AFRICAN DEVELOPMENT BANK GROUP

PROJECT: The Gambia Electricity Access Project (GEAP)
COUNTRY: Republic of The Gambia

PROJECT APPRAISAL REPORT

Septembre 2019

Project Team	Team Leader	Minkailou Halidou Toure, Senior Energy Economist	RDGW.1	4620
	Team Members	Emanuel Maniragaba, Senior Power Engineer	RDGW.1 /COLR	7075
		Moses Yao Duphey, Environmental and Social Safeguards Expert, Consultant	SNSCO	4829
		Kemayou Emile, Principal Political Economist/Fragility Expert	RDTS	1702
		Tidiani Ouédraogo, Senior Gender Expert, Consultant	AHGC.1	5350
		Philip Doghle, Principal Financial Management Specialist	SNFI.2	4637
		Fatimata Ball, Energy Specialist Young Professional	RDGW.1	4499
		Daniel Osei-Boakye, Senior Procurement Officer	SNFI.1/C OLR	4521
	Sector Division Manager	Amadou Bassirou Diallo	RDGW.1	1681
	Country Manager	Serge M. N'Guessan	COSN	4042
	Sector Director	Henry Paul Batchi Baldeh	PESD	4036
	Regional Director	Marie-Laure Akin-Olougbade	RDGW	4046

Peer Review	Fatimata Gaba-Ouédraogo, Chief Power Engineer	RDGW.1	4269
	Pierre Djaigbe, Principal Energy Officer	RDGW.1 /SNFO	6597
	Oscar Sindayigaya, Senior Renewable Energy Expert-Consultant	RDGW.1	
	Bocar Cissé, Senior Financial Analyst	RDGW.2	2316
	Moussa Koné, Principal Power Engineer	RDGE1	8265

AFRICAN DEVELOPMENT BANK GROUP

GAMBIA

THE GAMBIA ELECTRICITY ACCESS PROJECT (GEAP)

RDGW/PESD/COSN

September 2019

Public Disclosure authorized

TABLE OF CONTENTS

CURRENCY EQUIVALENTS
May 2019 (at appraisal)

UA 1	USD 1.389
UA 1	GMB 69.09
USD 1	GMB 49.33

FISCAL YEAR
1 January - 31 December

WEIGHTS AND MEASURES

- m Metre
- cm centimetre = 0.01 metre
- mm millimetre = 0.001 metre
- km kilometre = 1 000 metres
- m² square meter
- cm² square centimetre
- km² square kilometre = 1 000 000 m²
- ha hectare = 10 000 m²
- t (t) metric tonne (1 000 kg)
- KOE kilogram of oil equivalent
- kV kilovolt = 1 000 volts
- kVa kilovolt ampere (1 000 Va)
- kW kilowatt = 1 000 Watts
- GW gigawatt (1000 000 kW or 1000 MW)
- MW megawatt (1 000 000 W or 1 000 kW
- kWh kilowatt hour (1 000 Wh)
- MWh megawatt hour (1 000 KWh)
- GWh gigawatt hour (1 000 000 KWh)

ACRONYMS AND ABBREVIATIONS

AfDB	:	African Development Bank
ADF	:	African Development Fund
BD	:	Bidding Documents
CB	:	Country Brief
CSI	:	Core Sector Indicator
DFI	:	Development Financial Institution
ESIA	:	Environmental and Social Impact Assessment
ESMP	:	Environmental and Social Management Plan
ERR	:	Economic Rate of Return
GDP	:	Gross Domestic Product
HV	:	High Voltage
IRR	:	Internal Rate of Return
LV	:	Low Voltage
MoEP	:	Ministry of Energy and Petroleum
MoFEA	:	Ministry of Finance and Economic Affairs
MV		Medium Voltage
NDP	:	National Development Plan
NEA	:	National Environmental Agency
NGO	:	Non-Governmental Organization
NPV	:	Net Present Value
OMVG	:	Organisation pour la Mise en Valeur du fleuve Gambie
PAP	:	Project Affected Person
PFM	:	Public Finance Management
RAP	:	Resettlement Action Plan
UA	:	Units of Account
US	:	United States
USD	:	United States Dollars
WAPP	:	West African Power Pool
WB	:	World Bank

PROJECT INFORMATION SHEET

Client Information	
Borrower/Recipient	Republic of The Gambia
Executing Agency	National Water and Electricity Company (NAWEC)

FINANCING PLAN		
Sources	**Amount (UA million)**	**Instrument**
ADF loan converted to Grant	2.77	Grant
TSF -Pillar I Loan converted to Grant	8.32	Grant
TSF -Pillar I Grant	1.51	Grant
World Bank	47.21	Grant
NAWEC	0.15	Counterpart contribution
NAWEC	2.3	Contribution in kind
Total Project Cost	**62.26**	

	KEY FINANCIAL INFORMATION		
	TSF Grant	**TSF Loan converted to Grant**	**ADF Loan converted to Grant**
Loan Currency	UA	UA	UA
Interest Type	N/A	N/A	N/A
Interest Rate Margin	N/A	N/A	N/A
Service Charge	N/A	N/A	N/A
Commitment Fee	N/A	N/A	N/A
Tenor	N/A	N/A	N/A
Grace Period	N/A	N/A	N/A

KEY FINANCIAL & ECONOMIC OUTCOMES		
	Financial	**Economic**
Net Present Value	USD3.58 million	USD15.86 million
Internal Rate of Return	13.1%	17.5%

TIMEFRAME – MAIN MILESTONES	
Concept Note Approval	03 May 2019
Project Approval	3 October 2019
Effectiveness	November 2019
Last Disbursement	July 2023
Completion	May 2023
Closing Date	31 December 2023

PROJECT SUMMARY

Project Overview: The Gambia Electricity Access Project's ultimate objective is to increase the Gambian population's access to affordable and reliable electricity services. It will involve the construction of Medium and Low Voltage lines, erection of transformers and connection of customers in Lower River, North Bank, Central River, and West Coast regions. From the OMVG Energy Project's two substations (Brikama and Soma), under physical implementation, the project will provide people (men and women) with electricity access and improve the performance of the National Water and Electricity Company (NAWEC) by increasing its billing and revenue collection capacities, and building its staff capacities. With a total cost of UA62.26 million, the project will be implemented within four (04) years.

Project Impact: The sixty one thousand (61,000) beneficiaries of the project will be households (including women headed households), small businesses, and public institutions (local governments, elementary, high schools, and health centers) in urban and rural areas: approximately 22,000 customers in Lower River region; 18,000 in North Bank region; 15,000 in Central River region, and 6,000 in West Coast region. In addition, the project will reduce the customers' connection charges by providing last-mile connection equipment (including prepaid meters) enabling poor households connection and management of their own consumption without the risk of the physical disconnection process that can arise because of unpaid monthly bills. Finally, the project activities will ultimately improve NAWEC's operational efficiency and revenue base, which will in turn help improve the financial position of the sector and eventually result in lower end user tariffs.

Needs Assessment: Approximately half of the population in The Gambia has access to electricity services. While sixty per cent of the population in the Great Banjul Area (GBA) is served, only twenty-five per cent of the population in the other regions has access. The generation mix of The Gambia is one hundred per cent from Heavy Fuel Oil (HFO) and Diesel, exposing the utility to oil volatility. The regional power trade has been identified as a significant opportunity for The Gambia to import low-cost and renewable power from its neighbouring countries. The OMVG Energy Project is a vehicle for such an import. It should be noted that AfDB is the Lead financier of that project. The GEAP project is a complementary investment to OMVG Energy project to increase the population's access to affordable and reliable electricity services in both rural and urban areas.

Bank's Added Value: This project complements the OMVG Energy project and reinforce the ongoing investments in electricity sub-sector in The Gambia**.** With this project, the Bank would consolidate its leadership in the electricity-value chain investment in The Gambia and position itself among the development partners active in the access development segment in The Gambia. By leveraging its experience of electricity access projects in West African Region, AfDB's intervention will make connection affordable for low-income households (including women headed-households) and support financial viability strategies of the utility. The Bank's experience in similar operations helped to better structure the project.

Knowledge Management: The Bank will reinforce the monitoring and evaluation system of NAWEC to collect data and follow evolution of the project's key indicators (outputs and impacts) on beneficiaries. In addition, the Bank will learn from reports of: (i) NAWEC staff trainings and study tours; and monitoring and evaluation reports of (ii) supervision missions, Owner's Engineer and the Financial Auditor. Lessons learnt from the project implementation will inform project completion report on specific issues in a concise summarized way. In addition, they will be used as a basis of discussions at networks and workshops, and as starting point for strength, weakness, opportunity and threat (SWOT) analyses for similar project. That will enhance the Bank to better structure its future operations in relevant manner.

RESULTS-BASED LOGICAL FRAMEWORK

Country and project name: The Gambia- The Gambia Electricity Access Project (GEAP)
Purpose of the project: Contribute to improve the Gambian population's living conditions in urban and rural areas.

RESULTS CHAIN		PERFORMANCE INDICATORS			MEANS OF VERIFICATION	RISKS & MITIGATION MEASURES
		Indicator (including Core Sector Indicator)	Baseline 2018	Target (2023)		
IMPACT	Contribution to increase access to affordable and reliable electricity	- National Electricity Access Rate - Electricity Access Rate in rural area	- 50% - 25%	- 70% - 50%	- National statistics - NAWEC annual reports	**Risk**: (i) Unsuccessful implementation of The Gambia National Development Plan and the Energy Sector Road Map Objectives. **Mitigation**: (i) GOG and Development Partners commitment will be geared towards the implementation of the Gambia National Development Plan the Energy Sector Road Map Objectives.
OUTCOMES	People provided with electricity access	- Number of households and businesses provided with electricity access	-	- 61,000	- Human Development Report; - National statistics; - Project post-evaluation report; - NAWEC quarterly and annual reports; - Impact assessment on women's access to electricity report; - Women's bureau annual report; - Impact assessment on women's empowerment report.	**Risk**: (i) Shortage in power generation **Mitigation**: (i) Power generation will be reinforced by the ongoing rehabilitation of capacity, installation of new plants (including solar) and the commencement of operation of OMVG energy by 2022. **Risks:** (ii) Payment collection/Theft risks **Mitigation**: (ii) Installation of Automatic Meter Reading (AMR) for large consumers and pre-paid meters for household consumers will mitigate these risks. **Risks:** (iii) Inadequate operation and maintenance due to lack of resources **Mitigation**: (iii) NAWEC's cost recovery will enhancing it to maintain properly its assets. **Risks:** (iv) Sector's Poor Financial Situation **Mitigation**: (iv) The GoTG and NAWEC agreed upon to clear progressively the public sector arrears and to transition public sector clients to prepaid meters (except for critical facilities).
		- Number of women households and businesses provided with electricity access	-	- 18,000		
	Greenhouse Gases emissions avoided	- Ton of CO_2 emissions avoided per year	-	- 25,000		
	Jobs created	- Number of direct permanent jobs (with at least 30% for women) created during operation	-	- 60		

OUTPUTS	Electrical infrastructures built in rural and peri-urban areas	- Length of 33 KV - Length of 30 KV - Number of 33kV/400 V transformers - Number of 30kV/400 V transformers - Length of 400 V LV lines - Number of electrified localities - Number of customers connected - Number of Customer Service Centers built - Number of NAWEC Staff (desegregated by sex) trained - Number of studies completed - Number of temporary jobs (desegregated by sex) created during implementation	- 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0	- 903km - 118km - 389units - 128units - 1,338km - 376 - 61,000 - 2 - 20 - 1 - 1,500	- Progress reports from the implementing agency; - Supervision mission reports from AfDB and World Bank; - Disbursement and financial reports from the implementing agency; - Project completion report	**Risks:** (i) Lack of attracting suitable and qualified contractors **Mitigation:** (i) Creating sizable bidding packages by aggregating sparse and small works. Because of the substantial economies of scale, large and quality contractors showed more interest to bid and construct.

	Components	**Inputs**	
		Source (UA62,26 million)	**Amount (UA62,26 million)**
ACTIVITIES	1. **Expansion of electricity distribution infrastructure :** construction of electrical infrastructures (MV & LV lines and MV/LV transformers), supply of connection equipment, acceptance tests and commissioning, 2. **Project Implementation Management:** consultancy services for electrical works supervision, service provisions for works supervision of Customer Service Centers, provisions of two vehicles to ensure effective site supervision, PIU operation fees. 3. **Institutional development and capacity building:** four counterpart engineers on the job training with contractor (EPC and Owner's Engineer), trainings, study tours and provision of laptops to counterpart engineer, construction of two Customer Service Centers, sensitization to productive use of electricity, empowerment of women and youth, training on gender and sustainable development.	**ADF Loan converted to Grant** **TSF-Pillar 1 Loan converted to Grant** **TSF-Pillar 1 Grant** **World Bank Grant** **NAWEC (in kind)** **NAWEC Counterpart Fund**	**UA2.77** million **UA8.32** million **UA1.51** million **UA47.21** million (US$66. million) **UA2.3** million **UA0.15** million
		Total	**UA62.26** million

PROJECT IMPLEMENTATION SCHEDULE

Activities		2019						2020												2021												2022												2023					
		7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7
Approval & Effectiveness	Approval																																															
	Entry into force																																															
	Effectiveness																																															
	First Disbursement																																															
Activities on the Soma and Brikama networks	Procurement of Consultant for Design, preparation of Bidding Document provision of technical assistance for Bid Evaluation and preparation of contractual documents																																															
	Review of Designs and Tendering																																															
	Procurement of Contractors for works																																															
	Works																																															
	Supervision of works																																															
Project Support	Implementation of Environmental and Social Management Plan (ESMP)																																															
	Procurement of providers of Technical Assistance and Capacity Building																																															
	Procurement of External Audit Services (Financial & Procurement)																																															
	Technical Assistance and Capacity Building activities																																															
	Audit Services activities																																															
	Acquisition of Office equipment																																															
	Acquisition of vehicles																																															
Project Completion Activities	Preparation of Project Completion Report (PCR)																																															
	Project Closing																																															

REPORT AND RECOMMENDATION OF THE MANAGEMENT OF THE AfDB GROUP TO THE BOARD OF DIRECTORS ON A PROPOSED GRANTS TO THE REPUBLIC OF THE GHAMBIA FOR THE GAMBIA ELECTRICITY ACCESS PROJECT

Management submits the following report and recommendations on proposed ADF Grant of UA 2.77 million and TSF-Pillar 1 Grant of UA 9.83 million to the Republic of The Gambia for The Gambia Electricity Access Project (GEAP).

STRATEGIC THRUST AND RATIONALE

Project Linkages with Country Strategy and Objectives

1.1.1 The proposed project is in line with The Gambia's Country Brief (2017-2019), the Gambia National Development Plan (2018-2021) and the Energy Sector Road Map's second phase (2018-2020) as it aims at improving the Gambian population's access to electricity services, in both rural and urban areas, by extending the National Water and Electricity Company's (NAWEC) distribution system, from the OMVG's substations.

1.1.2 The Country Brief for The Gambia (2017-2019) places emphasis on assistance to the Government to ensure improved governance and enhanced capacity to respond to the unique constraints faced by the Gambia, as a fragile state. Other immediate priority areas earmarked for assistance are energy with a focus on electricity access development, as well as water and sanitation to improve the life conditions of the people, and promotion of better integration of The Gambia within the region. This project will support both electricity access development and promotion of integration by expanding access to reliable and affordable electricity services to households, small and medium enterprises and industries through import from neighbouring countries of OMVG (Guinea and Senegal).

1.1.3 The CB is aligned with the country's National Development Plan (2018-2021) and the Energy Sector Road Map's second phase (2018-2020). The Goal of the NDP is to deliver good governance and accountability, social cohesion, and national reconciliation and a revitalized transformed economy for the wellbeing of all Gambians. It particularly focuses on expenditure in favor of policies, programs and projects in agriculture modernization, infrastructure and energy, human capital development, gender equality, youth empowerment as well as private sector development. The Gambia's vision for the energy sector as laid out in the NDP (2018-2021) is to improve access to electricity and enhance household energy security for sustainable economic development.

Rationale for Bank Involvement

1.1.1 Approximately half of the population in The Gambia has access to electricity services. While sixty per cent of the population in the Great Banjul Area (GBA) is served, only twenty-five per cent of the population in the other regions has access. In addition, the electricity sub-sector is experiencing insufficient and irregular electricity supply. Even with the current thirty (30) MW power rental, the gap between demand and supply at peak stands at eleven (11) MW in Great Banjul Area. The generation mix of The Gambia is one hundred percent from HFO and Diesel, exposing the utility to oil volatility price that is not reflected in tariff. The average electricity tariff is US$0.26 per kWh against an estimated operating cost per kWh of US$0.39 exacerbating the NAWEC's financial viability. As result, National Water and Electricity Company (NAWEC) is not able to perform basic maintenance activities, let alone make the investments required to upgrade and expand the electricity system.

1.1.2 The regional power trade has been identified as a significant opportunity for The Gambia to import low-cost and renewable power from its neighboring countries. The OMVG Energy Project is a vehicle for such an import. It should be noted that AfDB is the Lead financier of that project. Funded by eight (08) donors with a total amount of US$1.2 billion, the OMVG Energy Project is under physical implementation

and its commissioning is expected in December 2020. The project is a complementary investment to OMVG Energy project. In fact, the interconnection will enable The Gambia to import high volumes of electricity from the sub region, allowing it for example to access low cost hydro from Guinea, or in the future, gas to power from Senegal, and more broadly from the West Africa Power Pool (WAPP). These are much cheaper sources of electricity, which could fundamentally change the cost structure of electricity. From the two major substations of the OMVG Energy Project within the Gambian territory, the project will expand electricity access to both urban and rural communities.

1.1.3 The design of the project is consistent with the Bank's revitalised focus (High 5s in its pillar 1), New Deal for Energy and Ten Year Strategy (TYS) as it finances the expansion of medium and low-voltage networks from the high-voltage two (02) substations (Brikama and Soma) of the OMVG Energy Project to expand electricity grid and increase access. In addition, and in line with the JfYS 2016-2025, the proposed project provides opportunity to realize the potential employment benefits including relevant facilitation to Micro Scale and Medium Enterprise (MSME) growth. The project will also contribute to inclusive growth by creating employment and broadening opportunities for participation across gender, age and geography in the project area. The country's comparative socio-economic indicators are provided in Appendix I. The country's development agenda and sector brief are also provided in Annex A.

1.1.4 Drawing on its expertise and experience in similar projects in the region, the Bank engagement will enable adoption of best practices in design and execution of network expansion, thus ensuring technically and socially efficient delivery. Beside, financing the last-mile is key to achieving the benefits of the OMVG interconnection. It will enable The Gambia to source loans at rates that would ensure the financial viability of the distribution extension that is critical for increasing access to electricity and supporting inclusive economic growth.

Aid Coordination

1.1.1 The aid architecture in The Gambia is constituted of many Development Partners (DPs) assisting the country through various financing instruments. In addition to the AfDB, the IMF and the WBG, major development partners currently include the Islamic Development Bank, EU, DFID, OPEC, UNDP, IFAD, UN agencies, Taiwan, India and Japan. The Gambia has signed the Paris Declaration on Aid Effectiveness, and most DPs are aligning external assistance with country objectives as presented in the National Development Plan (2018-2021). The current macro-economic situation and related prospects has supported revival of the budget support group comprising the AfDB, EU, IMF and the WBG. In the energy sector specifically, the aid coordination is very active and include AfDB, WBG, IsDB, EIB, Exim Bank of India and Kuwait Fund. A list of ongoing and future projects in the electricity sub-sector in The Gambia is provided in Appendix 2.

1.1.2 Beside the close cooperation between the AfDB and the WBG on the JAS-I and II preparation and budget support policy matrix, donor harmonization is only most advanced in the education sector. Sectoral aid coordination groups of the various donors and UN agencies in Banjul are still not very active. The design of the project has benefited from various consultations among DPs and its implementation will benefit from the coordination arrangements for the energy sector in The Gambia, in general and in particular the on-going OMVG Energy Project being supported by eight donors (WB, EIB, AFD, BOAD, KfW, Kuwait Fund, IsDB and AfDB as Lead donor).

PROJECT DESCRIPTION

The project draws on the on-going ECOWAS/OMVG Gambia Electricity Access Program, which is being supported by the Bank and many other Development Partners (DPs) including the World Bank. The program will contribute to achieving The Gambia's overarching development agenda of improving access to electricity and enhance household energy security for sustainable economic development.

The ultimate objective of this project is to contribute to improve the Gambian population's living conditions by increasing access to affordable and reliable electricity services and empowering NAWEC and project areas communities. More specifically, the project will: (i) provide people access to electricity by connecting households and businesses; (ii) avoid CO_2 emissions; and (iii) create jobs and stimulate the local economy.

1.2 Project Components

1.2.1 The project is part of the ECOWAS/OMVG Gambia Electricity Access Program, which is partially funded by the World Bank. AfDB's financing will complement the World Bank one to expand electricity access to low-income households and business in both rural and peri-urban areas and support them to the productive use of electricity.

1.2.2 The project's design aims to address not only the country's needs in terms of power infrastructure development, but also the weaknesses of the sector's institutional framework and the related poor technical capacity and financial standing of most of the power sector players through institutional development and capacity building activities. The project does not include investments in the expansion of the power generation capacity, but instead addresses the current strain to access in both rural and urban areas through grid expansion to make use of the affordable and reliable renewable capacity from OMVG interconnection.

1.2.3 The project has three components as depicted in Table 2.1. As for the component "Expansion of electricity distribution infrastructure", AfDB's financing scope covers: 53 localities, 118km of 30kV lines, 3km of 33kV lines, 339km of LV lines, 137units of transformers ranging from 50 to 250kVA and supply of 10,000 last-mile connection equipment, including service drops, prepaid meter, and ready boards for LV customers. In addition, it finances partially the "Project Implementation Management" and entirely "Institutional Development and Capacity building", namely "NAWEC Capacity Building", "Electricity Access Development", "Sensitization for productive use of electricity in rural localities", and "Gender support activities". These components are described in more detail in Annex B.2 of the Technical Annexes.

Table 2.1
Project Cost Estimates by Components (Amounts in UA million)

N°	Component Name	Estimated Cost	Sub-components	Description
A)	Expansion of electricity distribution infrastructure	48.78	A.1 Access through Grid Extension	• Detailed designs, supply and installation of approximately of 903km of 33 kV lines and 389 MV/LV transformers unit ranging from 100 to 250KVA. • Detailed designs, supply and installation of approximately 118km of 30kV lines and 128 transformers units ranging from 50 to 250KVA. • Detailed designs, supply and installation of approximately 1338km LV lines.
		6.47	A.2. Supplies and installation of Connection equipment	• Supply of 61,000 last-mile connection equipment, including service drops, prepaid meter, and ready boards for LV customers.
B)	Project Implementation Management	1.74	B.1 Management and Supervision Consultancy	• Consultancy services for electrical works supervision
				• Service provisions for works supervision of two Customer Center Services
		1.62		• Provision of 2 vehicles to ensure effective site supervision;

			B.2 Project Implementation Support	• Incentives for PIU Experts, procurement adverts and project operation. • Implementation of environmental & social (E&S) management plan • Auditing of the project account
C)	Institutional Development and Capacity Building	0.29	C.1 NAWEC Capacity Building	• Incentives for 4 Counterpart Engineers on-the-job training with contractors (EPC contractor and Owner's Engineer). • Trainings and study tours. • Provisions of laptops to Counterpart Engineers on-the-job training with contractors (EPC and Owner's Engineer). • Construction and equipment of two Customer Service Centers.
		0.09	C.2 Electricity Access Development	• Studies for electrification of new localities
			C.3 Sensitization for productive use of electricity in rural localities	• Hiring of NGOs to sensitize population in productive use of electricity
			C.4 Gender support activities	• Trainings, sensitization and awareness raising on gender • Promotion of income generating activities
	Contingencies	3.26		Physical and price escalation contingencies
	Total	**62.26**		Total project cost

1.2 Technical Solutions Adopted and Alternatives Considered

1.2.1 The solution adopted in this project consists in extension of the distribution infrastructure with the construction of new distribution network including medium and low voltage lines and transformers as well as installation of new connection services. Alternative solutions were considered and rejected for the reasons summarized in Table 2.2.

Project Alternatives and Reasons for Rejection		
Alternative	**Description**	**Reasons for Rejection**
Extension of low voltage networks only	Extension of low voltage tapping from the existing transformer points and other low voltage lines without consideration of medium voltage.	• By extending low voltage networks only, the new connected customers will suffer from the serious voltage drop given the distances between the existing transformer points and the considered areas. • By extending low voltage networks only, it would mean to limit the distribution capacity and future extensions. This thus reduce the opportunities for development of new economic and productive activities by the population in the considered areas.
Deployment of large and medium scale off-grid systems	Decentralized off-grid solutions such as solar PV systems are used in large and medium scale even in the areas where the conventional grid is available, instead of extending the existing grid.	• The proximity of the considered areas with the new OMVG substations will make these substations very useful with reliable and affordable electricity supply. • Higher upfront costs that makes it difficult to deploy a large scale without affecting the viability of the project and the electricity connections cost. • The regulatory framework for deployment of large-scale off-grid systems in The Gambia is not conducive.

1.3 Project Type

1.3.1 The proposed operation will be implemented as a standalone project and will be financed through ADF facilities, the World Bank's grant and NAWEC counterpart contributions. Parallel financing of project activities to avoid any inconvenience related to procurement rules and procedures of various financers have been adopted.

1.4 Project Cost and Financing Arrangements

1.4.1 The total project cost, excluding taxes and customs duties, is estimated at UA62,26 million, of which 83% is in foreign currency. This cost includes 3% provision for physical contingencies and 5% for price escalation. It is partially financed by ADF for an amount of UA12.6 million. Table 2.3 presents the foreign and local currency project cost by component and Table 2.4 presents the project's financing plan.

Table 2.3
Estimated Costs by Components (Amounts in UA million)

N°	Component Name	Sub-components	Foreign Currency	Local Currency	Total
A)	Expansion of electricity distribution infrastructure	A.1 Access through Grid Extension	41.46	7.32	48.78
		A.2. Supplies and installation of Connection equipment	5.63	0.84	6.47
B)	Project Implementation Management	B.1 Management and Supervision Consultancy	1.51	0.23	1.74
		B.2 Project Implementation Support	0.65	0.97	1.62
C)	Institutional Development and Capacity Building	C.1 NAWEC Capacity Building	0.13	0.16	0.29
		C.2 Electricity Access Development	0.03	0.06	0.09
		C.3 Sensitization for productive use of electricity in rural localities			
		C.4 Gender support activities			
	Contingencies (physical & financial)		2.54	0.72	3.26
	Total		**51.96**	**10.30**	**62.26**
	Percentage		**83**	**17**	**100**

1.4.2 The project is also financed by the World Bank, and NAWEC respectively for UA47.21 million (US$66 million), UA2.45 million (including UA2.30 million in-kind). World Bank has approved its financing in November 2018. The justification of the Government's counterpart fund level is presented in Annex A2.

Table 2.4
Sources of financing (Amounts in UA million)

Sources of financing	Foreign Currency	Local Currency	Total	%Total
ADF Loan converted to Grant	2.49	0.28	2.77	4.4
TSF-Pillar 1 Loan converted to Grant	7.49	0.83	8.32	13.4
TSF-Pillar 1 Grant	0.68	0.83	1.51	2.4
World Bank Grant	41.20	6.01	47.21	75.8
NAWEC Contribution		0.15	0.15	0.2
NAWEC contribution (in kind)		2.30	2.30	3.7
Total cost	**51.86**	**10.40**	**62.26**	**100**

1.4.3 The available resources to finance the project consist of: (i) ADF Loan (from cancelled resources): UA2.77 million; (ii) TSF-Pillar 1 Loan: UA8.32 million; and (iii) TSF-Pillar Grant: UA1.51 million. In its Report "The Gambia: Debt Sustainability Analysis, IMF Country Report No. 17/179" dated June 23, 2017, the International Monetary Fund (IMF) found that The Gambia is in external debt distress. The most recent IMF DSA (as of 31 May 2019) confirmed that The Gambia remains in the same situation. Both external and domestic debt are very high, and a significant pipeline of already-contracted loans poses risks to

solvency. Public sector debt increased from 56.6% of GDP in 2008 to an estimated 121.3% of GDP in 2018. External debt constitute 67.5% of GDP and the remaining 53.8% of GDP is the domestic debt portion.

1.4.4 Management takes note of recent decisions by the Board requiring ADF countries that have been recently classified as a high risk of debt distress (including Mozambique and Sierra Leone) to receive grants only and have approved certain waivers to the ADF-14 Operational Guidelines. This has been the case for The Gambia, which have been eligible to grant only since 2018. However, it is worth noting that the Operational Guidelines of the ADF 14 Resource Allocation Framework (the "ADF-14 Operational Guidelines") provide that, (a) regarding to the use of cancelled resources from previous ADF cycles, cancelled resources keep their original form regardless of the risk of debt distress of the country at the time of the cancellation (section 2.6); and (b) that country debt sustainability analysis at the beginning of each ADF cycle determines the grant/loan mix for TSF Pillar 1 resources for the country for the entire duration of the ADF cycle (Annex VI, section VI.2.).

1.4.5 Management therefore proposes and recommends that the Board waives the provisions of section 2.6 and Annex VI section VI.2 of the ADF-14 Operational Guidelines in order to convert the ADF loan (UA2.77 million) and the TSF-Pillar 1 loan (UA8.32 million) respectively into grants, on an exceptional basis, to the Republic of The Gambia

1.4.6 The project cost by category of expenditure is provided in Table 2.5.

Table 2.5
Project Cost by category of expenditure (Amounts in UA million)

Category of expenditure	Foreign Currency	Local Currency	Total	%Foreign Currency
Works	**43.44**	**7.67**	**51.11**	**70**
Goods	**4.08**	**0.26**	**4.34**	**7**
Services	**1.51**		**1.91**	**2**
Operating fees		**1.64**	**1.64**	**-**
Total base cost	**49.04**	**9.57**	**59.00**	
Contingencies	*2.54*	*0.72*	*3.26*	**4**
Total cost	**51.57**	**10.28**	**62.26**	**83**

1.4.7 The disbursement plan is provided in Table 2.6.

Table 2.6
Disbursement Plan by Components (Amounts in UA million)

N°	Component Name	Sub-components	2019	2020	2021	2022	2023	Total
A)	Expansion of electricity distribution infrastructure	A.1 Access through Grid Extension	2.44	7.32	17.07	17.07	4.88	48.78
		A.2. Supplies and installation of Connection equipment		0.65	2.59	2.91	0.32	6.47
B)	Project Implementation Management	B.1 Management and Supervision Consultancy	0.17	0.44	0.44	0.44	0.26	1.74
		B.2 Project Implementation Support	0.16	0.41	0.41	0.41	0.23	1.62
C)	Institutional Development and Capacity Building	C.1 NAWEC Capacity Building		0.06	0.07	0.10	0.06	0.29
		C.2 Electricity Access Development		0.02	0.03	0.03	0.01	0.09
		C.3 Sensitization for productive use of electricity in rural localities						

	C.4 Gender support activities						
	Contingencies (physical & financial)	0.49	0.82	0.82	0.82	0.33	3.26
	Total	**3.27**	**9.70**	**21.43**	**21.77**	**6.08**	**62.26**
	Percentage	**5**	**16**	**34**	**35**	**10**	**100**

1.4.8 ADF resources will be used to finance partially the components "Expansion of electricity distribution infrastructure" and "Project Implementation Management" and fully the component "Institutional Development and Capacity Building". ADF resources by category of expenditure is presented in Table 2.7 as follow:

Table 2.7
ADF resources by category of expenditure (Amounts in UA million)

Sources of financing	ADF Loan converted to Grant		TSF Loan converted to Grant		TSF Grant	
	Foreign Currency	Local Currency	Foreign Currency	Local Currency	Foreign Currency	Local Currency
Works	2.49	0.28	7.49	0.81		
Goods				0.02	0.18	0.57
Services					0.50	0.13
Operating fees						0.13
Total cost	**2.49**	**0.28**	**7.49**	**0.83**	**0.68**	**0.83**

1.5 Project's Target Area and Development Impact

1.5.1 The West Coast Region, North Bank region and Lower River Region, where the project will be located, are situated along The Gambia River. Major economic activities are subsistence agriculture, livestock production and handicraft.

Overall, the project is expected to benefit an estimated 61,000 households and Professionals in different ways. They will benefit from a more reliable, affordable and better quality electricity supply from neighbouring OMVG member countries. Moreover, it will avoid CO_2 emissions. Finally, the project activities will ultimately improve NAWEC's operational efficiency and revenue base, which will in turn eventually result in lower end user tariffs that will indirectly benefit the entire Gambian population.

1.6 Participatory Approach

1.6.1 The GoTG engaged its Development Partners (DPs) in 2018 to provide funding to support electricity access development. A number of stakeholders' engagements were held to solicit views, idea and comments on the project construction and its operation. Plenary information and consultation sessions were initiated with the beneficiary communities. Various segments of the population, namely traditional rulers, women and youth groups, officials of the decentralized sector ministries, attended these public/community consultations. Public consultations with relevant stakeholders, including the National Environmental Agency, captured the significant concerns associated with the project. Those stakeholder consultations demonstrated enthusiasm about the project and did not highlight any particular concerns besides the need to encourage local employment. This participatory process and public consultation will be maintained throughout the project processing and implementation.

1.7 Bank Group Experience and Lessons Reflected in Project Design

1.7.1 ***Bank Group Experience:*** The Bank's portfolio in the Gambia as at May 2019 is UA131.4 million comprising nine (9) Public Sector operations, three (3) Regional Operations and one (1) Private Sector operation. The distribution of national public operations by sector is as follows: rural development (70.4%); water & sanitation (15.6%); governance (12.4%) and energy (1.6%). The portfolio is relatively young, with the average age of the national public operations being 2.3 years in 2019, and rated 'satisfactory'. There are no pending Project Completion Reports. The public sector portfolio includes two (02) energy sector

operations, i.e. Green Mini-Grid Country Support Program and OMVG Energy project at a total amount of UA4.47 million.

1.7.2 In the energy sector, OMVG Energy Project for which AfDB is the Lead financier is the major project. Funded by eight (08) donors with a total amount of US$1.2 billion, the OMVG Energy Project is under physical implementation and its commissioning is expected in December 2020. In fact, the interconnection will enable The Gambia to import high volumes of electricity from the sub region, allowing it for example to access low cost hydro from Guinea, or in the future, gas to power from Senegal, and more broadly from the West Africa Power Pool (WAPP). The proposed project is a complementary investment to OMVG Energy project to reach final consumers.

1.7.3 ***Lessons Learnt:*** The main lessons learnt from the Bank's past interventions in The Gambia are related to: (i) poor readiness and quality at entry; (ii) project startup and implementation delays due to limited capacity; (iii) lengthy procurement process and poor quality of related documents (bidding documents, bid evaluation reports, contract documents, etc.); and (iv) lack of incentives for electricity connection and use by low-income households in rural areas.

1.7.4 The proposed project considers the above lessons by: (i) ensuring that the proposed project is supported by appropriate design, feasibility, ESIA and ESMP studies; (ii) ensuring project implementation readiness by strengthening PIU's procurement and financial management capacities; (iii) simplification of project design in line with local capacity; and (iv) making connection affordable and promoting productive use of electricity.

1.8 Key Performance Indicators

1.8.1 The key outcome indicators will be the: (i) number of new communities, public institutions, households and businesses electrified; (ii) ton of CO_2 emissions avoided per year; and (iii) number of direct permanent jobs created during operation. The new customers are expected to be 61,000 by 2023 including 376 communities, 53,880 households (35% female-headed), 1,120 public institutions and 6,000 businesses, which will be electrified. By shutting down its power plants in the project's area and using them as back up, NAWEC will improve its operational costs by reducing its fuel consumption. Direct and indirect jobs will be created during the project operation thanks to the productive use of electricity and the stimulation of the local economy.

1.8.2 From an outputs perspective, the project will result in the erection of 1,021km of Medium Voltage lines, 1,300km Low Voltage lines, installation of 517units of distribution transformers, construction of two (02) Customer Services Centers, as well as the implementation of 61,000 connection services. In addition, the project will build capacity of NAWEC by training, providing study tours, preparing one study and procuring vehicles, computers, printer and office furniture.

2 PROJECT FEASIBILITY

2.1 Financial and Economic Performance

2.1.1 ***The Project's Performance:*** it has been analysed based on Financial Internal Rate of Return (FIRR) and Economic Internal Rate of Return (EIRR). The FIRR has been computed from financial costs of the project and revenue from electricity sales to new customers. As for the EIRR, it has been computed from economic costs (investment costs corrected by conversion factors) and expected economic benefits of the project (valuation of avoided costs of fuel, and savings made by households on their energy use expenditures with and without the project). The results of the analysis are summarized in Table 3.1 below.

Table 3.1
Key Economic and Financial Data of the project

Base case scenario	FIRR: 13.1%	FNPV: US$3.58 million
	EIRR: 17.5%	ENPV: US$15.86 million

2.1.2 The results of the analysis show that the project is financially sustainable and economically viable. Its Financial Internal Rate of Return (FIRR) is estimated at 13.1% (which is above the discount of 12%) while the Financial Net Present Value (FNPV) discounted at a rate of 12% stands at US$3.58 million (which is positive). On the other hand, the Economic Internal Rate of Return (EIRR) is estimated at 17.5% % (which is above the discount of 12%) while the Economic Net Present Value (ENPV) discounted at a rate of 12% is US$15.86 million (which is positive). The detailed calculations of the financial and economic analysis, sensitivity tests and financial analysis of NAWEC are provided in Annex B7.

2.1.3 ***The Project's performance sensitivity analysis:*** Sensitivity tests has been conducted on key project assumptions: (i) 10% increase of investment cost; (ii) 10% increase of operating and maintenance costs; and (iii) 10% decrease of end user average tariff). The outcomes show that the project is mainly sensitive to the end user tariffs decrease and investment cost increase respectively for financial and economic criteria. However, its FIRR, EIRR, FNPV and ENPV remain at acceptable levels. The results are summarized in Table 3.2 below.

Tableau 3.2
Sensitivity analysis on project's performance

Financial outcomes	**FIRR**	**FNPV**
Base scenario	**13.1%**	**US$3.58** million
10% increase of investment costs	11.9%	US$(0.18) million
10% increase of O&M costs	12.7%	US$2.15 million
10% decrease of end user tariff	10.2%	US$(5.62) million
Economic outcomes	**EIRR**	**ENPV**
Base scenario	**17.5%**	**US$15.86** million
10% increase of investment costs	13.8%	US$6.43 million
10% increase of O&M costs	17.3%	US$15.32 million
10% decrease of end user tariff	14.4%	US$6.69 million

2.2 Environmental and Social Impact

2.2.1 The project is classified as Category II according to the Bank's Integrated Safeguards System. Any likely impacts will be few, site-specific, largely reversible, and will readily be minimized by applying appropriate management and mitigation measures or incorporating internationally recognized design criteria and standards. A summary of the Environmental and Social Management Plan (ESMP) has been already posted 30 days prior to Board presentation.

2.2.2 ***Environment****:* The main environmental impacts during construction involves: (i) land and vegetation clearance for sub-stations and wayleaves for distribution lines; (ii) development of deep excavations; (iv) dust, noise and vibrations; (v) management of electrical and electronic equipment waste parts; (vi) pollution from oily run-off, fuel spills and hazardous substances; and (vii) occupational health and safety management for construction staff. During operation, the main impacts are: visual intrusion; fire risk and public safety related to electrical installation; risk of insulation oil leaks from transformers and switchgears; risk of gas leaks from modern gas-filled switchgears (sulphur hexafluoride SF6); impacts of noise from transformers and associated equipment; and impacts of waste generated from engineering and maintenance works.

2.2.3 Adequate mitigation measures for adverse impacts have been identified and will have to be included in the ESMP. These include: (i) development of a management plan for electrical and electronic equipment waste; (ii) development of a Project Health and Safety Plan; (iii) inclusion of the necessary environmental clauses in the project tender and bidding documents & inclusion in construction contract document so as to

ensure the implementation of the ESMP; (iv) planning for independent supervision engineer during the construction phase. The total ESMP implementation cost is estimated at USD 220,000.

2.2.4 The project will directly contribute to the creation of temporary jobs or employments during construction activities, most of which will be contracted locally. It is expected that an improved and increased access to electricity will stimulate the development of small and medium enterprises in the project area and beyond. Improved access to electricity will reduce operational costs significantly and thus boost business expansion and/or multiplication in the deprived areas. The local gardeners will also have the chance to pump water to their gardens at a reduced cost using electric motor pumps or pumps powered by electricity instead of diesel. This will positively boost businesses that currently use expensive generators or have no alternative energy choices for business.

2.2.5 ***Climate Change:*** The project will improve the operational efficiency of the electricity distribution system, increase the communities' access to electricity and help transition Gambia to a low-carbon economy through the reduction of greenhouse gas emissions. The improvements in the operational efficiency of the distribution system are likely to reduce GHG emissions. The project is also likely to result in the displacement of expensive and highly polluting stand-alone diesel generator sets in the urban areas with the improved reliability of the distribution system. In the rural areas, the project will connect the communities and households, which previously tend to use biomass and fossil fuel as their main source of energy. The project will lead to a reduction of GHG emissions (mainly CO_2, NOx) and prevention of toxic gas emissions (SO_2, Particulates Matter (PM_{10} $PM_{2.5}$)).

2.2.6 At the Transformer or substations, the key climate change concern is the usage and leakage of sulphur hexafluoride gas (SF_6). Some switchgears that may be installed may contain SF_6. SF_6 is a potent greenhouse gas with a high global warming potential and decomposes under electrical stress, forming toxic by-products that are a threat in the event of exposure. Typically, losses of the SF_6 gas are very minor in the operational phase but it is noted that all halogenated gases can potentially accrue "greenhouse gas effects" if they are released in significant quantities. However well installed SF_6 equipment should not leak significant amounts of gas and leakage should be checked routinely from all such equipment.

2.2.7 ***Gender:*** Both men and women benefit from reliable electricity supply - yet not in similar ways. In The Gambia, mostly women use biomass and fossil fuel as their main source of energy. Women spend more time on household and childcare activities than men do. Electricity allows women to conduct these activities more efficiently and provides them more flexibility, as they are no longer constrained by daylight hours. The project will thus contribute in freeing women's time for other activities, such as education, income generation and leisure. Access to information technology, and in particular television, can influence positively attitudes about gender roles and awareness about women and girls' rights. While its impact may be more limited in rural areas, it is expected that the project will encourage the use of electric appliances in urban settings, such as freezers, refrigerators, blender and grinders. These can significantly reduce the drudgery of arduous tasks such as daily shopping, grinding and milling. One of women's most time-consuming activity however, cooking, is unlikely to be facilitated by the project, as the use of electric stoves remain a lot more expensive than the current fuel alternatives, which are wood and charcoal.

2.2.8 Access to electricity will diversify income-generating opportunities for women, allowing them to work in sectors not constrained by daylight hours, such as sales and commerce, which are the dominant occupations for women outside agriculture. It will increase in the purchasing power of households, thanks in particular to: (i) the multiplication of income-generating activities for women and men; (ii) the savings achieved by replacing the lamps usually used (kerosene lamps, flashlights…); and (iii) the job creation for both women and men using street lights for trade. This in turn leads to greater financial independence and improved child welfare (as extra income from women is likely to be invested in children). The project will thus improve the productivity, efficiency and competitiveness of these women-headed SMEs.

2.2.9 ***Social**:* The project will improve the quality, reliability and efficiency of the electricity supply to the communities and households. It will also contribute to a significant improvement in the standards of living of the communities and households who will be newly connected to the grid. Connection to the electricity grid will make it easier for those households to carry productive activities (such as studying at night by the students or researchers, or carrying a home business as well as gardening activities) as well as provide them with greater comfort with refrigerators and fans. Moreover, it will encourage the use of information and communication technology (ICT) such as cell phone, internet and television services, etc. Those services do not only provide households with a greater variety of leisure activities, but it has also an important role in access to information.

2.2.10 The project will contribute to the direct creation of temporary jobs during construction activities as well as permanent jobs during operation. During construction, the project will also generate indirect employment through the use of vendors and contractors as well as new business opportunities for local small shops and restaurants. But more importantly, the project will support job creation through private sector development. It is indeed expected that the project will connect businesses as well as support the productivity of the existing businesses, mostly located in the area with no access to electricity, by encouraging the use of electrical machinery such as water pumps with electric motors (for gardening or farming), as well as refrigerators and freezers (for frozen foods shops, restaurants, pharmacies and bars). A reliable electricity supply will contribute to lowering operational costs of businesses that are not connected to the electricity grid and are currently using expensive stand-alone diesel generators or batteries as primary source of energy.

2.2.11 ***Involuntary Resettlement***: The estimated land size required for the substations ranges between one to three acres, which have been acquired already and belong to NAWEC. The project is not expected to engender physical and economic resettlement. The sites identified for the proposed activities do not have physical structures nor present signs of farming activities. NAWEC owns the plots for transformer or switching station). A detailed environmental and social analysis is provided in Annex B8.

3 PROJECT IMPLEMENTATION

3.1 Implementation Arrangements

3.1.1 The Government of The Gambia, through the Ministry of Finance and Economic Affairs (MoFEA) will be the recipient of the ADF and TSF-Pillar 1 grants. The proceeds will be on granted by MoFEA to the National Water and Electricity Company (NAWEC) (an autonomous, specialized limited liability company charged with provision of water and electricity services in The Gambia), by signing subsidiary agreements (on-granting) on terms and conditions acceptable to the Bank and the Fund. The National Water and Electricity Company (NAWEC), under the Ministry of Petroleum and Energy (MOPE), will be the executing agency of this project and will assume all fiduciary responsibilities and responsibilities for reporting to the Bank and the Fund.

3.1.2 A PIU is established within NAWEC and already staffed with a Project Coordinator, a Procurement Specialist, a Financial Management (FM) Officer, a Power Engineer and a Project Accountant. NAWEC has experience in hosting an implementation unit and the PIU has received specific training in World Bank fiduciary rules and guidelines.

3.1.3 However, given the magnitude of this project in combination with other ongoing donor-financed projects, the PIU will be strengthened by two electrical engineers from NAWEC to back up the Power Engineer. The PIU will also be strengthened by the services of individual consultant for the preparation of conceptual designs, technical specifications, bidding documents. A consultancy firm will be hired to provide services for supervision of construction works and assistance in contract management.

3.1.4 The Project Steering Committee (SC), already established to oversee the ongoing The Gambia Electricity Support (GESP) and The Gambia Electricity sector Rehabilitation and Modernization (GERM) Projects and includes representation of various ministries including the Ministry of Finance, Ministry of Petroleum and Energy, Ministry of Local Government, Ministry of Women's Affairs, Public Utility Regulatory Authority (PURA), Office of the President, National Environmental Agency, and NAWEC will have mandate to advise on strategic issues related to the GEAP's implementation. The SC will meet at least quarterly and will monitor project progress and planning for subsequent periods. The implementation arrangements are detailed in Annex B3.

3.1.5 ***Procurement***: "Procurement of goods (including non-consultancy services), works and the acquisition of consulting services, for the financed by the Bank for the Gambia Electricity Access Project, will be carried out in accordance with the "Procurement Policy and Methodology for Bank Group Funded Operations" (BPM), dated October 2015 and following the provisions stated in the Financing Agreement. Specifically, Procurement would be carried out following:

3.1.6 Borrower Procurement System (BPS): Procurement through National Competitive Bidding (NCB) and shopping procedures will be carried out using BPS comprising its Laws and Regulations (Gambia Public Procurement Act, 2014 using the national Standard Solicitation Documents (SSDs) agreed during project negotiations" for various group of transactions to be indicated under the project, detailed in annex B 5.1 and the provisions stipulated in the Financing Agreement.

3.1.7 Bank Procurement Policy and Methodology (BPM): Bank standard PMPs, using the relevant Bank Standard Solicitation Documents (SDDs), will be used for Open Competitive Bidding International (OCB-I) contracts for both goods and works and Acquisition of Consulting Services as indicated in the Technical Annex B5, Para. B.5.3.2.

3.1.8 Procurement Risks and Capacity Assessment (PRCA): the assessment of procurement risks at the Country, Sector, and Project levels and of procurement capacity at the Executing Agency (EA), were undertaken for the project and the output have informed the decisions on the procurement regimes (BPS and Banks PMP) being used for specific transactions or groups of similar transactions under the project. The appropriate risks mitigation measures have been included in the procurement action plan proposed in Annex B5, Paragraph 5.9.

3.1.9 In accordance with the Borrower's Procurement System and the Fund's PMPs within a period of six (6) months prior to the Date of Signature, an Advance Procurement arrangement has been adopted for: (i) construction and equipment of two (2) customer service centers; (ii) designs, supply and installation of three (3) kilometer MV lines, seventy-five (75) kilometer LV lines, and nine (9) MV/LV substations ranging from 100 to 250KVA from Brikama substation; (iii) designs, supply and installation of ninety-two (92) kilometers of MV lines, two hundred and three (203) kilometer LV lines and sixty-two (62) MV/LV substations ranging from 50 to 250KVA from Soma Substation; and (iv) consultancy services for electrical works supervision acquired for Component 1 of the Project.

3.1.10 ***Financial Management:*** NAWEC will execute the project through its PIU, which will be responsible for the day-to-day implementation of the Project. The overall financial management function of the PIU is headed by an experienced financial management specialist (FMS), responsible for all projects. He will be supported by an experienced dedicated project accountant (to be hired) to cope with the reporting requirement and ensure that duties are adequately segregated. The FMS will report to the Finance Director (NAWEC) for the consolidation of NAWEC reports and to the PC. The project will use the existing FinEx accounting software (version 2016) for accounting, financial reporting and budget monitoring and migrate to the ERP version to be procured and adopted by NAWEC. The project will also adopt International Public Sector Accounting Standards (IPSAS) Cash Basis, in in line with government of the Gambia Accounting Standards and also adopt the existing accounting policies and procedures, in harmony with other donor funded projects, and supplemented with specific AfDB's FM and disbursement requirements.

3.1.11 At the end of every quarter, the project accountant will produce from FinEx, unaudited interim financial reports (IFRs) for the benefit of NAWEC and shared with the Bank within forty-five (45) days at the end of each quarter. Annual reports must also be produced at the end of each and audited and the signed audited financial statements and related management letter submitted to the Bank within six (6) months after the end of the financial year. The Bank's financing section of the annual budget will also be generated using the FinEx budgeting module, and submitted together with the annual work plan and procurement for PSC's approval before execution and reporting. A customized PIM from the existing project implementation manuals, will be developed to provide guidance for implementation and instill consistency in administrative, procurement and financial management arrangements/ practices. The project will also use same IT services and policies/ guidelines as other projects under the PIU. The internal audit function of NAWEC will be responsible for periodic review project activities and monitoring of the exiting controls to tighten the overall internal control environment.

3.1.12 ***Disbursements:*** The Bank uses four disbursement methods in disbursing funds to projects. Two (2) methods will are recommended under this project: (1) Direct payments and (2) Special Account (SA) methods. The other methods: (3) Reimbursement and (4) Reimbursement Guarantee, are also available to the project if the need arises. Direct payments method will be used in meeting payments against larger contracts, signed between the Project and contractors / suppliers / consultants; which have been duly cleared by both the Bank. The Special Account (SA) method will be used in paying for eligible recurrent expenses and smaller. This will require the opening of a dedicated USD denominated special account at the Central Bank of Gambia, (with the approval of the Minister of MOFEA) to make local payments. A separate local currency account will also be opened at local commercial to receive counterpart funds contributions from the government. Both accounts will be managed by PMU. *All disbursements shall follow the procedures outlined in the Bank's Disbursement Handbook 2012.*

3.1.13 ***External Audit:*** The Auditor General (AG) of the Gambia or a competitively recruited private independent audit firm will audit the project on an annual basis. The recruitment of a private independent audit firm will follow an agreed on procedure with the Auditor General (AG) of The Gambia. The procedure involves the AG providing to Project management, a list of private independent audit firms agreed with the Bank, and also participating in the tender evaluation process. The audit terms of reference (TOR) will be agreed with the Bank and the audited financial statements and the accompanying management letter will be submitted to the Bank within six (6) months of each period being audited. The associated audit fees to be paid from project resources will only be remitted after the audit reports are cleared by the Bank. A single three-year audit contract could be concluded so as to avoid repeating the selection process every year. It is envisaged that within 6 months of effectiveness NAWEC should commence the process of recruiting an external auditor. For in-year reporting, NAWEC PIU shall produce and submit to the Bank, quarterly unaudited interim financial reports (IFRs) no later than 30 days at the end each quarter.

3.1.14 ***Overall Conclusion:*** The overall FM risk is assessed as moderate and to mitigate this further, NAWEC PIU will recruit a project accountant dedicated to the project, customize a PIM to guide project implementation and NAWEC is committed to maintain PIU for the execution of its the projects (**detailed FM Assessment in Annex B.4**).

3.2 Project Monitoring and Evaluation

The monitoring and evaluation of the project's implementation progress and impact will be the overall responsibility of NAWEC with support from the Owner's Engineer. Updates on progress on project outcomes and results indicators will be reported through regular progress reports. The PIU shall include an M&E specialist to track the indicators. The main indicators are aligned with key specific parameters of the sector that are generated and monitored monthly.

The Bank will monitor the project during implementation through regular supervision missions (at least twice a year) and review of annual audit reports. The Bank will undertake a midterm review of the project

approximately 18 months after its approval by the Board of Directors. Within six months of the completion of the project, the Bank will prepare a Project Completion Report (PCR).

3.3 Governance

3.3.1 Over many years, NAWEC suffered from presidential directives that set electricity tariffs well below cost recovery and imposed economically unviable projects in rural areas, while a monopoly supplier inflated fuel supply cost from rent seeking. While political and governance risks in The Gambia remain elevated, the Government has made progress, albeit mixed, with the introduction of some reform measures to define institutional arrangements that enhance transparency and accountability in public sector procedures and promote private sector participation.

3.3.2 In line with the Government's vision to transform NAWEC into an efficient and creditworthy company, reforms are ongoing namely: (i) appointment of NAWEC Board in January 2019; (ii) accounting segregation of electricity, water and sewage activities; (iii) elaboration of strategic plan and performance contract; (iv) support payment of public sector bills and clearing of public sector arrears; and (v) transition of public sector clients to prepaid meters. Some development partners, in particular the World Bank, have started supporting NAWEC's corporate governance enhancement related activities. These activities encompass several reorganization and capacity building related to the financial management of the utility (organization audit and proposals for restructuring of NAWEC, separation of financial and commercial account of electricity, water and sewerage, energy sector planning etc.). The bank facility will complement these activities (through capacity building component) by building on what has already been achieved.

3.3.3 Finally, a profound long-term change in NAWEC's corporate governance and institutional culture is necessary to catalyze improvement in technical and commercial performance and customer service. Furthermore, NAWEC has adequate internal technical and administrative controls and anti-corruption measures, and satisfactory appeal mechanisms to ensure transparency in its bidding process.

3.4 Sustainability

3.4.1 Power sector viability is the Government's priority and several initiatives are ongoing, namely: (i) NAWEC's operational performance improvement through its supply capacity expansion (from 25 MW in October 2017 to 80 MW in February 2019), shift towards HFO instead of diesel oil, reduction of technical and commercial losses, and improvement of network stability; (ii) Enhancement of NAWEC's governance with the appointment of the board in January 2019, ongoing preparation of NAWEC's strategic development plan and performance contract; and (iii) NAWEC's financial restructuring by implementing the Memorandum of Understanding between NAWEC and MOFEA signed in March 2018 to restructure NAWEC's debt, support payment of public sector bills and clearing of public sector arrears.

3.4.2 The main elements of the agreement relate to the MoFEA transferring a portion of NAWEC debts that are unrelated to any specific asset and that were bailouts for fuel supply or interest charges during difficult times. This will clean up the balance sheet and improve the financial viability of the company in accounting terms. Moreover, the Energy sector roadmap for 2019-2025 also includes a progressive tariff increase towards cost-reflective tariffs of production to ensure the financial sustainability of the sector. The MoU will be implemented through a performance contract (including reliability and reduction in technical losses targets) which should have a positive impact on NAWEC financial position.

3.4.3 Cost recovery in the electricity sector will ultimately be essential for sustainability and the phasing out of financial support from the Government. Investments in the power sector under the current project are designed to promote cost recovery through reduction of operational cost (shutting down of thermal power plant), importation of affordable electricity from neighboring countries, as well as to promote a reduction of commercial losses (higher revenues). NAWEC's financial and operational performance will ultimately ensure the long-term sustainability of the electricity sector. Current supports from Development

Partners to the utility intend to promote the appropriate managerial and organizational changes within the company to make it more efficient.

3.5 Risk Management

3.5.1 The major risks involved in this project and proposed mitigation measures are discussed in Table 4.1 below.

Table 4.1 – Risks and Mitigation Measures

Risk	Description	Mitigation
Lack of attracting suitable and qualified contractors.	Dispersed and small nature of access project could prevent from attracting suitable and qualified contractors and lead to delays and less cost-effective contracts.	Creating sizable bidding packages by aggregating sparse and small works. Because of the substantial economies of scale, large and quality contractors showed more interest to bid and construct.
Payment collection /theft.	Risk that payments to the utility company NAWEC are not collected on time.	Installation of pre-paid meters for household consumers, and medium voltage connection to residential users as part of the overall NAWEC program.
Inadequate operation and maintenance	Risks related to NAWEC's capacity to properly operate and maintain the project due to lack of resources.	NAWEC's cost recovery will enhance it to operate and maintain properly its assets.
Sector's Poor Financial Situation	NAWEC's public sector arrears non-timely payment could continue to weaken its financial position.	▪ The GoTG and NAWEC signed an MoU to clear progressively the public sector arrears. ▪ The GoTG and NAWEC agreed upon to transition public sector clients to prepaid meters (except for critical facilities).

3.6 Knowledge Building

The electricity sector in The Gambia is struggling with poor operational and commercial conditions. The approach to revive it will consist in addressing needs of sectoral reforms (governance, pricing, operational performance…) by providing information, sensitizing and bringing onboard key stakeholders. The key point is to get common understanding on the need to implement reforms by engaging all stakeholders.

In order to make the electricity sub-sector efficient, the project has been designed to get more exposure of main stakeholders (NAWEC, MoEP, MoFEA and PURA) to best practices. In fact, technical experts from NAWEC will be on the-job-training with contractors (EPC and Works supervision services provider), as well as trainings and study tours will be organized. NAWEC experts will be appointed to follow up on external support activities to enable the utility to capture knowledge.

The Bank will reinforce the monitoring and evaluation system of NAWEC to collect data and follow evolution of the project's key indicators (outputs and impacts) on beneficiaries. In addition, the Bank will learn from reports of: (i) NAWEC staff trainings; and monitoring and evaluation reports of (ii) supervision missions, Owner's Engineer and the Financial Auditor. Lessons learnt from the project implementation will enhance the Bank to better structure its future operations in relevant manner.

5. LEGAL INSTRUMENTS AND AUTHORITY

5.1 Legal Instruments

5.1.1 The legal instruments to finance this operation are (i) an ADF grant agreement of UA 2.77 million between the Republic of The Gambia (the "Recipient") and the Fund, (ii) a TSF-Pillar 1 grant agreement of UA 9.83 million between the Recipient and the Bank and the Fund (as administrators of the TSF).

5.2 Conditions Associated with the Bank and the Fund's Intervention

A. Entry into Force of the ADF and TSF-Pillar 1 Grant Agreements

5.2.1. The agreements will enter into force upon signature by the respective parties.

B. Conditions Precedent to First Disbursement of the ADF and TSF-Pillar 1 Grants

5.2.2 The obligation of the Fund to make the first disbursement of the respective grants shall be subject to the entry into force of the respective agreements and satisfaction of the following condition by the Recipient:

i) The execution and delivery of a Subsidiary Agreement between the Executing Agency and the Recipient in form and substance satisfactory to the Fund.

C: Other Conditions:

The Recipient shall provide evidence, in form and substance satisfactory to the Bank and the Fund, of the fulfilment of the following conditions:

(i) Prior to disbursement, the opening of a segregated USD denominated special account and a Gambian Dalasi account in the name of the Project at a bank acceptable to the Bank and the Fund into which the proceeds of the grant will be deposited;

(ii) The establishment of Environmental and Social Management System (ESMS), in form and substance satisfactory to the Fund, within three (3) months of grants disbursement; and

(iii) The provision of a baseline assessment on communities targeted by the Project in order to understand among others the source of energy in use, amount spent by households on energy consumption, and the type of businesses which will be supported by the Project's interventions prior to the start of the works, not later than six (6) months after entry into force of the grant Agreements;

D. Undertakings

The Recipient undertakes the following under the Grant Agreements:

(i) To carry out the Project in accordance with the ESMP, the Fund's Safeguards Policies and the applicable national legislation in a manner and in substance satisfactory to the Fund;

(ii) To deliver to the Fund, Project quarterly reports in form and substance acceptable to the Fund, setting out the Recipient's implementation of the ESMS (including but not limited to any implementation failures and related remedies, if any);

(iii) To cause the Executing Agency to maintain at all times during Project implementation a Project Implementation Unit (PIU) with the mandate, staffing and resources satisfactory to the Fund. The PIU shall comprise experienced staff including among others: (i) a project coordinator; (ii) a procurement specialist; (iii) a financial management officer; (iv) a power engineer; (v) two (2) electrical engineers; (vi) a project accountant; and (vii) a monitoring and evaluation expert.

(iv) To maintain the Project Steering Committee (PSC) established to oversee the Gambia Electricity Support (GESP) and the Gambia Electricity Sector Rehabilitation and Modernization (GERM) projects for planning and monitoring of Project progress. The PSC shall comprise representatives from various ministries including: (i) the Ministry of Finance; (ii) the Ministry of Petroleum and Energy; (iii) Ministry of Local government; (iv) Ministry of Women Affairs; (v) the Public Utility Regulatory Authority (PURA); (vi) the Office of the President; (vii) the National Environmental Agency; and (viii) the Executing Agency; and

(v) To take all appropriate measures and actions necessary to ensure that the governance reforms within the Executing Agency are maintained throughout the implementation of the Project in order to enhance its capacity to efficiency execute the Project.

5.3 Compliance with Fund Policies

5.3.1 This project complies with all applicable Fund policies.

6 RECOMMENDATION

6.1 Given that The Gambia is in situation of debt distress, Management recommends that the Board of Directors:

(i) Waive the provisions of Section 2.6 of the Operational Guidelines of the ADF 14 Resource Allocation Framework, which require cancelled resources to keep their original form regardless of the risk of debt distress of the country at the time of the cancellation; and permit the conversion of the ADF loan (UA 2.77 million) into grant, on an exceptional basis, to be utilized by The Gambia, to finance the Project;

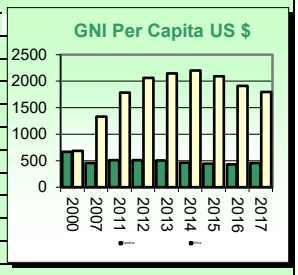
(ii) Waive the provisions of Annex VI section VI.2 of the Operational Guidelines of the ADF 14 Resource Allocation Framework, which provides that country debt sustainability analysis at the beginning of each ADF cycle determines the grant/loan mix for TSF Pillar 1 resources to the country for the entire duration of the ADF cycle, and permit the conversion of the loan under TSF Pillar 1 (UA 8.32 million) into a grant, on an exceptional basis, to be utilized by The Gambia, to finance the Project;

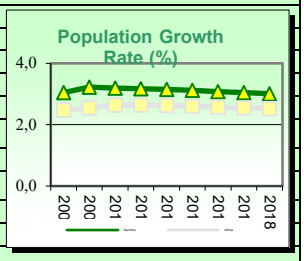
(iii) Award to The Gambia, a grant of an amount not exceeding the equivalent of UA 2.77 million from the resources of the Fund, for the purposes of the activities in the proposed project and subject to the conditions stipulated in the present report, which amount includes the cancelled loan resources outlined in (i) above; and

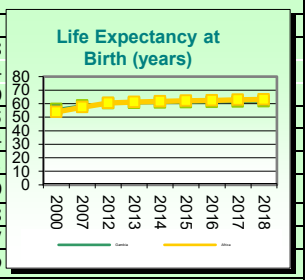
(iv) Award to The Gambia, a grant of an amount not exceeding the equivalent of UA 9.83 million from the resources of the TSF-Pillar 1, for the purposes of the activities in the proposed project and subject to the conditions stipulated in the present report, which amount includes (a) the cancelled loan resources outlined in (ii) above and (b) the country's Pillar 1 allocation.

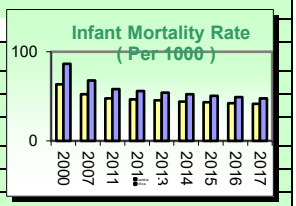
Appendix I: The Gambia's Comparative Socio-Economic Indicators

	Year	Gambia	Africa	Develo-ping Countries	Develo-ped Countries
Basic Indicators					
Area ('000 Km²)	2018	11	30 067	92 017	40 008
Total Population (millions)	2018	2,2	1 286,2	6 432,7	1 197,2
Urban Population (% of Total)	2018	61,3	42,5	50,4	81,5
Population Density (per Km²)	2018	216,1	43,8	71,9	31,6
GNI per Capita (US $)	2017	680	1 767	4 456	40 142
Labor Force Participation *- Total (%)	2018	77,2	65,9	62,1	60,1
Labor Force Participation **- Female (%)	2018	72,2	55,5	47,6	52,2
Sex Ratio (per 100 female)	2018	98,0	99,8	102,3	99,3
Human Develop. Index (Rank among 189 countries)	2017	174	...	…	…
Popul. Living Below $ 1.90 a Day (% of Population)	2007-2017	10,1	...	11,9	0,7
Demographic Indicators					
Population Growth Rate - Total (%)	2018	3,0	2,5	1,2	0,5
Population Growth Rate - Urban (%)	2018	4,1	3,6	2,3	0,7
Population < 15 years (%)	2018	45,1	40,6	27,5	16,5
Population 15-24 years (%)	2018	20,1	19,2	16,3	11,7
Population >= 65 years (%)	2018	2,4	3,5	7,2	18,0
Dependency Ratio (%)	2018	93,0	79,2	53,2	52,8
Female Population 15-49 years (% of total population)	2018	23,9	24,1	25,4	22,2
Life Expectancy at Birth - Total (years)	2018	61,6	63,1	67,1	81,3
Life Expectancy at Birth - Female (years)	2018	63,1	64,9	69,2	83,8
Crude Birth Rate (per 1,000)	2018	38,4	33,4	26,4	10,9
Crude Death Rate (per 1,000)	2018	7,8	8,3	7,7	8,8
Infant Mortality Rate (per 1,000)	2017	41,4	47,7	32,0	4,6
Child Mortality Rate (per 1,000)	2017	63,6	68,6	42,8	5,4
Total Fertility Rate (per woman)	2018	5,3	4,4	3,5	1,7
Maternal Mortality Rate (per 100,000)	2015	706,0	444,1	237,0	10,0
Women Using Contraception (%)	2018	12,2	38,3	61,8	…
Health & Nutrition Indicators					
Physicians (per 100,000 people)	2010-2016	10,7	33,6	117,8	300,8
Nurses and midwives (per 100,000 people)	2010-2016	161,8	123,3	232,6	868,4
Births attended by Trained Health Personnel (%)	2010-2017	57,2	61,7	78,3	99,0
Access to Safe Water (% of Population)	2015	90,2	71,6	89,4	99,5
Access to Sanitation (% of Population)	2015	58,9	39,4	61,5	99,4
Percent. of Adults (aged 15-49) Living with HIV/AIDS	2017	1,6	3,4	1,1	…
Incidence of Tuberculosis (per 100,000)	2016	174,0	221,7	163,0	12,0
Child Immunization Against Tuberculosis (%)	2017	94,0	82,1	84,9	95,8
Child Immunization Against Measles (%)	2017	90,0	74,4	84,0	93,7
Underweight Children (% of children under 5 years)	2010-2016	16,4	17,5	15,0	0,9
Prevalence of stunding	2010-2016	25,0	34,0	24,6	2,5
Prevalence of undernourishment (% of pop.)	2016	9,6	18,5	12,4	2,7
Public Expenditure on Health (as % of GDP)	2014	5,0	2,6	3,0	7,7
Education Indicators					
Gross Enrolment Ratio (%)					
Primary School - Total	2010-2017	97,1	99,5	102,8	102,6
Primary School - Female	2010-2017	101,0	97,4	102,0	102,5
Secondary School - Total	2010-2017	57,1	51,9	59,5	108,5
Secondary School - Female	2010-2017	55,7	49,5	57,9	108,3
Primary School Female Teaching Staff (% of Total)	2010-2017	33,1	48,7	53,0	81,5
Adult literacy Rate - Total (%)	2010-2017	42,0	65,5	73,1	...
Adult literacy Rate - Male (%)	2010-2017	51,4	77,0	79,1	...
Adult literacy Rate - Female (%)	2010-2017	33,6	62,6	67,2	...
Percentage of GDP Spent on Education	2010-2015	2,8	4,9	4,1	5,2
Environmental Indicators					
Land Use (Arable Land as % of Total Land Area)	2016	43,5	8,0	11,3	10,4
Agricultural Land (as % of land area)	2016	59,8	38,2	37,8	36,5
Forest (As % of Land Area)	2016	48,4	22,0	32,6	27,6
Per Capita CO2 Emissions (metric tons)	2014	0,3	1,1	3,5	11,0









Sources : AfDB Statistics Department, UNAIDS; UNSD; WHO, UNICEF, UNDP; *Last update: February 2019*

Appendix II: Bank's Portfolio in the Gambia

The Gambia: List of On-going National Operations as at 31 May 2019

Sector / Operation	Approval date	Approved amount (UA million)	Amount disbursed (UA million)	Disburs rate (%)	Disbursement deadline
RURAL DEVELOPMENT					
1 Food and agriculture sector devpt project (FASDEP)	15-May-13	19,31	18,76	97.2	31-Dec-2019
2 Agriculture value chains devpt project (AVCDP)	31-Mar-16	6,00	2,30	38.3	31-Dec-2020
3 Gambia strategic program on climate resilience (SPCR)	27-July-16	1,09	0,52	47.8	11-Nov-2019
4 PPF Advance for preparation of the Agricultural Transformation Programme (ATP)	24-Mar-17	0,93	0,93	100	30-Jun-2019
5 Rice value chain transformation programme (RVCP) - ADF Grant - TSF Grant	6-Dec-18	 4,23 0,77	 0	 0	30-Jun-2024
Subtotal		**32,33**	**22,51**	**69.6**	
ENERGY					
6 Green Mini-Grid Country Support Programme	24-Feb.-17	0,72	0,03	4.1	31-Dec-2019
WATER & SANITATION					
7 Climate Smart Rural Wash Development Project - ADF Grant - RWSSI-TF - TSF Grant	17-Sept.-18	 3,00 1,62 2,50	 0,11 0,02 0,10	 3.6 1.4 4.0	31-Dec.-2023
Subtotal		**7,12**	**0,23**	**3,2**	
GOVERNANCE					
8 Institutional Support for Economic and Financial Governance Phase III (ISEFG III)	23-Sept.-15	2,00	0,85	42.8	31-Dec-2019
9 Inclusive growth promotion institutional support project (IGPISP) - ADF Loan - ADF Grant	30-Mar.-17	 1,58 2,09	 0,06 1,23	 3.6 58.9	30-Jun-2020
Subtotal		**5,67**	**2,14**	**37.7**	
TOTAL		**45,84**	**24,91**	**54.3%**	

On-going Private Sector Operations

Sector / Operation	Approval date	Approved amount (UA million)	Amount disbursed (UA million)	Disburs rate (%)	Disbursement deadline
SOCIAL					
1 Horizons Clinic Project	16-Apr-2014	5,95	-	-	01-May-2025
TOTAL		**5,95**			

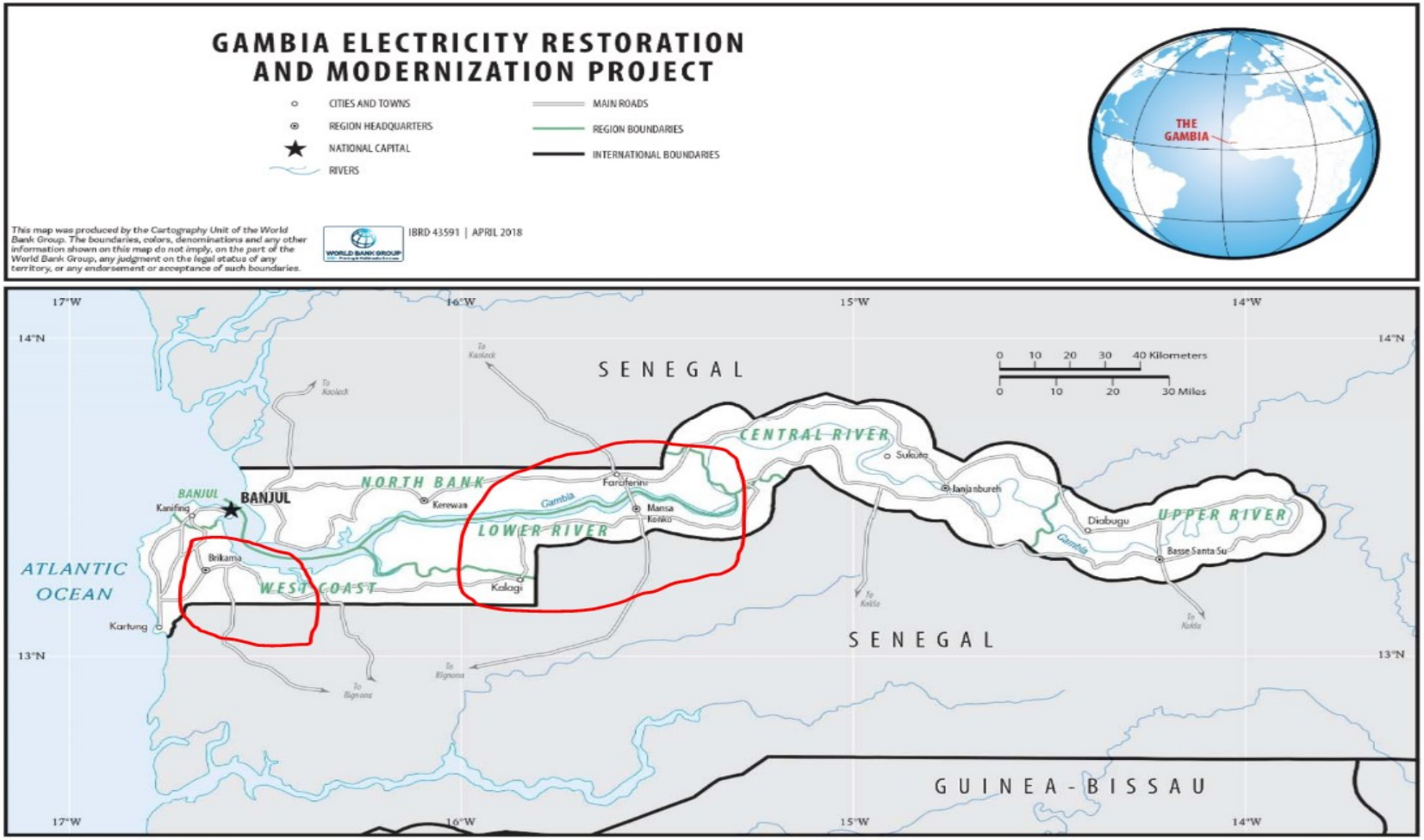
On-going Regional Operations

Sector / Operation	Approval date	Approved amount (UA million)	Amount disbursed (UA million)	Disburs Rate (%)	Disbursement deadline
RURAL DEVELOPMENT					
1 Programme building resilience against food and nutritional insecurity in the Sahel (P2RS)	15-Oct-14	11,50	7,52	65.4	30-June-20
2 Africa Disaster Risks Financing (ADRiFi) Programme	27-Feb-19	0,90	0	0	31-Dec-23
		12,40	**7,52**	**60,6**	
TRANSPORT					
3 Trans-Gambia River crossing Project Trans-Gambia Corridor Preparatory Studies Project - Phase II	16-Dec.-11 19-Oct.-14	63,55 1,00	51,10 0,50	80.4 50.4	31-Dec.-19 31-Dec.-20
Subtotal		**64,55**	**51,60**	**79.9**	
ENERGY					
4 OMVG Energy project (ADF Loan) (ADF Gant)	30-Sept-15	3,00 0,75	0,17 0,07	5.5 10,1	31-Dec.-2020
Subtotal		**3,75**	**0,24**	**6.4**	
TOTAL		**80,70**	**59,36**	**73.5%**	

Appendix III: Similar Projects in The Gambia

Energy Sector Group Matrix of DP interventions								
Donor	**Project Name**	**Government Implementing Agency**	**Amount of financing (curr.)**	**Amount of fin. ($)**	**Type of fin.**	**Date of approval**	**Period of Implement.**	**Brief Description of Project**
PIPELINE OF PROJECTS/STUDIES							18 months	Electricity expansion for
Organization of Islamic Conference member countries	OIC Energy Project	NAWEC		10m	grant		18 months	Install 15 MVA transformers around the OIC concentrated areas
SREP	Green Mini-Grid Country Support Programme	Minister of Energy and Petroleum		1 m	grant		24 months	Improve institutional and legal framework for mini-grid investment
ON GOING PROJECTS/STUDIES								
Exim Bank of India	Electricity Expansion Project	NAWEC		22.5m	Loan		18 Months	Electricity expansion for Kiang and GBA
World Bank	Gambia Electricity Restoration Modernization Project	NAWEC		90 M		2018	5 Years	
Islamic Development Bank	Brikama II 20 MW Power Supply Project	NAWEC		24 m			24 Months	Installation and commissioning of 2x10 engines in Brikama
World Bank	Gambia Electricity Support Project	NAWEC		18.5M	Grant/loan		5 years	Expansion of available generation at Kotu and Brikama

Appendix IV: Map of Project Area



Source: World Bank