

# Nigeria

## 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) Africa Clean Energy (ACE) 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<sup>1</sup>.

## Key statistics<sup>2&3</sup>

### Demographics

|  |             |
|--|-------------|
| Total Population                       | 195,874,740 |
| Population Density per km <sup>2</sup> | 215         |
| GDP per Capita                         | USD 2,028   |
| GDP Growth                             | 1.9%        |

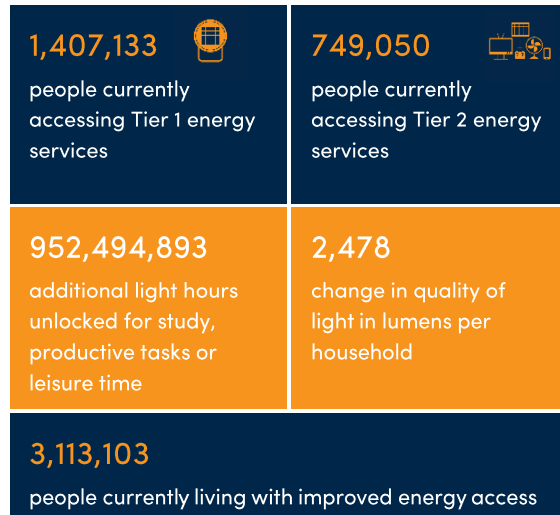
### Energy Access Deficit

|  |                       |
|--|-----------------------|
| National Electrification Rate  | 54.4%                 |
| Urban Electrification Rate   | 86.8%                 |
| Rural Electrification Rate   | 22.6%                 |
| Number of households without power   | 20 million            |
| % of quality-verified <sup>4</sup> (QV) vs non-QV products in the market <sup>5&amp;6</sup> (H1, 2019) | QV: 94%<br>Non-QV: 6% |

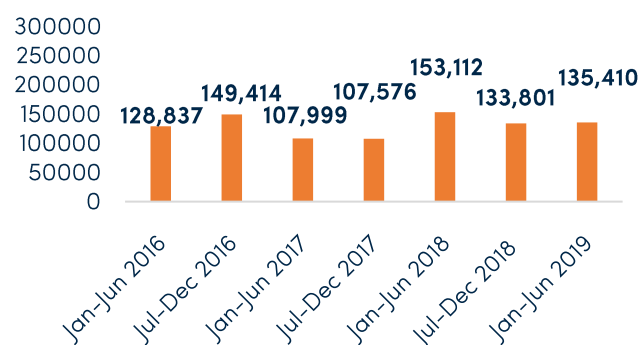
### Electrification Planning

|                                      |   |
|--------------------------------------|---|
| Electrification Targets <sup>7</sup> | 90% by 2030,<br>Universal access<br>by 2040 |
|--------------------------------------|---|

## Impact<sup>8</sup>



## Sales<sup>9</sup>



Sales of Portable Lanterns, Multi-light Systems and Solar Home Systems

<sup>1</sup> 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](mailto:info@gogla.org).

<sup>2</sup> <https://data.worldbank.org/>

<sup>3</sup> <https://www.usaid.gov/powerafrica>

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

<sup>5</sup> Share of quality-verified (QV) and non-QV sold by GOGLA and Lighting Global affiliates.

<sup>6</sup> 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.

<sup>7</sup> Nigeria SEforALL Action Agenda, Sustainable Energy for All Action Agenda, 2016

<sup>8</sup> Impact numbers have been estimated by plugging the most recent sales data into the [Standardized Impact Metrics for the Off-Grid Solar Energy Sector](#). The reported estimates differ from the previous edition of the country briefings due to the use of a smaller, yet more consistent and recent dataset, considering only products sold by GOGLA members and Lighting Global affiliates since 2016. Note that while the numbers shown represent the aggregate impact of key players in the off-grid solar sector, these estimates do not present the full global impact of off-grid solar lighting products sold.

<sup>9</sup> All sales data included in this briefing is derived from the "Global Off-Grid Solar Market Report Database", result of a joint primary data collection effort carried out by GOGLA in partnership with IFC Lighting Global and the Efficiency for Access Coalition. The public version of the resulting report of the effort is available [here](#).

## Current Status

In 2017 approximately 87 million people lack access to electricity in Nigeria, giving it the second largest energy access deficit in the world in absolute terms<sup>10</sup>. The Rural Electrification Strategy and Implementation Plan (RESIP), approved by the President in 2016, seeks to make 'full use of both grid and off-grid approaches, with subsidies focused on expanding access'<sup>11</sup>. RESIP envisages that private sector providers will be 'heavily involved' and calls for a particular focus on unserved and underserved rural areas

The Rural Electrification Agency (REA) has established the Rural Electrification Fund (REF) to help finance several rural electrification projects. In October 2018 The REA also announced a plan to power 500,000 small businesses over the next three to four years as part of the Off-Grid Electrification Strategy<sup>12</sup>. The Renewable Energy Association of Nigeria (REAN) is well-established and there is an Off-Grid Donor Coordination Platform for the sector.

Attracted by the size of the potential market, several more established solar PV companies are now operating in Nigeria, using both cash sales and pay-as-you-go business models. Approximately 14 SHS distributors are actively distributing Lighting Global quality-verified products from a broad range of manufacturers. For these companies to grow rapidly they must fund an ever-increasing amount of stock in the supply chain and invest heavily in building distribution capacity to reach and serve new customers. Key regulatory challenges include high taxes on imported solar products and components, managing mobile payment systems, and competing with low-quality generic products

## Promoting Quality & E-Waste Management

Nigeria currently has no mandatory standards in place for off-grid solar products. However, as part of the Economic Community of West African States (ECOWAS), Nigeria is likely to adopt national standards that are harmonized with the IEC/Lighting Global quality standards.

ACE TAF together with the IFC will be supporting the Standards Organization of Nigeria (SON) in adopting national standards in the near future. This includes setting up a Testing Facility for the SON to enable them carry out market checks for off-grid products in the market.

The Ministry of Environment is looking to develop an E-Waste Policy, Regulation and Management System for the renewable energy sector, and will be supported by GIZ, and ACE-TAF. The Heinrich Boell Foundation has been supporting the Ministry of Environment in developing a management framework for used lead-acid batteries from the off-grid market.

## Taxation

Solar products are subject to sales tax and import duty equivalent to approximately 25% of the cost of goods.

## Investments

Private companies and their investors have invested heavily in building off-grid solar businesses in Nigeria. However, given the size of the underserved population, there is still a significant need for access to finance. Key financial barriers include a lack of access to local currency loans for operating expenses and hard currency loans for capital costs as well as high interest rates and rigid collateral requirements, particularly from local commercial banks. Finally, foreign exchange is a major issue that inhibits the ability to access finance in foreign currency.

<sup>10</sup> Tracking SDG7 Report, 2019

<sup>11</sup> Rural Electrification Strategy and Implementation Plan, Federal Republic of Nigeria, 2016

<sup>12</sup> <https://guardian.ng/energy/rea-to-power-500000-businesses-in-five-years/> and <http://rea.gov.ng/download/rural-electrification-strategy-implementation-plan-resip/>

## Sector Support Programs

The World Bank Group's Lighting Africa program has been carrying out consumer awareness campaigns across Nigeria, which have reached at least 50 million people across 21 states, while collaborating with more than a dozen MFIs to support microloans for the purchase of pico solar and SHS. Training was also provided to retailers and after-sales technicians<sup>13</sup>.

Furthermore, the World Bank launched the Nigeria Electrification Project (NEP) that includes a standalone solar component worth US\$75 million in grant funding, which is expected to leverage an additional US\$230 million in private sector funding<sup>14</sup>. NEP's off-grid component is comprised of US\$15 million of competitively awarded grants and US\$60 million of performance-based grants. An assessment is envisaged to determine which additional financing instruments may be needed to meet working capital needs.

The African Development Bank announced it will parallel co-finance the NEP with a US\$150 million sovereign loan provided to the Nigerian government, directed mostly to mini grids, together with the Africa Growing Together Fund (AGTF), which approved a loan of US\$50 million.

DFID and the Shell Foundation are supporting the Nigeria Off-grid Market Acceleration Program (NoMAP), an off-grid market accelerator. In its first year the accelerator is focusing on building market data for SHS and mini-grids and piloting an off-grid payment system for SHS companies<sup>15</sup>. In its first year, NOMAP successfully integrated 5 SHS companies into the 20,000+ agent payment network of SWIFTA, one of the leading agent networks in the country. NOMAP also carried out geo-spatial mapping and surveys that identified

6,000 viable communities for SHS in Nigeria, and 3,000 for mini-grids.

Nigeria is part of the 19 countries under the ROGEP project. Two pilot projects will be implemented in Nigeria.

Nigeria is also part of the Africa Clean Energy Technical Assistance Facility (ACE-TAF), a 4 year programme funded by DFID aims to catalyse a market-based approach for private sector delivery of Renewable Energy electrification technologies, with a focus on high quality Stand Alone Solar (SAS) systems<sup>16</sup>.

The USAID/Power Africa 5-year Nigeria Power Sector Program (NPSP) is being implemented by a consortium led by Deloitte Consulting LLP, with the main objective of increasing electricity availability and access in Nigeria by assisting in the development of generation, transmission, and distribution infrastructure while promoting private sector investment in the energy sector.

The EU Delegation to the Federal Republic of Nigeria and ECOWAS also provides support to the sector and is co-funding DFID Nigeria's Solar Nigeria Programme, and GIZ's NESP II<sup>17</sup>.

Other key organizations supporting the off-grid sector include the Heinrich Boell Foundation, and the UNDP as well as the Energizing Economies Initiative of the REA<sup>18</sup>.

## Opportunities and Barriers

The establishment of the Rural Electrification Fund and the strong development partner support provides many opportunities for off-grid sector development in Nigeria, such as targeted concessional finance and technical assistance for companies, and the creation of quality standards.

<sup>13</sup> [Nigeria Consumer Insights Market Study, Lighting Africa, 2013](#)

<sup>14</sup> Visit [World Bank Nigeria Electrification Project](#) for more information.

<sup>15</sup> Visit [Shell Foundation Roving Heights](#) for more information.

<sup>16</sup> Visit [Africa Clean Energy website](#) for more information.

<sup>17</sup> Visit [Nigerian Energy Support Program II](#) for more information.

<sup>18</sup> Visit [Energizing Economies Initiative](#) for more information.



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In terms of barriers, it is important that access to foreign exchange and local currency working capital is made available to the sector. More also needs to be done to promote quality in the market and address the risk of market spoilage due to counterfeit and low-quality products, especially amongst more basic solar lights. Reducing taxation on quality-verified solar products would significantly improve affordability, which remains a major barrier.

### Further Information

- [Rural Electrification Strategy and Implementation Plan](#), Federal Republic of Nigeria, 2016
- [Nigeria Electrification Project Appraisal Document](#), World Bank, 2018
- [Power for All: Nigeria Call to Action](#), Power for All, 2017
- [Nigeria Fact Sheet](#), USAID Power Africa, 2018
- [Lighting Africa Country Page - Nigeria](#)
- [Nigeria](#), SEforALL Africa Hub
- [Regulatory Indicators for Sustainable Energy \(RISE\) - Nigeria](#)