Project Information Document (PID)

Concept Stage | Date Prepared/Updated: 22-Jul-2020 | Report No: PIDC30098

BASIC INFORMATION

A. Basic Project Data

Country	Project ID	Parent Project ID (if any)	Project Name
Western Africa	P170599		ECOWAS Regional Electricity Access Project (Phase 2) (P170599)
Region	**Estimated Appraisal Date**	**Estimated Board Date**	**Practice Area (Lead)**
AFRICA WEST	Feb 22, 2021	May 11, 2021	Energy & Extractives
Financing Instrument	**Borrower(s)**	**Implementing Agency**	
Investment Project Financing	The Republic of Senegal,Islamic Republic of Mauritania,The Republic of Niger,ECOWAS	SENELEC, NIGELEC, ECOWAS Directorate for Energy and Mines, SOMELEC	

Proposed Development Objective(s)

The Project Development Objective is to increase grid electricity access in the Islamic Republic of Mauritania, the Republic of Niger and the Republic of Senegal

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	315.00
Total Financing	315.00
of which IBRD/IDA	315.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	315.00
IDA Credit	309.00
IDA Grant	6.00

Environmental and Social Risk Classification	Concept Review Decision
Substantial	Track II-The review did authorize the preparation to continue

Other Decision (as needed)

B. Introduction and Context

Country Context

1. **For over 40 years, the Economic Community of West African States (ECOWAS) has united 15 countries with the stated goal of promoting economic cooperation and achieving 'collective self-sufficiency'.** Its original members include Benin, Côte d'Ivoire, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, The Gambia, Togo, and Burkina Faso (joined as Upper Volta). Cabo Verde later joined in 1977. The block of countries occupies a little over 5 million km^2 and is highly heterogeneous—economically, culturally, and ecologically—presenting both opportunities and challenges to economic growth and development. Fourteen of the countries are sparsely populated and four are landlocked, depending on their neighbors for crucial access to global markets. The region is home to 370 million people**,** of which 55 percent live in low density rural areas.

2. **Despite recent economic growth, West Africa remains poor and around 50 percent of the population still lives on less than US$2 per day.** The countries in the region are some of the poorest in Sub-Saharan Africa with gross domestic product (GDP) per capita of under US$1,000 on average and as low as US$363 in Niger. Thus, despite being home to around 33 percent of the Sub-Saharan African population, the region accounted for just 28 percent (US$1,606 billion) of GDP in 2015. There has been a positive economic trend over the past decade, driven mainly by growing domestic demand, increased foreign investment, favorable commodity prices, and improved economic governance. As a result, West Africa was one of the highest performing regions of the continent. However, the strong GDP growth that the region achieved over 2010–2014 decreased severely to 2.25 percent in 2015 and −0.2 percent in 2016 due to the impacts of the Ebola crisis and protracted low commodity prices. Thus, while the first Millennium Development Goal (MDG) target of halving poverty was met globally, this was not the case in West Africa. Over the 1990–2015 target period, ECOWAS only experienced a 29 percent reduction in overall poverty. Today, 70 percent of this region's population still lives below US$3.10 per day.

3. **ECOWAS and the Sahel therefore need economic growth that is more transformational, sustainable, and inclusive to reduce extreme poverty and boost shared prosperity on the scale required by the Sustainable Development Goals (SDGs).** Achieving this presupposes deeper regional integration and stronger economic cooperation, the theoretical benefits of which are well-understood. In many cases, the national borders were mostly drawn by former colonial powers and have little relationship with ethnic and cultural homogeneity. The resulting small size of many countries and fragmentation of domestic markets has led to various inefficiencies, which in turn pull down the economic potential of the entire continent. Regional integration increases productivity and output by encouraging labor and capital mobility, increases the potential trading volume among integrated countries, and facilitates the spread of technology and knowledge through the exchange of goods and ideas.[1] In practical terms, successful regional integration requires the

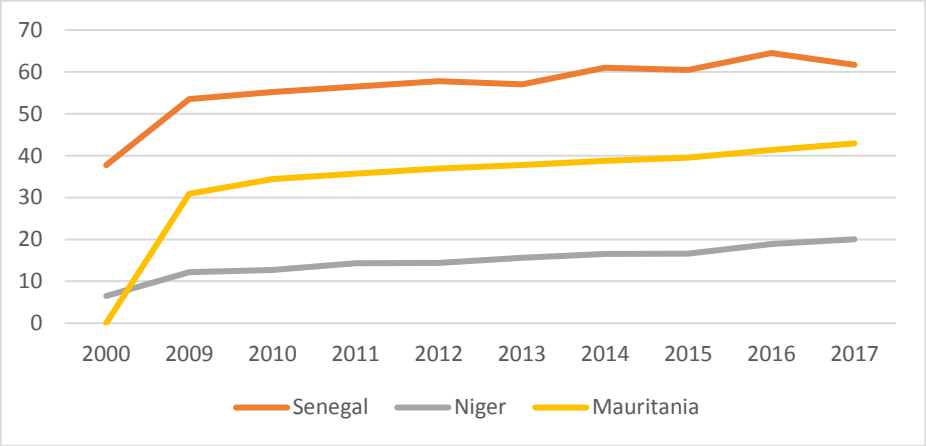
[1] AfDB (African Development Bank), OECD (Organisation for Economic Co-operation and Development), and UNDP (United Nations Development Programme) UNDP. 2016. *African Economic Outlook 2016*.

effective management by countries of relevant 'border crossers' including people, commodities, money, electricity, water, technology, and institutions among others.

Sectoral and Institutional Context

4. **Electricity access is a priority in ECOWAS and Sahel because almost half of the ECOWAS population and almost three quarters of the Sahel population (184 million people in ECOWAS and 64 million people in Sahel),** do not have access today. Access to electricity in Sub-Saharan Africa lags the rest of the world. Until recently, the total number of people without access to electricity continued to increase as population growth outpaced the rate of electrification. Substantial disparities in the economies of ECOWAS and Sahel countries mean that electricity access rates are unidentical. Guinea-Bissau, for example, has an access rate as low as 14.7 percent overall and just 4 percent in rural areas. Overall, the region's growth in access has historically occurred at speeds far below what is needed to achieve SDG 7, namely ensuring access to affordable, reliable, sustainable, and modern energy for all by 2030. Figure 1 shows access evolution for Mauritania, Niger, and Senegal.

Figure 1. Access to Electricity in Target Countries



Source: World Bank Development Indicators Database

5. **ECOWAS is the regional coordinator for electricity trade and integration which aims at expanding on-grid access and improving the cost of supply to the countries by intensifying an interconnected power system**. In 1999, ECOWAS established the West African Power Pool (WAPP) to integrate national power systems into a regional electricity market. While not a member of ECOWAS, Mauritania enter an association agreement with ECOWAS countries for joint regional integration on May 17, 2017. This approach was based on the benefits of optimizing energy resources across the region, given different country endowments and load profiles. A regional mechanism creates the opportunity to both capitalize on large-scale generation plants designed to support multiple countries and trade power to maximize availability and minimize cost. The expectation is that, over the medium to long term, this mechanism will help to provide stable and reliable electricity supply at an affordable cost. The stark contrast between large energy surpluses in some countries and others who struggle with scarcity of cost-efficient sources of electricity suggests fertile ground for regional trade.

6. **The WAPP is underpinned by an infrastructure program comprising mutually reinforcing subprograms that will converge into a unified transmission system linking all West African countries by 2021.** In the past decade, WAPP member countries have successfully secured financing and set up the institutional structure to make major progress on five subprograms as follows: (i) The Coastal Transmission Backbone Subprogram P094917 (Côte d'Ivoire, Ghana, Benin/Togo, and Nigeria); (ii) The Interzonal Transmission Hub Subprogram (Burkina Faso, Ghana, Côte d'Ivoire and Mali); (iii) The Gambia River Basin Development Organization P146830 (OMVG) and the Guinea-Mali Interconnector P166042

(The Gambia, Guinea, Guinea-Bissau, Mali, and Senegal); (iv) The North-Core Transmission Subprogram P162933 (Nigeria, Niger, Burkina Faso, and northern Benin and Togo; and (v) The Côte d'Ivoire-Liberia-Sierra Leone-Guinea Power System P113266. These programs are being implemented under the leadership of the WAPP, and with the support of several donors, including the World Bank, the African Development Bank (AfDB), and other multilateral and bilateral institutions.

7. **Mauritania has made notable progress in the electricity sector as a result of significant investments in its power infrastructure – standing at an access rate of 44.5 percent.** Like other countries in the region, the increase in generation capacity has mainly served urban centers. Only 10 percent of the rural population is connected to the grid – compared to 72 percent electrification rate in urban centers. Tariffs are generally not high enough to cover costs, which in turn deters investments. In addition to below cost tariffs, collection rates in Mauritania is approximately 64 percent, resulting in a gap of more than US$0.15 per kWh. Consequently, the utility is unable to attract investment due to its poor financial performance. Mini grids are part of the electrification solution in the country, with the Government prioritizing a strong regulatory framework as well as a private sector approach to develop the sector.

8. **Niger has one of the lowest electrification rates in West Africa at 17.6 percent of the population.** 67 percent of the urban population is electrified while only 1 percent have access in rural areas. The electricity sector is facing many challenges at the forefront of which is the very high tariff of US$0.18 per kWh. While this is almost twice the global average, it is still insufficient to achieve full cost recovery. Other challenges include: (i) extremely low access to electricity in rural areas, (ii) rapidly growing demand for electricity which is outpacing GDP growth and is mostly met by electricity imports from Nigeria, (iii) maintaining the state-owned utility, NIGELEC, financial profitability in the short and medium term while at the same time increasing generation capacity, absorbing higher import costs and servicing new debt. The Government has prioritized developing institutional and legal frameworks to address sector challenges. One of these measures included the Electricity Act which dismantled the monopoly of NIGELEC and allowed for private sector participation in generation and rural electrification. However, Niger will continue rely on fossil fuel-based generation and electricity imports in the medium term, as well as greenfield renewable energy projects to meet rising electricity demand.

9. **Senegal has a more advanced power sector and higher access rate.** Approximately 67 percent of the population was electrified, including 92 percent of the urban centers and 40 percent in rural areas although the Government aims to achieve universal access by 2025. The country's power sector is dominated by SENELEC, a vertically integrated state-owned utility. SENELEC controls the transmission and distribution of electricity in addition to nearly half the country's generating capacity. IPPs own the other half and sell directly to SENELEC. The main challenge facing the power sector is the electrification rate in rural areas, which remains low. Despite putting in place a Rural Electrification Action Plan in 1998, the Government and private stakeholders have struggled to make significant progress. Another key challenge facing the sector is the operating financial deficit of SENELEC, which covered by the Government annually. The high electricity tariffs of US$0.18 per kWh which is 80 percent more than the global benchmark of US$0.10 per kWh does not cover the cost of service (US$0.24 per kWh). The outlook for the sector is dominated by the discovery and planned development of natural gas, which along with renewable energy, will be at the forefront of the government's effort to shift the energy mix and modernize the electricity sector.

Relationship to CPF

10. **The proposed project supports the implementation of the World Bank Group's (WBG) Country Partnership Framework (CPF) for the Islamic Republic of Mauritania for the period FY18-FY232, which centers around achievement of inclusive and resilient growth, and building on the country's natural resource wealth**. The CPF clearly specifies

[2] Report № 125012-MR, July 12, 2018.

government priorities and highlights access to electricity in the poorest rural areas and intermediate cities as urgencies. While the country has made progress in increasing power generation capacity, the benefits have mainly targeted urban areas while rural electrification remains low at approximately 10 percent.

11. **The proposed project supports the implementation of the WBG CPF for the Republic of Niger for the period FY18-FY22[3].** The CPF is aligned with the country's second Plan for Economic and Social Development which highlights key strategies to meet Niger's goals of the acceleration of economic and social development. The CPF lists the availability of productive infrastructure for trade in rural areas as a key objective, with the number of additional households provided with electricity access as a main indicator.

12. **The proposed project supports the implementation of the WBG CPF for Senegal4. The CPF is aligned with the country's National Development Plan which is entering its second implementation phase**. The CPF specifies lowering energy cost and carbon footprint and optimizing the energy risk as key objectives in achieving sustainable and inclusive economic growth. The focus includes reducing subsidies, increasing rural household electrification, and reducing technical and commercial losses in electricity service delivery.

C. Proposed Development Objective(s)

13. The Project Development Objective is to increase grid electricity access in the Islamic Republic of Mauritania, the Republic of Niger and the Republic of Senegal.

Key Results (From PCN)

14. The PDO-level indicator is people provided with new or improved electricity service

D. Concept Description

15. **The project comprises three components:** (a) Design, supply, and installation of electricity distribution infrastructure (medium voltage [MV] and low voltage [LV]) to maximize new connections; (b) Supervision of the construction and technical advisory; and (c) Project coordination and technical assistance.

16. **Component 1: Design, supply, and installation of electricity distribution infrastructure (estimated cost: US$280 million, of which IDA US$280 million).** This component specifically supports the detailed design, supply, and installation of distribution networks from the WAPP 225/33 kV substations with the following scope: (a) MV lines; (b) 1MV/LV distribution substations; (c) LV lines to expand grid coverage and maximize the number of new connections; and (d) last-mile connection equipment, including service drops, prepaid meters, and ready boards for LV customers.

17. **Component 2: Supervision of the construction and technical advisory (estimated cost: US$9 million, of which IDA US$9 million).** This component will finance the costs associated with the recruitment of an owner's engineer who will be recruited on a competitive basis under the project to supervise the work carried out under Component 1. The owner's engineer will also monitor compliance with safeguard instruments (environmental and social) related to construction.

18. **Component 3: Project coordination and technical assistance (estimated cost: US$26 million, of which IDA US$26 million).** In the spirit of strengthening national and regional capacities, this component will finance a combination of technical assistance and project management support to assist recipients in successfully implementing the project and preparing for future phases under the program. Specifically, this component will finance the strengthening of recipient

[3] Report № 123736-NE, April 10, 2018.
[4] Report № 143333-SN, February 11, 2020.

implementation teams responsible for project implementation, expected project costs associated with the management of safeguards excluding the resettlement costs, and technical advisory services pertaining to preparation studies—such as least-cost electricity access development plans—for future projects in the region

Legal Operational Policies	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Areas OP 7.60	No

Summary of Screening of Environmental and Social Risks and Impacts

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