

Senegal

Impact⁸

Introduction

This note was developed by GOGLA with the support of the World Bank Group technical team and Lighting Global Program, the Energy Sector Management Assistance Program (ESMAP), the Shell Foundation, USAID, Power Africa, the UK Foreign Commonwealth & Development Office (FCDO) 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 countries' off-grid solar markets, as well as relevant policies and programs¹.

Key statistics^{2&3}

Demographics

Total Population	17,738,795
Population Density per km ²	87
GDP per Capita	USD 1,487.8
GDP Growth	0.9%

Energy Access Deficit

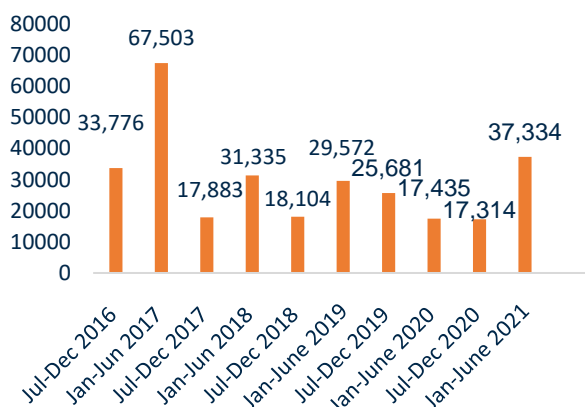
National Electrification Rate	70.4%
Urban Electrification Rate	95.2%
Rural Electrification Rate	53.2%
Number of people without access to electricity	3 million
% of quality-verified ⁴ (QV) vs non-QV products in the market ^{5&6} (H1, 2021)	QV: 57% Non-QV: 43%

Electrification Planning

Electrification Targets ⁷	Universal access by 2025.
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161,000 people currently accessing Tier 1 energy services	107,000 people currently accessing Tier 2 energy services
315,000,000 additional light hours unlocked for study, productive tasks or leisure time	193 change in quality of light in lumens per household
635,000 people currently living with improved energy access	

Sales⁹



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

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 [Agence Nationale de Statistique et de la Démographie - ANSD \(Projections 2022\)](#)

³ <https://www.usaid.gov/powerafrica>

⁴ Quality-verified products are tested according to the IEC TS 62257-9-8. For more information, please see the [Verasol quality assurance programme](#).

⁵ Share of quality-verified (QV) and non-QV products 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 [Plan Actions National d'Efficacité Energétique \(PANEE\), Sénégal \(Période 2015-2020/30\), CEREEEC, 2015](#)

⁸ Impact numbers have been estimated on the basis of the Standardized Impact Metrics for the Off-Grid Solar Energy Sector. The reported estimates differ from the previous edition of the country briefings due a change in the calculation approach. 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 country impact of off-grid solar lighting products sold.

⁹ 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

The electricity access rate in Senegal is among the highest in Sub-Saharan Africa with a national access rate of 70%. There is however a great disparity between urban areas where 95% of households have electricity, and rural areas where the access rate is just 53.2%.

Attracted by the stable political environment, several notable local and international solar PV companies like Oolu Solar and Baobab+ operate in Senegal, using cash sales, pay-as-you-go (PAYGo), and partnerships with micro-finance institutions (MFIs). In the 2019 PAYGo Market Attractiveness Index, Senegal was the highest ranking West African country, ranking 9th out of 24 countries.¹⁰

Policy, Regulation and Sector Planning

As one of West Africa's economic hubs Senegal has been a major player in the development of the off-grid sector. The sector is a priority point in the government's 2014 accelerated economic development plan called the "Plan Senegal Emergent" (PSE) or Emerging Senegal Plan (ESP)¹¹ which outlines the country's energy policies and national roadmap for electrification. The National Rural Electrification Program (PNER)¹² documents Senegal's primary electrification strategy which aims to achieve 100% access in urban areas and 90% access in rural areas by 2025.

The government noted that large-scale expansion of the national grid will not meet the needs of rural areas and have enacted several plans. The Operational Plan by SEforAll and the Ministry of Petroleum and Energy was designed and updated in 2021 to implement the government's universal access targets. The Local Initiative Rural Electrification (ERIL) executed by the Agence Sénégalaise d'Électrification Rurale (ASER), integrates off-grid solar into its official electrification framework. This aims to provide off-grid solutions to regions not covered by the grid through both mini-grids and solar home systems by subsidizing the capital costs of small, off-grid electrification projects. Under this model, solar home systems are intended to cover 3.3% of villages with low population density

and off-grid solar will be a critical enabler of the country's electrification goals.¹³

The National Assembly adopted Act No. 2021-31 of July 9, 2021 that reforms the country's electricity sector. The new law introduces the country's first electricity code, which aims to provide a new regulatory framework for the power sector and integrates regulations related to rural electrification. The new Electricity Code also structures a national policy for rural electrification by providing for the use of rural electrification concessionaires, and particularly decentralized rural electrification concessionaires through isolated mini-grids and Stand-Alone Solar systems.¹⁴

Promoting Quality & E-Waste Management

The Association Sénégalaise de Normalisation (ASN) (Standards Association of Senegal) develops and promotes national and international standards in Senegal.¹⁵ ACE-TAF and CLASP engaged ASN on the development of a roadmap to adopt IEC 62257-9-8 standards (<350Wp solar) which were adopted in December 2021.¹⁶

Senegal has no specific laws and regulations on e-waste. The Global Green Growth Institute (GGGI) launched a waste management project with a component of waste from electrical and electronic equipment (WEEE) in 2019 and aims to support the Government of Senegal in structuring the e-waste sector.¹⁷ In 2021 SetTIC, an eco-company operating in the field of recycling of WEEE became Senegal's first Environment Ministry-authorized e-waste recycling center working according to international regulations. SetTIC is supported by The Netherlands Trust Fund (NTF) IV.¹⁸

Taxation

In July 2020, the Senegalese Ministry of Energy introduced VAT exemptions for solar PV products. The Ministry also issued a list of 22 electricity and biogas production facilities that are exempt from VAT. The exempted products include solar panels, inverters, solar thermal collectors, batteries, solar lamp kits, solar water heaters, and charge regulators.

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¹⁰ [Stand Alone Solar Market Update Senegal, 2021](#)

¹¹ [Plan Sénégal Emergent \(PSE\)](#)

¹² [Programme National d'Électrification Rurale \(PNER\), 2016](#)

¹³ [Power Africa Off-Grid Project Senegal Market Assessment, 2021](#)

¹⁴ <https://www.dlapiper.com/en/us/insights/publications/2021/11/africa-energy-futures/africa-energy-futures-senegal/>

¹⁵ Visit [the Association Sénégalaise de Normalisation ASN](#) for more information.

¹⁶ [Adoption of IEC International Standards](#)

¹⁷ Visit [The Global Green Growth Institute](#) for more information.

¹⁸ <https://www.intracen.org/news/Electronic-waste-recycling-Senegal-business-model/>

¹⁹ [VAT exemptions for solar thermal and PV. Decree No. 010158](#)

Investments

As mobile money penetration increases, attention and capital have slowly turned toward West African markets but early-stage companies in Senegal have reported facing difficulties accessing equity. However, they can access debt through specialist debt providers (e.g., Lendable, SIMA Funds, SunFunder) and crowdfunding platforms (e.g., Lendahand, Solylend, Bettervest).²⁰

Baobab+ received €4 million in debt financing from the Energy Entrepreneur's Growth Fund (EEGF) and the Facility for Energy Inclusion Off-Grid Energy Access Fund (FEI-OGEF) to expand operations in Senegal and Côte d'Ivoire.²¹ Baobab+ also attracted €10 million in equity funding from Norfund to grow its existing presence in Senegal, Côte d'Ivoire, Mali, and Madagascar, and begin operations in new countries.²²

MyJouleBox, a France-based company raised €3 million in 2021 as part of its plan to deploy 36MW of off-grid solar power by 2023 to 55,000 new customers in Senegal, Benin, Burkina Faso, and Togo. Under the brand name 'Aress', they distribute solar home systems for household electrification in rural areas, as well as large-scale off-grid solar systems capable of powering peri-urban households, small and medium-sized enterprises (SMEs), and commercial and industrial customers.²³

Industry Association

The Business Council of Renewable Energy of Senegal (COPERES) was created in 2015 and is an independent association that represents its member companies and renewable energy professionals. Their ambition is to support the government of Senegal to increase the contribution of renewable energies to 30% by 2025. COPERES is under the National Associations of Renewable Energy Professionals which brings together entrepreneurs, consultants, and other private renewable energy services under Senegalese law. COPERES is also a member of the Professional Association of Renewable Energies of ECOWAS (APER-CEDEAO).²⁴

Sector Support Programs

The USAID-funded Power Africa Off-grid Project (PAOP) provides technical assistance and targeted grant funding to support the development of Africa's off-grid SHS and mini-grid sectors in Senegal and other African countries. Through a team of resident technical advisors, PAOP works with companies, investors, and governments to advance the role of the private sector in extending energy access while integrating gender into all its work streams.²⁵

The German Agency for International Cooperation (GIZ) through Energising Development (EnDev) Senegal program facilitates the establishment of a commercial supply chain for dynamic and sustainable markets for improved clean cookstoves and facilitates specific activities for the electrification of rural areas by identifying interventions to serve different demands of households and social institutions based on technical and economic criteria.²⁶

The World Bank-funded Regional Off-Grid Electricity Access Project (ROGEAP) aims to increase electricity access to households, businesses, and public institutions by supporting the development of the market for modern Stand-Alone Solar products through a regional approach covering 19 countries in Western and Central Africa. It seeks to unify policies and standards, as well as business procedures to develop a regional market of Stand-Alone Solar products, support entrepreneurs in business acceleration activities, and provide credits and grants for the deployment of Stand-Alone Solar home systems. ECOWAS coordinates the project activities, together with the West African Development Bank (BOAD).²⁷

Under the Foreign, Commonwealth and Development Office (FCDO), the Africa Clean Energy Technical Assistance Facility (ACE-TAF) has been pivotal in providing targeted support to enable a suitable environment for private sector delivery of access to energy through Stand Alone Solar systems. ACE-TAF shares market knowledge on Stand Alone Solar systems.²⁸

The sustainable energy program (Programme Energies Durable, PED) is funded by the German Ministry of Economic Cooperation (BMZ) and is implemented by GIZ. It aims to improve the conditions for the implementation of sustainable

²⁰ [Power Africa Off-Grid Project Senegal Market Assessment, 2021](#)

²¹ [Press release: Baobab+ raises 4 million euros to strengthen its action in Côte d'Ivoire and Senegal](#)

²² [Press release: Baobab+, leader in rural electrification in West Africa and Madagascar, is raising €10 million from Norfund](#)

²³ <https://www.ruralelec.org/news-from-are/myjoulebox-leading-west-african-solar-operator-secures-eur-3m-series-round-are>

²⁴ Visit [COPERES](#) for more information

²⁵ [Senegal Power Africa Off-grid Project \(PAOP\) Fact Sheet](#)

²⁶ Visit [Senegal-EnDev](#) for more information

²⁷ Visit [Regional Off-Grid Electrification Access Project \(ROGEAP\) Overview](#) for more information

²⁸ Visit [ACE-TAF Senegal Fact Sheet](#) for more information

energy services by enhancing political framework conditions, vocational training in renewable energies, energy efficiency, productive use of solar energy, and rural electrification.²⁹

In 2019, Dr Akinwumi Adesina, President of the African Development Bank (AfDB), announced the “Desert to Power” project, an ambitious project for the development bank whose main objective will be to accelerate the development of the production of solar energy connected to the grid and off grid in the Sahel countries including Senegal. At least 90 million people will be electrified by decentralized solar systems. The objective is to generate 10 GW through solar PV systems via public, private, grid and off-grid projects by 2025. Initially, the project will focus on the G5 Sahel countries. The main outcome of this regional project is to accelerate electrification through off-grid solutions.³⁰

Opportunities and Barriers

The Senegalese government is committed to supporting the renewable energy sector and rural electrification in the country and officially recognized off-grid solar as an ideal solution, demonstrated by the adoption of the new electricity code.

Senegal has strong partnerships with MFIs, and this has been key in the success of some off-grid solar companies in the country. Links with MFIs range from partnerships to wholly owned subsidiaries (e.g., Baobab+). Cash-and-carry sales models still dominate the sales volume in Senegal, but MFIs are the primary financing options for customers looking to purchase larger systems. Given the relatively low mobile-money penetration in the region, partnerships with MFIs are key in addressing consumer access to finance.

The establishment of the National Off-Grid Consultation Framework created by the Ministry of Energy³¹ provides many opportunities for off-grid sector development in Senegal, such as targeted concessional finance and technical assistance for companies, and the creation of quality standards.

Further Information

- [Plan Actions National d'Efficacité Energétique \(PANEE\), Senegal, Période \(2015-2020/2030\), PEEC, 2015.](#)
- [Plan d'Actions National des Energies Renouvelables \(PANER\), Senegal, Période \(2015-2020/2030\), PERC, 2015](#)
- [Senegal, Country Fact Sheet, Power Africa, 2018](#)
- [Évaluation du marché de l'énergie solaire hors réseau et conception de dispositifs de soutien au secteur privé - Rapport Sénégal](#)
- [Sous-Commission Cadre Favorable à l'Électrification Rurale Hors Réseau](#)
- [Guide d'importation et d'exonération de la taxe sur la valeur ajoutée sur des produits et systèmes solaires hors réseau au Sénégal](#)

²⁹ Visit [Sénégal : Programme Energies Durables \(P.E.D.\)](#) for more information

³⁰ Visit [Desert to Power Initiative](#) for more information

³¹ [Stand Alone Solar Market Update Senegal, 2021](#)