gov/powerafrica>

⁴ Quality-verified products are tested according to the Lighting Global Quality Standards. For more information please see the [Lighting Global Quality Assurance Program](#).

⁵ Share of non-QV sold by GOGLA and Lighting Global affiliates.

⁶ 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 [The Kenya National Electrification Strategy \(KNES\), 2018](#)

⁸ 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.

⁹ GOGLA and Lighting Global Semi-Annual Data Collection.

steadily grown, from 3% in 2009 to more than 40% in 2015-16¹⁰. Based on sales numbers by GOGLA and Lighting Global affiliates, 88% of sales in the second half of 2017 were quality-verified.

Kenya's off-grid solar market growth has been underpinned by the country's political stability, economic growth, ease of doing business, consumer awareness campaigns and a supportive policy environment for the off-grid sector. Market growth has also been enabled by the widespread use of microfinance, mobile phones and by the widespread adoption of mobile money, which plays a key role in many pay-as-you-go business models. Kenya also has one of the most well-established and well-recognized national industry associations – the Kenya Renewable Energy Association (KEREAA).

However, off-grid solar sales have been mostly concentrated in more densely populated, wealthier counties to the west of the country. The World Bank backed, US\$150 million, six-year Kenya Off-Grid Solar Energy Access Project (KOSAP), which started in 2017, is specifically designed to extend off-grid solar into 14 underserved counties. It promotes mini-grids, standalone solar solutions for homes, schools, clinics and government offices, as well as solar pumping and improved cookstoves. It aims to reach around 1.3 million people living in 277,000 households with solar lights and home systems by 2023¹¹.

Promoting Quality

Mandatory standards are in place for pico-PV systems, which are fully harmonised with IEC/Lighting Global quality standards. A 'pre-verification of conformity', or PVoC process is being used to ensure that all products that enter the country legally meet quality standards. Standards for solar home systems are currently in development.

Taxation

The off-grid solar industry benefited greatly from import duties and sales tax exemptions until 2016. From 2016 onwards, import duties and sales tax on some solar lights, some components of solar home systems and related appliances – equivalent to around 30% of the cost of goods – were introduced in 2016, as part of a change that was implemented across the East Africa Community.

Investments

Kenya has attracted more private investment into off-grid solar than any other country in Africa, resulting in the establishment of Africa's largest and most successful off-grid solar industry. The country has also benefited from a number of grant-making and concessional financing schemes that have helped to unlock private capital¹².

Sector Support Programs

Currently, the main sector support program in Kenya is the World Bank-funded Kenya Off-Grid Solar Project (KOSAP). This aims to extend the market into underserved counties through a combination of results-based financing and local currency working capital financing. In addition, the Kenyan government together with the World Bank recently announced the Kenya National Electrification Strategy (KNES), a roadmap to achieve universal energy access in 2022¹³.

Opportunities and Barriers

With KOSAP, Kenya has the potential to develop a best-in-class mechanism for incentivizing companies to enter underserved areas. This could make a major contribution in reaching national energy access targets. There will be a need for continuous dialogue with the private sector to ensure KOSAP is well-designed, implemented and monitored to minimize potential market distortion and maximize sustainability.

¹⁰ Kenya Off-Grid Solar Access Project for Underserved Counties: Project Appraisal Document, World Bank, 2017

¹¹ Kenya Off-Grid Solar Access Project for Underserved Counties: Project Appraisal Document, World Bank, 2017

¹² For more information please see [GOGLA Bridge](#).

¹³ [The Kenya National Electrification Strategy \(KNES\), 2018](#)

Further Information

- [Kenya Off-Grid Solar Access Project for Underserved Counties: Project Appraisal Document, World Bank, 2017](#)
- [Energy Africa: Kenya Compact Development and Final Report, Evidence on Demand, 2016](#)
- [Kenya Fact Sheet, USAID Power Africa, 2018](#)
- [Kenya Off-Grid Solar Access Project for Underserved Counties \(KOSAP\), Lighting Africa, 2018](#)
- [Lighting Africa Country Page - Kenya](#)
- [Regulatory Indicators for Sustainable Energy \(RISE\) - Kenya](#)