

OPPORTUNITIES AND TRENDS BRIEF

March 2021

Rwanda: An addressable market for solar home systems that will be served through subsidy schemes, and an emerging market for energy solutions to enable economic growth

5.6m

Unelectrified population

12.66m

Total population



499

people/Km²
Population density

72
out of
100



RISE Score (Framework for Stand-Alone Systems)

2024



Government target for universal electrification

38
out of
190¹



Ease of Doing Business Rank



8

Donor programmes supporting Stand-Alone Solar (SAS).

20 companies active in the SAS sector, but majority of the sales have been by four companies.



- » **Before the Covid-19** pandemic Rwanda enjoyed impressive economic growth, exceeding 8 per cent Gross Domestic Product (GDP) growth in 2018 and 2019 that was driven by strong public investment.
Since the pandemic, the country has witnessed a significant slowdown in the services and industry sectors (contributing to **48 per cent and 19 per cent of GDP** respectively²), with exports and tourism hit especially hard. The National Bank of Rwanda (BNR) reported a growth rate of just 2.3 per cent for the financial year (FY) 2019/2020 compared to 8.9 per cent in the previous financial year.³
- » Off-grid market sales witnessed a gradual decline from about **86,000 systems sold in 2017/2018 to 83,000 in 2018/2019 and 62,000 in 2019/2020**. This is primarily attributed to affordability constraints, the uncertainty and delays in the development of the Minimum Standards for solar home systems (SHS) and the COVID-19 pandemic.
- » Currently, the market for products meeting the government's minimum standards for SHS has been largely saturated – households that can afford SHS have now been covered. Therefore, the poorest are primarily expected to acquire products through subsidy schemes such as EnDev's Pro Poor Results-Based Financing Programme (Pro Poor RBF) and the recently launched Renewable Energy Fund RBF subsidy.⁴
- » The market for small-scale solar irrigation is growing, with support from government and donors to address the affordability gap.

Government has been providing direction for the off-grid sector in:



The National Electrification Plan, 2019 the government plans to electrify **48% of the population** through off-grid solutions. The Plan will be updated in 2021.



The Ministerial Guidelines for Minimum Standards for Solar Home Systems, 2019 whose goal is to ensure quality of products and services to end-users.



The Off-Grid Monitoring Information System (OMIS) which will track all SHS deployed in the country.

The Renewable Energy Fund is one of the government-backed funding mechanisms available:



The Renewable Energy Fund (REF) established in 2017 which provides lines of credit to:

- ❖ savings and credit cooperatives (SACCOs) (Window 1),
- ❖ microfinance institutions and banks (Window 2),
- ❖ mini-grid developers (Window 3),
- ❖ SAS companies (Window 4).



A result-based financing (RBF) subsidy scheme, capitalised by USD30 million, was recently approved by the government and the World Bank (Window 5) – it will provide targeted incentives to low-income households and is expected to be the major driver of sales in the coming years.



The trade association Energy Private Developers (EPD) advocates for SAS companies, among others. It has an operational secretariat and 112 members. In 2020, EPD successfully lobbied for SAS companies to keep their call centers open and technicians working.



Affordability continues to limit access for vulnerable groups, due to the high prices of eligible products. Subsidies will therefore be instrumental in addressing this challenge. In addition, during the pandemic some companies laid-off staff and restructured debt due to significant drops in revenue and difficulties in importing products.

In conclusion

The addressable market for SAS in Rwanda will mainly be served through well designed subsidy schemes, developed in partnership with development partners, private sector and government. There is also an emerging opportunity to serve **57% of the population** who are smallholder farmers with solar technologies for irrigation, post-harvest processing and cold storage.

Reference

- 1 World Bank (2020) Doing Business
- 2 National Bank of Rwanda (2020). 2019–2020 Annual Report. The Rwandan fiscal year is July to June, hence the slight difference from World Bank growth figures cited further above, which refer to the calendar year.
- 3 National Institute of Statistics (2020)..Gross Domestic Product (GDP): Fiscal Year 2019–2020.
- 4 The Rwandan government has categorized households under the Ubudehe system, by which Ubudehe 1 are the poorest households and 4 are the richest.
- 5 ACE TAF (2020) Demand-side subsidies in off-grid solar: A tool for achieving universal access and sustainable markets