

Rwanda

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	12,208,407
Population Density per km ²	495
GDP per Capita	USD 784
GDP Growth	6.10%
Energy Access Deficit	
National Electrification Rate	29.3%
Urban Electrification Rate	80%
Rural Electrification Rate	17.7%
Number of households without power	1,700,000
Electrification Planning	
Electrification Targets ⁷	Universal access by 2024 (52% on-grid, 48% off-grid)

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 quality verified (QV) and 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 [Government of Rwanda, SREP Meeting, 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.

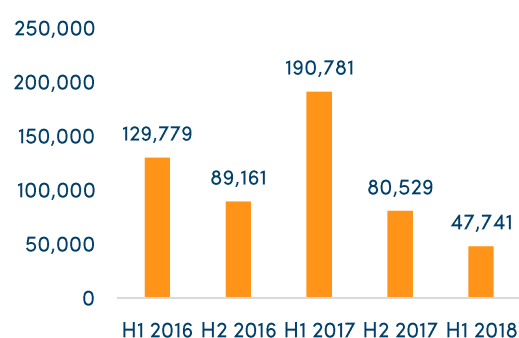
Impact⁸

2,348,331 people currently living with improved energy access – clean, safe solar light

62,622 people currently using their products to support an income-generating enterprise

726,013,281 additional light hours unlocked for study, productive tasks or leisure time

Sales (pico and SHS)⁹



Current status

The Government of Rwanda aims to transition from a low-income country to a middle-income country and to reach this goal, the government is aiming to achieve 100% electricity access by 2024. At present, around 30% of Rwandans have access to electricity, while new grid connections are expensive, and the capacity of the current grid is constrained. The Rwandan Ministry of Infrastructure (MININFRA) has recognized that low-consumption households can be

served efficiently and cost-effectively by off-grid systems, and Rwanda has become one of the major markets for solar lighting products in Africa.

In 2017, Solar Home System (SHS) sales exceeded a growth rate of 130%, compared to the previous year with almost 100,000 systems sold. In contrast, the market for lamps experienced an 80% drop in sales, from 135,00 units sold in 2016 to 30,000 units in 2017. This market shift happened in large part due to innovative pay-as-you-go (PAYG) financing models, aggressive expansion by larger companies, and government endorsement of SHS. A few major companies have reported reaching profitability in Rwanda, resulting in decreasing reliance on grants and greater demand for commercial investment¹⁰.

Promoting Quality

Rwanda has mandatory standards for Pico-PV in place, fully harmonised with IEC/Lighting Global quality standards. Standards for SHS are under development.

Taxation

Solar energy equipment and appliances have been exempt from sales tax and import duty in Rwanda since 2015.

Investment

Rwanda has attracted a lot of investment given its ease of doing business and relatively high population density. A number of donor agencies are actively providing finance to companies operating in Rwanda, and the focus of international organisations on the sector is seen as a critical enabler of growth. It is estimated that US\$34 million was invested in the Rwandan SHS sector by December 2017 (with US\$15 million alone invested in 2017). Larger companies have been raising debt and equity financing primarily through Development Financial Institutions (DFI's) and impact investors.

Sector Support Programs

The launch of the SREP-funded Renewable Energy Fund (REF), facilitated by Rwanda's Development Bank (BRD), in November 2017 unlocked US\$50 million of capital targeted to the off-grid sector¹¹. In addition, EnDev results-based financing, including end-user price subsidy, is being developed. It is linked to the Ubudehe system, which determines poverty level and subsidy eligibility, and will include: 1) a sizeable public awareness campaign, 2) careful verification, monitoring and reporting and 3) building capacity support from EnDev for the Rwanda Energy Group, the state-owned utility which will lead implementation.

Opportunities and Barriers

As the Government of Rwanda continues to explore mechanisms to accelerate access to electricity through off-grid products, a number of proposals to run large-scale tenders in the first quarter of 2018, and the introduction of minimum size standards in mid-2018, led to uncertainty in the sector. While stakeholder engagement has made important progress in this regard, the resolution of a long-term plan to address affordability challenges would improve confidence. Several options are on the table and stakeholders are currently working together to select the approach best suited to Rwanda's context. There is a clear need for careful design, monitoring and management of program, as efforts to deliver energy access to the poorest could result in market distortion. Foreign exchange fluctuations and other market operating risks are still high. Greater clarity around, and training on, sales tax and import duty exemptions would help ensure that policy is better understood and applied by customs agents and officials¹².

Further Information

- [Rural Electrification Strategy, Ministry of Infrastructure, 2016](#)

¹⁰ Rwanda: Off-grid Sector Status Report, EnDev, 2017

¹¹ Visit the [World Bank Rwanda Renewable Energy Project](#) for more information.

¹² [Off-grid solar country briefing: Rwanda, ODI, 2016](#)

- [Rwanda Multi-Tier Framework Survey, World Bank, 2018](#)
- [Rwanda: Off-grid Sector Status Report, EnDev, 2017](#)
- [Off-grid Solar Country Briefing: Rwanda, ODI, 2016](#)
- [Rwanda Fact Sheet, USAID Power Africa, 2018](#)
- [Lighting Africa Country Page - Rwanda](#)
- [Regulatory Indicators for Sustainable Energy \(RISE\) - Rwanda](#)