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IDA/R2017-0146/1

May 11, 2017

Closing Date: Tuesday, May 30, 2017 at 6 p.m.

FROM: Vice President and Corporate Secretary

Guinea-Bissau

Emergency Water and Electricity Services Upgrading Project

Project Paper

Attached is the Project Paper regarding a proposed additional credit, proposed additional grant and restructuring to Guinea-Bissau for an Emergency Water and Electricity Services Upgrading Project (IDA/R2017-0146), which is being processed on an absence-of-objection basis.

Distribution:

Executive Directors and Alternates
President
Bank Group Senior Management
Vice Presidents, Bank, IFC and MIGA
Directors and Department Heads, Bank, IFC and MIGA

Document of
The World Bank

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Report No: PAD2282

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT PAPER

ON A

PROPOSED ADDITIONAL CREDIT

IN THE AMOUNT OF SDR 13.3 MILLION
(US$18.0 MILLION EQUIVALENT)

AND A PROPOSED ADDITIONAL GRANT

IN THE AMOUNT OF SDR 5.2 MILLION
(US$7.0 MILLION EQUIVALENT)

AND PROPOSED RESTRUCTURING

TO THE

REPUBLIC OF GUINEA-BISSAU

FOR AN

EMERGENCY WATER AND ELECTRICITY SERVICES UPGRADING PROJECT

May 8, 2017

Water Global Practice
Africa Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective March 31, 2017)

Currency Unit	=	CFA Franc (CFAF)
CFAF 580	=	US$1
US$1.35685	=	SDR 1

FISCAL YEAR
January 1 – December 31

ABBREVIATIONS AND ACRONYMS

AAAC	Environmental Impact Evaluation Agency *(Autoridade de Avaliação Ambiental Competente)*
AF	Additional Financing
BOAD	West African Development Bank (*Banque Ouest Africaine de Développement)*
DDO	Distillate Diesel Oil
EAGB	Electricity and Water Utility of Guinea-Bissau (*Electricidade e Águas da Guiné Bissau-Empresa Pública)*
EIRR	Economic Internal Rate of Return
ESMF	Environmental and Social Management Framework
FIRR	Financial Internal Rate of Return
FM	Financial Management
GDP	Gross Domestic Product
HFO	Heavy Fuel Oil
IDA	International Development Association
INSS	National Social Security Institute (*Instituto Nacional de Segurança Social)*
IRR	Internal Rate of Return
LV	Low Voltage
M&E	Monitoring and Evaluation
MEI	Ministry of Energy and Industry
MIP	Management Improvement Plan
MV	Medium Voltage
NGO	Nongovernmental Organization
NICT	New Information and Communication Technology
NPV	Net Present Value
OHADA	Organization for the Harmonization of Business Law in Africa *(Organisation pour l'Harmonisation en Afrique du Droit des Affaires)*
OMVG	Gambia River Development Organization *(Organisation pour la Mise en Valeur du Fleuve Gambie)*
PA	Partnership Agreement
PAD	Project Appraisal Document
PDO	Project Development Objective
PIM	Project Implementation Manual

PIU	Project Implementation Unit
PSP	Private Sector Participation
RAP	Resettlement Action Plan
RPF	Resettlement Policy Framework
SC	Services Contract
SCD	Systematic Country Diagnostic
SDR	Special Drawing Rights
SESA	Strategic Environmental and Social Assessment
SP	Services Provider
ToR	Terms of Reference
WAEMU	West African Economic and Monetary Union

Regional Vice President:	Makhtar Diop
Country Director:	Louise J. Cord
Senior Global Practice Director:	Guang Zhe Chen
Practice Manager/Manager:	Alexander Bakalian
Task Team Leaders:	Pierre Boulenger/Christopher Philip Trimble

GUINEA-BISSAU
EMERGENCY WATER AND ELECTRICITY SERVICES UPGRADING PROJECT - ADDITIONAL FINANCING

CONTENTS

ADDITIONAL FINANCING DATA SHEET

Guinea-Bissau

Emergency Water and Electricity Services - Additional Financing (P161630)

AFRICA

Water Global Practice

Basic Information – Parent			
Parent Project ID:	P148797	Original EA Category:	B - Partial Assessment
Current Closing Date:	30-Jun-2018		

Basic Information – Additional Financing (AF)			
Project ID:	P161630	Additional Financing Type (from AUS):	Scale Up
Regional Vice President:	Makhtar Diop	Proposed EA Category:	B – Partial Assessment
Country Director:	Louise J. Cord	Expected Effectiveness Date:	30-Sep-2017
Senior Global Practice Director:	Guang Zhe Chen	Expected Closing Date:	31-Dec-2021
Practice Manager/Manager:	Alexander E. Bakalian	Report No:	PAD2282
Team Leader(s):	Pierre Francois-Xavier Boulenger, Christopher Philip Trimble		

Borrower				
Organization Name	Contact	Title	Telephone	Email
Ministry of Economy and Finance	H.E. João Alage Mamadu Fadia	Minister	(245) 966654715	joaofadia@hotmail.com

Project Financing Data - Parent (Emergency Water and Electricity Services Upgrading Project-P148797) (in US$, Millions)

Key Dates

Project	Ln/Cr/TF	Status	Approval Date	Signing Date	Effectiveness Date	Original Closing Date	Revised Closing Date
P148797	IDA-54670	Effective	29-May-2014	05-Jun-2014	28-Jul-2014	30-Jun-2018	30-Jun-2018
P148797	IDA-H9560	Effective	29-May-2014	05-Jun-2014	28-Jul-2014	30-Jun-2018	30-Jun-2018

Disbursements

Project	Ln/Cr/TF	Status	Currency	Original	Revised	Cancelled	Disbursed	Undisbursed	% Disbursed
P148797	IDA-54670	Effective	SDR	11.10	11.10	0.00	5.24	5.86	47.23
P148797	IDA-H9560	Effective	SDR	3.40	3.40	0.00	1.36	2.04	40.04

Project Financing Data - Additional Financing Emergency Water and Electricity Services - Additional Financing (P161630) (in US$, Millions)

[ ] Loan [ ] Grant [X] IDA Grant
[X] Credit [ ] Guarantee [ ] Other

Total Project Cost: 25.00 Total Bank Financing: 25.00

Financing Gap: 0.00

Financing Source – Additional Financing (AF)	**Amount**
International Development Association (IDA) Credit	18.00
IDA Grant	7.00
Total	25.00

Policy Waivers

Does the project depart from the CAS in content or in other significant respects?	No
Explanation	
Does the project require any policy waiver(s)?	No
Explanation	

Team Composition

Bank Staff

Name	**Role**	**Title**	**Specialization**	**Unit**
Pierre Francois-Xavier Boulenger	Team Leader (ADM Responsible)	Senior Water Supply and Sanitation Specialist	Water and Sanitation	GWA07
Christopher Philip Trimble	Team Leader	Senior Energy Specialist	Energy	GEE07
Mamata Tiendrebeogo	Procurement Specialist (ADM Responsible)	Senior Procurement Specialist	Procurement	GGO01
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Philippe Marin	Peer Reviewer	Senior Water and Sanitation Specialist		GWA03
Richard Verspyck	Team Member	Consultant	Water and Sanitation	GWA07

Locations

Country	First Administrative Division	Location	Planned	Actual	Comments
Guinea-Bissau	Bissau Autonomous Region	Bissau	X		

Institutional Data
Parent (Emergency Water and Electricity Services Upgrading Project-P148797)
Practice Area (Lead)
Water
Contributing Practice Areas
Additional Financing Emergency Water and Electricity Services - Additional Financing (P161630)
Practice Area (Lead)
Water
Contributing Practice Areas
Energy & Extractives

I. INTRODUCTION

1. This Project Paper seeks the approval of the Executive Directors to (a) provide an additional International Development Association (IDA) credit and grant in the amount of Special Drawing Rights (SDR) 18.5 million (US$25 million equivalent), of which SDR 13.3 million (US$18 million equivalent) is a credit and SDR 5.2 million a grant (US$7 million equivalent) to the Guinea-Bissau Emergency Water and Electricity Services Upgrading Project (P148797), and (b) restructure the parent project (P148797).

2. The proposed Additional Financing (AF) will help finance the costs associated with scaling up and expanding activities to enhance the impact of the parent project. The proposal also includes a restructuring of the parent project, which will involve, among others, an extension of the project closing date and a revision of the project development objective (PDO) and the Results Framework.

3. The current PDO is to (a) restore and increase the access of the population of the Recipient's capital city of Bissau to safe water and improve the quality of water services and (b) to improve the reliability of electricity supply to the population of Bissau. In line with the Government's request, the AF will scale up and expand activities to support the reform of the electricity and water utility of Guinea-Bissau (*Electricidade e Águas da Guiné Bissau-Empresa Pública*, EAGB). To capture the enhanced nature of activities, a third element will be added to the PDO and it will be to (a) restore and increase the access of the population of the Recipient's capital city of Bissau to safe water and improve the quality of water services; (b) improve the reliability of electricity supply to the population of Bissau; and (c) improve the performance of EAGB. The AF activities are aligned with the components of the parent project. They will not generate any additional environmental and social safeguards risks or impacts that would require a change in the project safeguards category (B). An additional implementation period of three and a half years, to December 31, 2021, will be required to complete the activities proposed under the AF, particularly for implementing the services contract (SC) (see paragraph 4). The request for extension of closing date to match the closing date of the AF was received from the Government on April 17, 2017.

4. The AF will enhance the impact of the parent project by (a) providing access to improved water services to approximately 57,000 additional people, increasing the project outcome target by 75 percent and (b) further improving the reliability of electricity services. The improvement of the management and operational performances of EAGB under the AF will be achieved through private sector participation (PSP) in the delivery of services in the form of a SC with a professional operator and effective and proactive monitoring of the quality of electricity and water services under a performance contract.[1]

5. All activities will be financed entirely by the proposed additional credit and grant. No co-funding from the Government or from multilateral or bilateral agencies is foreseen. The AF is processed as a regular operation as the Recipient has demonstrated its ability to prepare and implement such an operation, whereas during the preparation of the parent project in early 2014

[1] This performance contract would be signed between the Government, represented by the Ministry of Economy and Finance (MEF) and the Ministry of Energy and Industry (MEI), and EAGB.

the country context required to trigger paragraph 12 of OP 10.00 – *Situations of urgent need of assistance or capacity constraints*.

II. BACKGROUND AND RATIONALE FOR ADDITIONAL FINANCING

Country Context

6. **Guinea-Bissau is fighting poverty, low growth, and political fragility.** Each of these areas presents both a formidable challenge, as well as an opportunity for serious, long-lasting, and much-needed change. With a population of just over 1.8 million people in 2015 and a gross national income per capita of US$590, Guinea-Bissau is the 12th poorest country in the world. Gross domestic product (GDP) growth averaged a mere 0.4 percent between 2000 and 2014, a rate that is symptomatic of a stagnating economy; this is roughly one-quarter the average performance of Sub-Saharan Africa (1.9 percent). The economy is dominated by agriculture, accounting for over 40 percent of GDP and employing about 80 percent of workers, high by regional standards. The production and export of raw cashews nuts constitute the main source of income for more than two-thirds of the households (and for virtually all small farmers) and represent over 85 percent of the country's total export earnings. Little productivity growth across all sectors and low (public and private) savings and investment have undermined growth potential. The economy is characterized by a dual vulnerability to external developments stemming from a high dependence on a single export and a high susceptibility to international price shocks. Additionally, frequent bouts of political instability and shocks associated with adverse weather conditions impose large costs on economic and social development in the country.

7. **Guinea-Bissau's persistent low growth does not reflect its potential, given the country's abundant natural resources and advantageous geographical location.** Guinea-Bissau has the potential to grow much faster. The country has the opportunity to advance its development agenda by expanding its cashew value chain, capitalizing on emerging green shoots in agriculture and other sectors by creating an environment for greater PSP in the economy, and by addressing some of the pressing infrastructure needs of the country, including electricity and water. There is great potential in cashew processing, cultivation in rice, and a diversified range of cereal, fruits, and tubers. Fisheries and mining are also recognized as possible engines of growth. In spite of the country's significant natural beauty, the potential of the tourism sector remains largely untapped. Moving into higher value-added activities in industry and services will be crucial to achieve the growth rates and Guinea-Bissau will require to catch up with other countries. An important step in unlocking this potential is, among others, tapping multilateral agencies and regional institutions, such as West African Economic and Monetary Union (WAEMU) and Economic Community of West African States, as well as other stakeholders for technical and financial support to anchor critical interventions, while also introducing initiatives to directly address the underlying weaknesses in the existing business environment and governance framework.

8. **Guinea-Bissau is one of the most coup-prone and politically unstable countries in the world**. Four successful coups have been recorded in independent Guinea-Bissau, with another 16 coups attempted, plotted, or alleged. The last military coup, in April 2012, has had a severe adverse economic and social impact on the population of Guinea-Bissau, especially its

poorest segments; the delivery of basic services was considerably reduced and water and electricity services deteriorated significantly and resulted in cholera incidents in 2013. Following a broad and inclusive dialogue process facilitated by the international community, an inclusive Government was formed on June 6, 2013, and elections restored democracy in 2014, and the new Government embarked on ambitious reforms. A short-lived period of political stability after the elections fostered important steps toward a set of reforms, including achieving stronger fiscal sustainability. However, a fresh round of political tensions emerged in mid-2015 and continues until today.

Sector Context at the Time of the Parent Project Design

9. **The institutional and legal framework of the electricity and water sectors in Guinea-Bissau was incomplete and ineffective.** EAGB was established in 1983 to deliver electricity and water services throughout the country. The scope of services was later modified by a Water Act of 1992, which gave responsibilities of rural water services to the General Directorate of Hydraulic Resources and two Electricity Acts of 2007, which reorganized the electricity sector. Most of the sectoral legislation was not actually effective, pending the issuance of complementary decrees and regulations. Since its creation, EAGB had confined its activities to the capital city, Bissau. In addition, EAGB's legal status no longer complied with the legislation of the Organization for the Harmonization of Business Law in Africa (*Organisation pour l'Harmonisation en Afrique du Droit des Affaires*, OHADA) that governs public enterprises in the WAEMU and the exact ownership of many of EAGB's assets remained to be ascertained.

10. **At the time of the parent project's design, electricity and water services in Bissau were facing three major challenges**:

(a) Urban access to electricity and water was low by regional standards and the unreliability of public supply made the services erratic and unsafe. Fifty-eight percent[2] of Bissau's population had intermittent access to electricity supplied by EAGB. Most of the large electricity consumers, such as enterprises and international organizations, and well-off households used gasoline or diesel-based electricity generators or were supplied by individual producers and distributors of electricity, who charged three to four times EAGB's tariff. Only 31 percent of Bissau's population had intermittent access to the water distributed by EAGB through household service connections and standposts. The remainder of the population was supplied mostly with unsafe water through shallow dug wells and informal suppliers. Similarly, the quality of EAGB's water was uncertain, as frequent interruptions of power supply and insufficient water pressure created opportunities for bacteriological contamination of the piped water, particularly in the rainy season.

(b) Since 1998, EAGB had been caught in a cycle of poor service delivery, lack of maintenance, financial shortfall, and an investment backlog. This critical situation reflected EAGB's structural and organizational shortcomings, as well as deficiencies in technical and management capacities. The company had continuously operated in

[2] Represents 26,000 households connected to the grid, and assumes eight people per household.

an emergency mode, with sporadic rehabilitation instead of maintenance and occasional infusions of cash.

(c) The country's fragility had prevented reform attempts and constrained external support. Several attempts to reform the sectoral institutional framework were initiated by the Government over 1998–2005, but could not be implemented due to the political and social conflicts in the country. For the same reasons, efforts to address the investment backlog with donor support were frequently aborted or were substantially delayed. Whereas the electricity and water sectors usually attract diverse and abundant external public financing in West African countries, IDA and the West African Development Bank (*Banque Ouest Africaine de Développement*, BOAD) were the only active donors in the electricity sector and the urban water sector had not received any significant external financing for a long time.

11. **The parent project, prepared following the 2012 coup, and with a transitional government in place at that time, represented IDA's contribution to the urgent recovery of the basic water and electricity services in Bissau** which, in the absence of immediate external support, would collapse with unforeseeable consequences on economic growth, health, and other social services. The Government had no other financing options to provide an effective emergency response, and the parent project was prepared as an emergency operation. The parent project helped address the sectoral challenges - funding high-impact rehabilitation to restore and improve the delivery of services and starting to close the coverage gap between services by developing access to safe water in unserved, poor neighborhoods. Taking into account the fragile environment and in line with the phasing of the Government's strategy, the parent project did not attempt to undertake institutional reforms.

Parent Project Implementation

12. The financing for the ongoing Guinea-Bissau Emergency Water and Electricity Services Upgrading Project consists of an SDR 3.40 million Grant (Grant No. H956-GW, equivalent to US$5.30 million) and an SDR 11.10 million Credit (Cr. No. 5467-GW, equivalent to US$17.20 million). It was approved on May 29, 2014. The Financing Agreement was signed on June 5, 2014, and the project became effective on July 28, 2014.

13. The PDO was to be achieved through (a) securing and expanding water production, storage and distribution capacities, and facilitating access to services through programs for constructing social water connections and public standposts; (b) rebuilding the fuel supply chain and eliminating weak points of the electricity distribution system; and (c) paving the way to the restoration of the financial viability of EAGB by improving the efficiency of service delivery and key management capacities. The project included three components:

- **Component 1. Water Supply (US$12.05 million).** This component aims at improving water services and expanding access.

- **Component 2. Electricity Supply (US$7.89 million).** This component aims at improving the reliability of electricity services

- **Component 3. Support to Project Implementation and EAGB (US$2.56 million).** This component aims at enabling the Project Implementation Unit (PIU) to deliver its responsibilities and improving EAGB's accountability and management.

14. **The project activities supporting the rebuilding of EAGB's fuel supply chain faced an overwhelming challenge shortly after inception, with the successive breakdown of EAGB's two heavy fuel oil (HFO)-powered generators at the beginning of 2015**. This situation prompted (a) the Government to rent diesel-powered generators with a capacity of 10 MW and (b) a restructuring of the project, which took place on October 6, 2015, to enable the project to purchase distillate diesel oil (DDO) instead of HFO to supply the rented generators, which were operated by the rental company. Although the emergency rental scheme entailed relatively high production costs, it largely secured energy production and led to a substantial increase of the electricity produced and of the number of electricity customers (see paragraph 17).

15. **Since the restructuring, the project's progress has been rated 'Satisfactory' with regard to the achievement of the PDO and 'Satisfactory' or 'Moderately Satisfactory' with regard to implementation progress**. Procurement and financial management (FM) and environmental and social safeguards are rated 'Satisfactory' or 'Moderately Satisfactory'. Project implementation complied with key covenants with regard to safeguards, audits, and reporting. As of April 13, 2017, the disbursement rate amounted to 44.9 percent and commitments amounted to 90 percent of the financing envelope now that two large contracts (one for water, and one for electricity) are awarded. There are no overdue audits for the project. So far, the parent project has achieved the following notable results:

- Provided three months of energy production through the supply of HFO/DDO;

- Secured the water production by the construction of dedicated electricity lines supplying the water boreholes, the installation of stand-by power generators for these boreholes in case of energy cutoff, and the supply of DDO to run these generators. These security measures enabled the water production facilities to run at 100 percent of their capacity since the beginning of the project;

- Increased the water production capacity by 37 percent (this number will go up to 75 percent once the major facilities, such as water tanks are built), providing 42,000 additional people with access to safe water;

- Provided 2,758 households with prepaid electricity meters, enabling a better control of their consumption;

- A hydraulic master plan for Bissau was prepared, which will guide the development of the water sector in a rational and planned manner. Water investments under the parent project correspond to the first stage (emergency) identified in the master plan, and the works planned under the AF to the next stage of the plan; and

- Two large contracts were awarded (one for water, US$5.5 million equivalent and one for energy, US$4.8 million equivalent), which will enable the achievement of the parent project's objective.

Current Situation of Services and EAGB

16. The evolution of key indicators of access, production, distribution and billing, and collection performances between 2013 (before the project's start-up) and 2016 is summarized in Table 1.

Table 1. Key Performance Indicators 2013–2016

Indicator	Unit	2013		2016	
		Electricity	Water	Electricity	Water
Urban population	Number	431,600		471,600	
Annual production					
• Electricity (net)	GWh	22.94		78.40[a]	
• Water	Mm^3		6.48		11.42
Annual volume delivered to end user					
• Electricity (of which water borehole consumption)	GWh	12.26		49[a] 4.7	
• Water	Mm^3		3.43		4.80
Nonrevenue electricity/water ratio (transmission and distribution losses)	Percent	47	47	37[a]	58
Access rate to services	Percent	58	31	n.a.	42
• through household connection	Percent	58	22	n.a	34
• through standposts	Percent	n.a	9	n.a	8
Number of connections	Number	27,250	9,556	49,651	20,046
• o/w metered	Number	23,890	6,726	45,510	6,769
• o/w metered and prepaid	Number	16,216	n.a	21,055	n.a
Number of staff	Number	339		409	
Staff per 1,000 connections	Number	9.2		5.9	
Average tariff					
• Electricity	CFAF/kWh	282		231	
• Water	$CFAF/m^3$		195		184
Bill collection ratio, private customers	Percent	n.a.		53	
Bill collection ratio, including Government	Percent	90		90	
Installed capacity • Of which available • Of which emergency rental	MW	11 n.a. n.a.		26 12 10	

Source: EAGB dashboard.
Note: a. Analysis assumes net generation data provided by EAGB includes GWh transmitted for the purpose of water borehole electricity consumption.

17. **Electricity services.** EAGB electricity services show a substantial increase of activity with regard to power generation (+242 percent) and the number of connections (+82 percent). These results are independent of project activities, as they are attributable to the shift of power generation to rental containerized units with a capacity of 10 MW (further expanded to 15 MW at the end of 2016), following the breakdown of EAGB HFO-fired generators (2 x 2.5 MW). Despite their high cost, the increased stability and availability offered through the rental units, combined with new meters provided through the parent project and other donor activities, has

enabled expansion to new customers. However, the reliability of the distribution networks has not yet improved much, pending the completion of project-financed rehabilitation and extension works. With regard to metering, the majority of new customers have not yet been equipped with prepayment meters.

18. **Water services.** Water production increased by 76 percent and the number of water connections increased by 110 percent. These results are mostly attributable to the project, which financed the drilling of new boreholes, the rehabilitation of production facilities, including the construction of dedicated electricity lines to secure energy supply to these facilities. However, the production increase is not fully reflected in the water sales, which increased only by 40 percent, pending the completion of project activities related to the rehabilitation and extension of distribution networks, the expansion of water storage, and metering. The increase of nonrevenue water (from 47 to 58 percent) likely results from (a) the increased water pressure, which in turn affects physical losses in aging pipes and (b) the deterioration of the metering rate since 2013 (only 34 percent of water customers are metered).

19. **The delivery and development of Bissau's electricity and water services and EAGB continue to face extensive challenges**:

(a) **Weak governance and management of EAGB.** The shortcomings of the institutional and legal framework of EAGB (see paragraph 9) have not been addressed. There is limited oversight of EAGB management, with no performance contract in place and the board of directors has not met since 2010. Technical and commercial management, FM, and human resources management exhibit severe shortcomings in the absence of adequate procedures and management tools (see paragraphs 5 to 8 of Annex 2), which led to poor service quality and poor technical, commercial, and financial performances.

(b) **High cost of electricity generation.** With dependency on emergency generation that uses imported diesel, the cost of generation is extremely high. It is estimated that the cost of supply is over US$0.50 per kWh, making it among the most expensive on the whole continent. This means that even with very high tariffs of US$0.37 per kWh, EAGB is unable to cover generation costs.

(c) **Even though the parent project will significantly contribute to the improvement of water and electricity services, the survival of EAGB services is contingent upon government subsidies that create a fiscal burden.** Due to EAGB's critical cash situation, the MEF paid approximately CFAF 700 million per month to EAGB in 2016, which represents a fiscal burden equivalent to 1.5 percent of GDP. Of this total, CFAF 400 million were payments of public water and electricity bills and the balance payments to commercial banks on behalf of EAGB for short-term debt servicing.

External Support to the Sector

20. **Donors' interventions in the energy sector in Guinea-Bissau and in the sub region create medium-tem opportunities to drastically reduce the cost of electricity supply, which**

would benefit the population both inside and outside of Bissau. Under the Gambia River Development Organization (*Organisation pour la Mise en Valeur du Fleuve Gambie*, OMVG) Interconnection Project,[3] the World Bank, jointly with other donors, is financing transmission lines that will enable importation of low-cost electricity from Guinea[4] and Senegal, including to supply about 30 MW by 2020, and provide a backbone transmission line through the country to enable electrification of urban and rural areas. The World Bank is the lead donor financing OMVG in Guinea-Bissau, financing all the lines and two substations. BOAD is financing the other two substations. BOAD is also financing the construction of a new HFO-fired power plant (15 MW) but has a financing gap of CFAF 10 billion. The African Development Bank will finance an electricity transmission loop that will link Bissau and other urban centers to the OMVG grid.

21. **At the same time, IDA remains the only external partner involved in Guinea-Bissau's urban water supply sector**. In the water sector, the AF will enable IDA to (a) further support the reduction of the growing access gap between electricity and water services in Bissau and (b) provide building blocks for the development of water services in secondary urban centers through institutional and technical studies.

Rationale for the Additional Financing

22. **OMVG provides a unique opportunity to benefit from lower-cost electricity supply from the region, and starting EAGB's reform now will enable to fully benefit from opportunities created by the perspective of this low-cost electricity supply.** Improving the operational performance of EAGB, combined with the availability of a significant quantity of affordable electricity from OMVG in 2020, will translate into improved financial viability. This will enable EAGB to be less dependent on government subsidies and so, will contribute to decrease the fiscal burden and enable the Government to allocate the dedicated amounts to priority sectors (health and education), in a context of scarce resources.

23. **All sector stakeholders agree on the need to shift from the emergency mode** that governed, to date, external assistance to the water and electricity sector and focus on improving the overall efficiency and sustainability of water and electricity services provision in Bissau by reforming EAGB.

24. **In its request for the AF, the Government explicitly mentioned its willingness to have this operation to support EAGB's reform**, in parallel with the financing of scaled-up activities of the parent project. The AF is the preferred financing mechanism, because it will (a) expedite the preparation process while maintaining the positive momentum of the results achieved to date; (b) capitalize on the current effective implementation arrangements which have generated satisfactory results under the parent project; (c) capitalize on knowledge and detailed assessments carried out under previous IDA-financed projects; and (d) complement the timely and effective interventions of other development partners, especially the OMVG interconnection by 2020 which requires the improvement of EAGB by this date.

[3] OMVG Interconnection Project (P146830), approved on April 29, 2015.
[4] Likely hydropower from the Kaleta dam in Guinea in the first instance.

Design of the AF

25. **The proposed AF will support several pillars of EAGB reform.** The formulation of EAGB reform, including PSP in the delivery of services, builds on discussions with EAGB and the Government and on background studies carried out under previous IDA interventions, including a study on the restructuring of EAGB conducted in 2013, tariff and financial viability studies conducted in 2014, an electricity legislation study conducted in 2014, and a study of EAGB's human resources in 2012. Key pillars of the reform process will include the following:

(a) **Support from a professional private operator to improve the technical, commercial, and financial situation of EAGB.** The selected PSP option will consist of an SC,[5] which is deemed the most suitable to the country environment, for a duration of around three years, allowing the proposed service contractor (or services provider, [SP]) enough time to get on board and be able to achieve results. Under the SC,[6] key management positions (at least general manager, financial manager, and commercial manager) will be held by the SP, which will also be in charge of producing specific deliverables and identifying emergency maintenance and rehabilitation bottlenecks. The SP will, among others, provide management tools, particularly for commercial management, supplemented by an exhaustive census of customers (current and potential), using new information and communication technologies (NICTs), and the purchase and installation of customer management software and hardware. The SP will also help revamp EAGB's accounting and FM system and design EAGB's financial restructuring. EAGB and the Government will sign a performance contract,[7] setting targets of improvement of operational performances and explicit government's obligations, including operational subsidies and payment of utility bills of public users. A capacity-building program will be defined and implemented with the SC's support. The project's Steering Committee will monitor the implementation of the SC and the performance contract, which will be periodically audited. The AF will also support the harmonization of EAGB's legal framework with OHADA legislation.

(b) **Design of a social plan** to address pressing human resources management issues and in that perspective contribute to improve EAGB's financial situation. So far, EAGB is overstaffed, compared with performing utilities, and furthermore the company is in default in several of its legal obligations:

(i) EAGB has not paid mandatory health and pension contributions to the National Social Security Institute (*Instituto Nacional de Segurança Social*, INSS) since 2012. So far, this has prevented 89 staff (on a total of 414), who have reached retirement age, or suffer from major health problems, from receiving pensions and all staff from benefitting from reimbursement of health costs.

[5] In a management contract, the operator has an obligation of results, whereas in an SC, the operator has an obligation of means.

[6] The design of the SC and the preparation of the corresponding bidding documents is under way, under financing of the Public-Private Partnership Trust Fund.

[7] The targets of the performance contract are being defined, as part of the ongoing preparation of a Management Improvement Plan (MIP) for EAGB.

Consequently, EAGB has had to maintain staff on its payroll after retirement and pay for health expenditures.

(ii) EAGB accumulated salary arrears (up to 35 months of earnings) to about 200 staff, which have not been settled for the most part.

(iii) Numerous employees do not have valid contracts or are employed in redundant positions.

26. The following due diligences will be carried out under the AF to assess the feasibility of a social plan to address the abovementioned issues and effectively target beneficiaries:

(a) Conduct all the preliminaries studies to design the scope of the social plan (a first report exploring the different options was produced in 2012, under a previous IDA-financed project).

(b) Plan communication activities to ensure that the plan is transparently shared with the affected employees in adherence with the national labor laws.

(c) Prepare a poverty and social impact assessment to evaluate the potential adverse social effects of a future retrenchment process and identify additional mitigation measures.

(d) Assess the framework to implement this social plan, including the role and the capacity of the different stakeholders, and particularly INSS.

27. The social plan, to be implemented and financed by the Government or external support, would generate substantial cost savings and help improve EAGB's governance by enabling the utility to comply with its legal obligations.

Box 1. Lessons Learned from Previous PSP Contracts

The World Bank has been supporting the promotion of different contracts in different forms (technical assistance, SC, and management contract,) particularly in Africa, to enable improving the performances of water and/or energy utilities. Several lessons learned may apply to the Guinea-Bissau case:

- The form of the contract depends on the country context and of the perception of the risks by the potential operators. In the Democratic Republic of Congo, a management contract was initially designed to provide support to the national urban water utility (*Régie de distribution d'eau de la Republique Democratique du Congo*, REGIDESO). After a long selection process, the qualified candidates declined to submit bids and two years were lost in the process. In a challenging context like the one of the Democratic Republic of Congo, it eventually appeared that an SC was more appropriate, and this option was successfully implemented.
- The real weaknesses of the utility need to be assessed to better design the contract. In the present case, a consultant has been recruited and is conducting this assessment. From the preliminary conclusions, it clearly appears that EAGB needs to be reinforced at least in commercial and financial sectors; this was also the case in the Burkina Management Contract implemented 15 years ago which enabled the national water utility (*Office national de l'eau et de l'assainissement*, ONEA), to improve in these areas and become one of the best performing utilities in Sub-Saharan Africa.
- An SP will bring its experience and know-how, but the objectives to be achieved need to be clearly defined from the beginning so that the SP can really focus on key issues that need to be addressed. A Management Improvement Plan (MIP), to be produced before the appointment of the SP, and endorsed by the authorities,

appears to be the appropriate tool to address the priorities, as implemented in Sierra Leone for the energy sector. A consultant is being recruited, financed by the parent project, to prepare EAGB's MIP.

- The SP must have the possibility to quickly intervene on the ground to solve problems it would have identified and which, based on his expertise, can have a quick-win impact. This was the case in Senegal in 1996when the private operator, *Sénégalaise des Eaux* quickly improved the water distribution throughout the network by installing distribution valves or pressure reducers to optimize the water distribution. In that perspective, funds will be allocated to a specific subcomponent of the AF (using World Bank procedures like any other activity) to enable the SP to implement emergency or quick-win maintenance, repair, and rehabilitation of water and electricity facilities.

28. **The selection of AF scaled-up activities for the water and electricity components is based on** (a) defining, with EAGB, priority works identified in the hydraulic master plan for the city of Bissau, which was financed under the parent project; (b) undertaking a joint assessment, with EAGB, of key remaining bottlenecks in the energy transmission and distribution grid which prevent the adequate delivery of the energy generated; and (c) targeting the elimination of metering issues by replacing the remaining electromechanical meters with prepayment meters, to achieve universal prepayment meter coverage for residential customers, and expanding water metering to all private connections billed on a lump sum basis.

29. **Furthermore, this operation will pave the way for the future development of the water and energy sectors**, exploring:

- How water and electricity services could be supplied in secondary urban centers as the OMVG Interconnection Project, in particular, will provide a backbone transmission line throughout the country and provide an opportunity for these centers to be connected;

- How EAGB will evolve in the next years on key strategic questions such as geographic focus (if EAGB will maintain its focus on Bissau or explore zones outside of Bissau);

- The rationale for water and electricity to remain operated by the same utility, EAGB; and

- The possibilities to use new sources of electricity generation, as the country offers a unique opportunity to benefit from solar energy, instead of costly and polluting fossil energy, already experimented in small centers of the country, but which could be promoted at a larger scale (as in Bissau), as an appropriate response to high costs of generation.

30. The activities financed by the proposed AF will be grouped under (a) Components 1 and 2 of the parent project, consisting of scaling up the existing activities in key strategic infrastructure investments; and (b) Component 3 of the parent project, which will include new activities associated with EAGB's reform, which explains why the AF amount is higher than the parent project. These activities are described in Section III, Changes to Component and Costs, and detailed in Annex 2.

Consistency with the Country Partnership Framework and World Bank Twin Goals

31. **The parent project was fully aligned with the Country Engagement Note** (CEN, Report No. 82529-GW) for fiscal years 2015–2016, which identified two key areas of intervention, of which the second focused on the restoration of basic services, including water and electricity. After the formulation of the Government's inclusive growth strategy and the completion of a country economic memorandum, the World Bank completed a Systematic Country Diagnostic (SCD, Report No. 106725-GB) in June 2016, which will inform the Country Partnership Framework for FY2018–2020. The SCD reiterates the urgent need to improve the delivery of basic services to achieve the World Bank's twin goals of eradicating poverty and fostering prosperity shared more equally to the benefit of the poor, and explicitly mentions EAGB as a priority area for performance improvements.

III. Proposed Changes

Summary of Proposed Changes

The proposed AF aims to (a) scale up water supply and electricity supply activities of the parent project that are designed to develop access to water services and improve the quality and reliability of electricity and water services in Bissau, in line with the original PDO and (b) support EAGB's reform to reinforce the sustainability of the project impact.

Accordingly, it is proposed to (a) revise the PDO to reflect the inclusion of the improvement of EAGB's performance; (b) revise the project scope and description and the Results Framework in line with the proposed activities under the AF; and (c) introduce legal covenants related to the implementation of EAGB's reform.

Implementation arrangements will be maintained as under the parent project. The team also proposes to extend the closing date of the parent project by three and a half years (from June 30, 2018, to December 31, 2021) to ensure sufficient time to implement the proposed AF activities. Additional changes are proposed for disbursement arrangements, procurement arrangements, and the implementation schedule.

These changes are reflected in an agreement restating and amending the legal agreement of the original project.

Change in Implementing Agency	Yes [ ] No [X]
Change in Project's Development Objectives	Yes [X] No [ ]
Change in Results Framework	Yes [X] No [ ]
Change in Safeguard Policies Triggered	Yes [ ] No [X]
Change of EA category	Yes [ ] No [X]
Other Changes to Safeguards	Yes [ ] No [X]
Change in Legal Covenants	Yes [X] No [ ]
Change in Loan Closing Date(s)	Yes [X] No [ ]
Cancellations Proposed	Yes [ ] No [X]
Change in Disbursement Arrangements	Yes [X] No [ ]
Reallocation between Disbursement Categories	Yes [ ] No [X]
Change in Disbursement Estimates	Yes [X] No [ ]

Change to Components and Cost	Yes [X] No [ ]
Change in Institutional Arrangements	Yes [ ] No [X]
Change in Financial Management	Yes [ ] No [X]
Change in Procurement	Yes [X] No [ ]
Change in Implementation Schedule	Yes [X] No [ ]
Other Change(s)	Yes [ ] No [X]

Development Objective/Results

Project's Development Objectives

Original PDO

The objective of the project is to (a) restore and increase the access of the population of the Recipient's capital city of Bissau to safe water and improve the quality of water services and (b) improve the reliability of electricity supply to the population of Bissau.

Change in Project's Development Objectives

Explanation:

The PDO will be amended to reflect the expected impact of the support to the reform of EAGB that will be provided through the proposed AF activities.

Proposed New PDO - Additional Financing (AF)

The objective of the project is to (a) restore and increase the access of the population of the Recipient's capital city of Bissau to safe water and improve the quality of water services; (b) improve the reliability of electricity supply to the population of Bissau; and (c) improve the performance of EAGB.

Change in Results Framework

Explanation:

The target values and the target dates of several current outcome and output indicators will be adjusted to reflect the impact of the AF activities. In addition:

(a) New PDO indicators will monitor EAGB's operational performance (water and electricity losses);

(b) New intermediate indicators will monitor EAGB's bill collection;

(c) A new intermediate indicator will monitor citizen engagement; and

(d) Intermediate indicators related to EAGB's own electricity production will be dropped as Bissau's electricity is now entirely produced through rented thermal power facilities.

Details of the changes are provided in Table 2 and Annex 1.

Table 2. Revisions to the Results Framework

Revisions to the Results Framework		Comments/Rationale for Change
PDO indicators		
Current (PAD)	**Proposed Change**	
Number of people in urban areas provided with access to Improved Water Sources under the project	Change in the target value: increased from 76,800 to 134,100 people; change of the target date	Outcome impact of the AF and increased implementation period

Number of people benefiting from enhanced water services under the project	No change	
Number of people benefitting from enhanced electricity services under the project	No change	
Annual electricity generated	To be dropped	No longer related to the project as EAGB generators have been replaced by rented generators
Direct project beneficiaries	Change in the target value: increased from 284,800 to 342,100 people; change of the target date	Outcome impact of the AF and increased implementation period
Female beneficiaries	Percentage unchanged (51%)	
	New indicator: Nonrevenue water	Impact of the SC
	New indicator: Network transmission and distribution losses	Impact of the SC
Intermediate Results indicators		
Current (PAD)	**Proposed Change**	
New piped household water connections that are resulting from the project intervention	Change in the target value: increased from 6,600 to 12,600; change of the target date	Impact of the AF activities and increased implementation period
Piped household water connections that are benefiting from rehabilitation works undertaken by the project	No change	
Improved community water points constructed or rehabilitated under the project	Change in the target value: increased from 80 to 111; change of the target date	Impact of the AF activities and increased implementation period
Operating time of ABC generators	To be dropped	EAGB generators replaced by rented generators
Prepayment meters installed under the project	Change in the target value: increased from 11,030 to 21,030; change of the target date	Impact of the AF activities and increased implementation period
Distribution lines constructed or rehabilitated under the project	Change in the target value: increased from 12 km to 85 km; change of the target date	Impact of the AF activities and increased implementation period
	New indicator: Citizen engagement: percentage of complaints to the call center that are satisfactorily addressed	Impact of the AF activities
	New indicator: Collection rate of electricity and water bills (private customers)	Impact of the SC
	New indicator: Percentage of water service connections equipped with meters	Impact of the AF activities
	New indicator: Percentage of electricity connections equipped with prepayment meters	Impact of the AF activities
	New indicator: Services Contract executed and implemented	To reflect the introduction of PSP

Compliance

Covenants - Additional Financing (Emergency Water and Electricity Services - Additional

Financing - P161630)						
Source of Funds	**Finance Agreement Reference**	**Description of Covenants**	**Date Due**	**Recurrent**	**Frequency**	**Action**
IDA	Schedule 2 Section I.A.1 (a)	The Recipient shall modify the mandate of the Project Implementation Unit no later than one month after the Effective Date, and thereafter maintain at all times during the implementation of the Project, a Project implementation unit within the administrative structure of MEF, with terms of reference and resources satisfactory to the Association, and supported by qualified and experienced personnel in adequate numbers to be responsible for coordinating the implementation of the Project.	October 30, 2017	☐		New
IDA	Schedule 2 Section I.A.3 (a)	The Recipient shall establish, not later than two months after the Effective Date and thereafter maintain at all times during Project implementation, a Project Steering Committee with a mandate, composition and resources satisfactory to the Association ("Project Steering Committee").	November 30, 2017	☐		New
IDA	Schedule 2 Section I.C.1 (c)	EAGB shall: (i) no later than nine	June 30, 2018	☐		Revised

		months after the Effective Date, establish, and thereafter maintain throughout Project implementation, a financial management system and prepare financial statements in accordance with consistently applied accounting standards acceptable to the Association; (ii) have said financial statements audited by independent auditors for each fiscal year of EAGB in accordance with consistently applied auditing standards acceptable to the Association; and (iii) send to the Recipient and to the Association said auditing reports on the audited financial statements of EAGB for each fiscal year of EAGB not later than six months after the end of such period.				
IDA	Schedule 2 Section I.D.1	Not later than four months after the Effective Date, the Recipient shall approve, and shall cause EAGB to adopt and thereafter maintain throughout Project implementation, a Management Improvement Plan.	January 30, 2018	☐		New
IDA	Schedule 2 Section I.D.2	Not later than six months after the Recipient's approval of the Management Improvement Plan, the Recipient shall:	July 30, 2018	☐		New

		(a) with support of the Project Implementation Unit execute a Services Contract with the Services Provider in accordance with the provisions of Section III of Schedule 2 to this Agreement; and (b) thereafter cause the Project Implementation Unit to maintain at all times during the implementation of the Project, the Services Contract under terms and conditions satisfactory to the Association.				
IDA	Schedule 2 Section I.D.3	Within two months from the date of signing of the Services Contract, the Recipient shall cause EAGB to: (i) proceed with any corporate nominations prescribed by the applicable laws, including, any representative from the Services Provider pursuant to the Services Contract; and (ii) submit to the Association an opinion or opinions satisfactory to the Association of counsel acceptable to the Association showing on behalf of the Recipient, that the Services Contract has been duly authorized or ratified by, and executed and delivered on behalf of, such party and	September 30, 2018	☐		New

		that all corporate nominations required under the Services Contract are legally valid.				
IDA	Schedule 2 Section I.D.4	The Recipient shall no later than six months after the Effective Date enter into a Performance Contract with EAGB under terms and conditions satisfactory to the Association and thereafter maintain at all times during the implementation of the Project said Performance Contract.	March 30, 2018	☐		New
IDA	Schedule 2 Section I.D.5	The Recipient, with the support of the PIU, shall have a semi-annual technical and financial review of the implementation of Services Contract and Performance Contract carried out by the Contract Auditors and submit its report no later than two months after the end of the relevant semester to the Services Provider, the Project Steering Committee and to the Association.		☒	Semi-Annual	New
IDA	Schedule 2 Section V.1	Not later than two months after the Effective Date, the Recipient shall cause EAGB to amend the company by-laws, in form and substance satisfactory to the Association, to comply with	November 30, 2017	☐		New

		OHADA Legislation				
IDA	Schedule 2 Section V.2	Not later than three months after the Effective Date, the Recipient shall appoint and thereafter maintain, at all times during Project implementation, the board of directors of EAGB, with terms of reference and composition satisfactory to the Association	December 30, 2017	☐		New
IDA	Schedule 2 Section V.3	The Recipient shall cause EAGB to adopt and thereafter implement a Maintenance, Repair and Rehabilitation Plan, in form and substance satisfactory to the Association		☒	Continuous	New
IDA	Schedule 2 Section V.4	The Recipient shall: (a) not later than twenty-four months from the Effective Date, cause EAGB to carry out an inventory of EAGB's assets and liabilities, and prepare and submit to the Association for its review and written approval the financial restructuring plan; and (b) within six months from its review by the Association, adopt the financial restructuring plan and take and, as the case may be, cause to be taken by EAGB or any other entity concerned by the financial	September 30, 2019	☐		New

		restructuring plan, all necessary governmental and corporate actions required for the implementation thereof, including the debts clearance mechanism.				
IDA	Schedule 2 Section V.5	Not later than six months after the Effective Date, the Recipient shall adopt the Generation Plan, in form and substance satisfactory to the Association.	March 30, 2018	☐		New

Conditions

Source of Fund	Name	Type
IDA	**Withdrawal conditions. Schedule 2, Section IV.B.1 (a)**	**Disbursement**

Description of Condition

Notwithstanding the provisions of Part A of this Section, no withdrawal shall be made for payments made prior to the date of this Agreement for Eligible Expenditures under Category (1) of the Additional Financing.

Source of Fund	Name	Type
IDA	**Withdrawal conditions. Schedule 2, Section IV.B.1 (b)**	**Disbursement**

Description of Condition

Notwithstanding the provisions of Part A of this Section, no withdrawal shall be made under Category (2) of the Additional Financing, unless and until EAGB has adopted a Maintenance, Repair and Rehabilitation Plan referred to in Section V.3 of Schedule 2 to this Agreement, in form and substance satisfactory to the Association.

Source of Fund	Name	Type
IDA	**Withdrawal conditions. Schedule 2, Section IV.B.1 (c)**	**Disbursement**

Description of Condition

Notwithstanding the provisions of Part A of this Section, no withdrawal shall be made under Category (3) of the Additional Financing unless and until the Recipient has adopted a Generation Plan referred to in Section V.5. of Schedule 2 to this Agreement.

Source of Fund	Name	Type
IDA	**Withdrawal conditions. Schedule 2, Section IV.B.1 (d)**	**Disbursement**

Description of Condition

Notwithstanding the provisions of Part A of this Section, no withdrawal shall be made under Category (4) of the Additional Financing unless and until: (i) EAGB has adopted a Management Improvement Plan referred to in Section I.D.1. of Schedule 2 to this Agreement; (ii) the board of directors of EAGB referred to in Section V.2. of Schedule 2 to this Agreement has been established, all in form and substance satisfactory to the Association; (iii) the Project Steering Committee referred to in Section I.A.3. of Schedule 2 of this Agreement has been established, in form and substance satisfactory to the Association; and (iv) Contract Auditors have been appointed, under terms of reference satisfactory to the Association.

Risk	
Risk Category	**Rating (H, S, M, L)**
1. Political and Governance	High
2. Macroeconomic	High
3. Sector Strategies and Policies	Moderate
4. Technical Design of Project or Program	Substantial
5. Institutional Capacity for Implementation and Sustainability	High
6. Fiduciary	Substantial
7. Environment and Social	Substantial
8. Stakeholders	Substantial
9. Other (Climate)	Low
OVERALL	High

Finance

Loan Closing Date - Additional Financing (Emergency Water and Electricity Services - Additional Financing - P161630)

Source of Funds	Proposed Additional Financing Loan Closing Date
International Development Association (IDA)	31-Dec-2021

Loan Closing Date(s) - Parent (Emergency Water and Electricity Services Upgrading Project - P148797)

Explanation:

The proposal also includes a request to extend the closing date of the parent project from June 30, 2018 to December 31, 2021, to ensure sufficient time to implement the proposed additional activities.

Ln/Cr/TF	Status	Original Closing Date	Current Closing Date	Proposed Closing Date	Previous Closing Date(s)
IDA-54670	Effective	30-Jun-2018	30-Jun-2018	31-Dec-2021	30-Jun-2018
IDA-H9560	Effective	30-Jun-2018	30-Jun-2018	31-Dec-2021	30-Jun-2018

Change in Disbursement Arrangements

Explanation:

Disbursements related to EAGB restructuring (Subcomponent 3.5), to the maintenance, repair, and rehabilitation expenditures (Subcomponents 1.5 and 2.6) and to densification of electricity distribution networks (Subcomponent 2.5) will be allocated to specific categories and will be subject to disbursement conditions as follows:

- For Subcomponent 3.5: prior adoption of the MIP, appointment of EAGB's board of directors, establishment of the Steering Committee, and recruitment of the auditor of contracts
- For Subcomponents 1.5 and 2.6: adoption of a maintenance, repair, and rehabilitation plan
- For Subcomponent 2.5: adoption of the generation plan

All other disbursements will be made under a single category.

A separate Designated Account will be established for the AF activities.

Change in Disbursement Estimates | **(including all sources of Financing)**

Explanation:

To reflect the inclusion of the AF.

Expected Disbursements (in US$, millions) (including all Sources of Financing)

Fiscal Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Annual	3.19	4.11	6.20	7.50	9.00	9.00	5.00	3.50	0.00	0.00
Cumulative	3.19	7.30	13.50	21.00	30.00	39.00	44.00	47.50	0.00	0.00

Allocations - Additional Financing (Emergency Water and Electricity Services - Additional Financing - P161630)

Source of Fund	Currency	Category of Expenditure	Allocation	Disbursement % (Type Total)
			Proposed	Proposed
IDA	US$	(1) Goods, works, non-consulting services, consultants' services, Training and Operating Costs for Parts 1.1 to 1.4, Part 2.4 and Parts 3.1 to 3.4 of the project.	9,248,000	72.00
IDA	US$	(2) Goods and works for Parts 1.5 and 2.6 of the project.	504,000	72.00
IDA	US$	(3) Goods and works for Part 2.5 of the project.	2,952,000	72.00
IDA	US$	(4) Goods, works, non-consulting services, consultants' services, and Training for Part 3.5 of the project.	5,296,000	72.00
		Total	18,000,000	
IDAT	US$	(1) Goods, works, non-consulting services, consultants' services, Training and Operating Costs for Parts 1.1 to 1.4, Part 2.4 and Parts 3.1 to 3.4 of the project.	3,596,000	28.00
IDAT	US$	(2) Goods and works under Parts 1.5 and 2.6 of the project.	196,000	28.00
IDAT	US$	(3) Goods and works	1,148,000	28.00

		under Part 2.5 of the project.		
IDAT	US$	(4) Goods, works, non-consulting services, consultants' services and training under Part 3.5 of the project.	2,060,000	28.00
		Total	7,000,000	

Components

Change to Components and Cost

Explanation:

The proposed AF activities fit within the existing project components. The proposed additional activities will increase the costs of Components 1, 2, and 3 by US$8.70 million, US$5.42 million, and US$10.88 million, respectively. The amended and restated project subcomponents (for the parent project and the AF) are listed in the following paragraphs. The AF activities under each subcomponent are summarized, with further details in Annex 2.

Component 1. Water Supply

Subcomponent 1.1. Increasing the availability of water and improve the quality of water services throughout Bissau by: (i) expanding the water production capacity through the drilling, pumping equipment and discharge lines of selected boreholes; (ii) securing the continuity of water production through the installation of selected diesel generators; (iii) expanding water storage infrastructure through the installation of four elevated water storage tanks and the repair and the rehabilitation of four elevated storage tanks; (iv) financing the provision of DDO to secure the energy supply for water production; and (v) safeguarding existing boreholes by fencing the wellfields and sealing unused boreholes.

The AF will expand activities related to water production and storage by drilling and equipping additional boreholes, constructing and rehabilitating additional storage tanks, providing DDO, and safeguarding boreholes.

Subcomponent 1.2. Increasing access to water services in peri-urban districts of Bissau by: (i) expanding the water distribution networks; (ii) installing approximately 12,600 social household connections; and (iii) constructing approximately 111 standposts.

The AF will expand activities related to the development of access to additional districts of Bissau, including the installation of 6,000 service connections and 31 standposts. This will enable people to have access to safe water at home with private connections at an affordable price (social connections) or at public standposts when the water network is not sufficiently dense. Access to safe water will be promoted by communication and hygiene promotion campaigns, with key messages related to women, and how citizens can be fully involved in this activity.

Subcomponent 1.3. Reducing technical and commercial losses throughout Bissau by: (i) replacing approximately 30 km of distribution pipes; and (ii) installing approximately 13,000 water meters on existing connections.

The AF will expand activities related to the reduction of nonrevenue water by providing 10,000 additional meters and replacing over 5 km of asbestos-cement pipes.

Subcomponent 1.4. Providing consultants' services for: (i) design and supervision of Subcomponents 1.1 to 1.3, as well as 2.2 to 2.4 and (ii) technical studies of urban centers outside of Bissau.

The AF will finance supervision of the additional water works and finance design studies for urban centers outside of Bissau.

Subcomponent 1.5. Facilitating maintenance by providing goods and works for maintenance, repair, and rehabilitation of water facilities.

This new subcomponent, is to be entirely financed under the AF. The SP will identify quick-win interventions to address immediate repair and rehabilitation needs and prepare a maintenance, repair, and rehabilitation plan.

Component 2. Electricity Supply

Subcomponent 2.1. Increasing the availability of electricity supply by financing the provision of fuel to supply power generators.

No additional activity is scheduled under the AF.

Subcomponent 2.2. Improving the reliability and efficiency of overload medium and low voltage networks by: (i) rehabilitating the output substation of the power station; (ii) replacing distribution cables and accessories; (iii) supplying and installing approximately 16 medium voltage (MV)/low voltage (LV) transformers; and (iv) creating approximately 10 MV/LV additional substations.

No additional activity scheduled under the AF.

Subcomponent 2.3. Securing the electricity supply for water production by: (i) connecting four boreholes to the MV grid; and (ii) installing four MV/LV substations.

No additional activity is scheduled under the AF.

Subcomponent 2.4. Improving customer management and revenue collection by providing: (i) approximately 21,030 pre-payment meters for existing service connections; (ii) additional license fees for the pre-payment meters; and (iii) 100 electronic meters for large users.

The AF will expand activities related to electricity billing and collection by providing 10,000 additional prepayment meters and 100 electronic meters

Subcomponent 2.5. Supporting the densification and expansion of medium and low voltage networks in selected areas, through: (i) the construction of MV lines and LV lines; and (ii) the provision and installation of 10 pole-mounted substations and 5 cabin substations.

This new subcomponent is to be entirely financed under the AF.

Subcomponent 2.6. Facilitating maintenance by providing goods and works for maintenance, repair, and rehabilitation of electricity facilities.

This is a new subcomponent, to be entirely financed under the AF. The SP will identify quick-win interventions to address immediate repair and rehabilitation needs and prepare a maintenance, repair, and rehabilitation plan.

Component 3. Support to Project Implementation and EAGB

Subcomponent 3.1. Supporting project implementation, coordination, monitoring and evaluation, by: (i) financing operating costs and consultants for the PIU; and (ii) carrying out audits for the project.

The AF will expand activities related to project implementation by providing support to the PIU over the additional implementation period.

Subcomponent 3.2. Strengthening the PIU implementation capacity through the provision of: (i) one vehicle and equipment for the PIU; and (ii) Training; and technical assistance to carry out institutional and technical studies.

The AF will expand activities related to this subcomponent by providing additional training and technical assistance to the PIU.

Subcomponent 3.3. Strengthening EAGB's capacity through the provision of: (i) technical audits on EAGB's performances including the external verification of the fuel purchase program; (ii) audits of EAGB's financial statements; (iii) training and technical assistance for enhanced operational management of EAGB; (iv)) technical and institutional studies; (v) strategic environmental and social assessment (SESA) of the energy sector; (vi) four vehicles; (vii) a generation plan; and (viii) studies on the integration and feasibility of solar.

The AF will expand activities related to this subcomponent by financing audits, studies (updating of social plan, technical and institutional studies, strategic environmental, and social assessment for the energy sector, generation plan study, and study of the integration and feasibility of solar); and the purchase of four vehicles.

Subcomponent 3.4. Supporting a sound environmental and social management of the project, as well as capacity building for the requirements under the safeguard documents.

The AF will expand activities related to this subcomponent by providing support over the additional implementation period.

Subcomponent 3.5. Supporting EAGB Restructuring through the provision of: (i) the SC; (ii) commercial management software and hardware; (iii) enumeration of EAGB's customers; (iv) training; (v) audits on EAGB's performances under the SC, and the performance contract; (vi) information, education and communication activities; and (vii) the establishment of a call center.

This new subcomponent is to be entirely financed under the AF.

Current Component Name	Proposed Component Name	Current Cost (US$, millions)	Proposed Cost (US$, millions)	Action
1. Water supply	1. Water supply	12.05	20.75	Revised
2. Electricity supply	2. Electricity supply	7.89	13.31	Revised
3. Support to project implementation and EAGB	3. Support to project implementation and EAGB	2.56	13.44	Revised
	Total:	22.50	47.50	

Other Change(s)

Implementing Agency Name	Type	Action
PIU	Implementing Agency	No Change

Change in Procurement

Explanation:

As the Concept Note of this AF was prepared after July 2016, the New Procurement Framework should have been applied to the AF's procurement. In view of the short preparation time, and to avoid parallel processes that could be confusing for the PIU, an exception was sought to apply instead the World Bank's current guidelines (Guidelines: Procurement of Goods, Works, and Non-Consulting Services under IBRD Loans and IDA Credits and Grants by World Bank Borrowers, dated January 2011 and revised July 2014,

and Guidelines: Selection and Employment of Consultants under IBRD Loans and IDA Credits and Grants by World Bank Borrowers, dated January 2011 and revised July 2014). On February 15, 2017, the Chief Procurement Officer approved the exception to apply the World Bank's current guidelines.

The abovementioned guidelines will apply to the procurement activities under the original financing as of the effective date of the AF.

An updated procurement plan, including updated thresholds for applicable procurement methods and prior reviews, has been prepared and agreed upon on March 29, 2017.

Change in Implementation Schedule

Explanation:

The implementation schedule is changed to reflect additional activities for 2017–2021 and the proposed extension.

IV. Appraisal Summary

Economic and Financial Analysis

Explanation:

Rationale for public sector intervention. The situation of water and electricity services amply demonstrates the shortcomings of public delivery. The spontaneous but scattered initiatives of the local private sector to provide substitute services are insufficient, less energy efficient, costly, and unaffordable for the vast majority of the urban population. The AF will introduce PSP in the delivery of services under an SC, which is deemed the most appropriate in current country conditions. The extent and scope of PSP may later evolve toward more ambitious options, once basic management improvements have materialized.

World Bank's value added. The World Bank brings substantial value added to the project, including experience with PSP and country and technical expertise, which were essential for preparing the proposed AF. Value added will be also high at the implementation stage, which will require intensive support and supervision, through a World Bank team that incorporates members from all relevant sectors (water, energy, PSP, and governance) already working on similar projects (past or present) in other low-income or fragile states.

Economic analysis. The economic analysis included in the Project Appraisal Document (PAD) of the parent project consisted of a cost-benefit analysis of the water supply and electricity components, which assessed the economic internal rate of return (EIRR) and the net present value (NPV) of the water and electricity activities, and of the project as a whole. As the AF will also focus on EAGB reform, the updated economic analysis takes into account the expected economic benefits of the improvement of operational performances, particularly the expected reduction of water and electricity losses. The PAD analysis was also updated (a) to reflect the current outcome of actual implementation, including EAGB's inability to operate HFO-fired power generators and their replacement by rented power units, and (b) the impact of parallel electricity supply schemes (OMVG and BOAD) on generation costs (which applies to both the 'with project' and 'without project' situations). Project benefits include the increased water and electricity consumption, the consumer surplus accruing to beneficiaries shifting from other water and electricity sources to EAGB services, and cost savings. Project costs include investment costs, incremental operating costs, and renewal costs. The expenditures related to EAGB reform and to implementation support under Component 3 of the project are allocated to the water and electricity components, in accordance with the relative weight of these activities in project investments or in EAGB turnover. The economic analysis encompasses all costs of the overall (parent project and AF).

The results of the updated analysis for the overall project and for each of the water and electricity components are given in Table 3, together with the results of the PAD analysis of the parent project. The NPVs are computed with the discount rate used in the PAD analysis (10 percent) and the current recommended rate for sustainable development projects (6 percent).

Table 3. Results by Component

Subcomponent	Water Supply	Electricity	Overall Project
PAD Analysis			
EIRR (%)	11.1	48.2	21.1
NPV@10% (US$, millions)	0.84	11.17	12.01
NPV@6% (US$, millions)	5.96	19.21	21.17
Updated Analysis			
EIRR (%)	10.0	12.0	11.1
NPV@10% (US$, millions)	0.04	2.27	2.31
NPV@6% (US$, millions)	6.33	11.63	17.96

The updated analysis exhibits a lower NPV and EIRR than the PAD analysis. The decrease of the EIRR is attributable to the disappearance of benefits expected from the shift from DDO to HFO in the parent project. (In hindsight, the PAD analysis overestimated these benefits by assuming that thermal power generation would remain the only source of supply in Bissau, whereas the AF rightly considers that hydropower will come in line in the medium term). In the absence of the AF, the EIRR would be even lower, which shows that the proposed additional activities, particularly those related to EAGB reform will bring adequate remedies by improving the efficiency of EAGB operations. However, the EIRR is very sensitive to the target value set for the improvement of electricity losses; if the target were decreased from 30 percent to 25 percent, the overall EIRR would increase to 14.4 percent.

The financial impact of the parent project and of the additional activities can be measured by the financial internal rate of return (FIRR). Financial calculations take into account the financial revenues and costs in the with/without project situations, including taxes and excluding noncash generating benefits that do not accrue to EAGB (consumer surplus). The FIRR is now estimated at 5.3 percent. The PAD estimate was 10.3 percent.

Financial analysis. The PAD stated that the shortcomings of EAGB's financial information made the assessment of the utility's financial viability particularly challenging. These shortcomings are enduring, as the provisions of the Partnership Agreement (PA) between EAGB and the Government—that were designed to ensure that EAGB's financial statements would be produced and audited on time—have not been complied with. The last available audit (on 2013 financial statements) resulted in a disclaimer of opinion. Table 4 provides unaudited key financial data and indicators.

Table 4. Key Financial Data (CFAF, millions) and Indicators of EAGB (2012–2015)

	2012	2013	2014	2015
Income Statement				
Sales	4,992	4,254	4,484	9103
o/w private customers	*2,319*	*2,072*	*2,178*	
o/w public customers	*2,673*	*2,182*	*2,305*	
Total operating revenues	4,992	5,154	5,217	9,963
Cash operating expenditures	7.582	4,660	7,329	13,200
Depreciation and allowances	***254***	***140***	188	111
Operating income	–2,843	354	–2,301	–3,349

Net income	–3,743	354	–2,530	–4,145
Summary Balance sheet				
Net fixed assets	1,182	1,118	982	939
Current assets	10,133	10,773	4,858	4,742
Cash	2,019	1,558	1,568	1,071
Total assets	13,334	13,450	7,408	6,752
Net equity	–15,303	–14,949	–20,152	–22,697
Other stable resources	18,414	17,514	16,714	18,788
Current liabilities	10,042	10,877	8,662	10,521
Bank overdraft	181	7	497	0
Total liabilities	13,334	13,450	7,408	6,752
Ratios and Indicators				
Working ratio (%)	**151.9**	**90.4**	**140.5**	**132.5**
Labor costs/operating revenues (%)	**31.0**	**20.1**	**23.5**	**11.6**
Clients receivables/sales (months)	15.5	19.5	13.9	3.8
o/w private customers	*9.9*	*9.6*	*6.4*	
o/w public customers	*20.4*	*29.0*	*21.0*	

Source: Unaudited EAGB Financial Statements

Irrespective of the quality of information, these figures reveal the dire financial situation of EAGB:

(a) With a negative net equity, the company is bankrupt and requires financial restructuring.

(b) Most of EAGB cash is not really available, as it is held in escrow accounts set up to guarantee the repayment of EAGB debt to commercial banks and credit lines.

(c) The working ratio, albeit improving, shows that EAGB revenues cannot cover its cash operating expenditures. Incremental electricity sales cannot cover the variable generation costs (fuel cost and incremental rental fee); this is particularly true for the sales to MV customers.

Against this background, EAGB reform will enable (a) setting up an adequate accounting and FM system; (b) designing the financial restructuring, which will require the Government's concurrence for implementation; (c) substantially improving the commercial performances; and (d) limiting the recourse to costly commercial financing of the cash-flow deficit. However, even with a substantial reduction of technical and commercial losses, EAGB's revenues will not cover operating expenditures until OMVG's electricity supply comes on line. EAGB's current tariffs, combined with an improved level of operating performances, would be sufficient to ensure financial viability afterwards.

The following specific covenants will be introduced under the AF:

(a) To monitor the improvement of EAGB's financial management within nine months of effectiveness

(b) To monitor the formulation of EAGB's financial restructuring within 24 months of effectiveness and its completion within 6 additional months

Technical Analysis

Explanation:

The water and electricity investment programs supported by the AF originates from an investment program

designed by EAGB in close coordination with the PIU. No major technical issues are expected from the AF because the technologies considered for water supply and electricity systems are proven and well established.

The design of new subcomponents supporting EAGB reform draws on successful experiences of similar activities in the region, particularly in the Democratic Republic of Congo and Sierra Leone.

Readiness. The implementation team is in place within the PIU with adequate capacities. The Project Implementation Manual (PIM) was updated to reflect the AF activities. The updated Environmental and Social Management Framework (ESMF) and the updated Resettlement Policy Framework (RPF) have been updated, validated by the World Bank, and disclosed (see page 30). Bidding documents for the main contracts (SC, water, and electricity works) are being prepared using current project funds.

Social Analysis

Explanation:

Social inclusion. The project will continue to rely on pro-poor policies for developing access to water, including social water connections and standposts programs. The generalization of prepayment metering for domestic connections will provide poor households with an efficient and affordable solution to manage energy consumption and avoid recourse to costly private electricity providers.

Gender. The proposed AF will help reduce gender inequalities with regard to household chores. First, the social water connections program will eliminate the burden of water hauling—a time consuming and physically stressful task— which mostly fall on female members of households. The other water components will also help reduce the stress associated with water shortages.

A nongovernmental organization (NGO) will conduct a large communication campaign to inform communities, particularly women, about the social water connections program and the associated benefits. The team will ensure that the terms of reference (ToR) of the NGO has adequate gender sensitivity. Monitoring will be done by the PIU social specialists.

Second, by the same token, women will be consulted upon the preferred localization of public standposts, to alleviate the time and effort of water collection.

Women will also play a prominent role in the hygiene education and information programs. The promotion of prepaid meters for electricity will facilitate the control of household expenses, which is usually incumbent on women.

Citizen engagement. EAGB plans to establish a client database through NICT (see box of Annex 2, 'The potential of NICT to improve basic services'), which will enable the company to geographically locate its customers and the type of services rendered. The updated consumer database will be the foundation to help EAGB set up a call center to closely interact with clients, with the following objectives: (a) respond on time to customer complaints; (b) restore services quickly in case of interruptions; and (c) monitor the quality of service rendered to the customers.

Customers will be encouraged to voice their concerns and issues with water and electricity services by calling EAGB call center's toll-free hotline. A relevant indicator has been designed to measure the ratio of resolved complaints to the total number of received complaints.

Second, citizens will be engaged in a communication campaign (as described above) about the opportunities of access to water, during which beneficiaries, particularly women as main users of water services, will be able to influence the choice of location of public standposts.

Third, citizens will be able to voice their views in satisfaction surveys to measure their level of satisfaction and the quality of the services rendered.

Consultation process. Consultation of beneficiaries has and will take place in several ways. As part of the

preparation of the safeguards instruments, consultations have been organized to inform potential beneficiaries and affected persons. In addition, communication campaigns are planned by an NGO targeting local communities to inform, sensitize, and consult on the location of the public standposts, including gender sensitivity.

Environmental Analysis

Explanation:

Environmental and social impact. There are no significant or irreversible adverse environmental and social impacts expected from the implementation of activities that will be financed under the proposed AF. Most of the adverse environmental and social impacts associated with these investments will be small in scale and site specific, typical of a Category B project, and therefore easily manageable at an acceptable level. There is no involuntary land acquisition expected nor involuntary physical displacement of persons.

Safeguard policies and instruments. The project's EA category remains B (Partial Assessment). The AF's physical activities are similar to the ones implemented under the parent project and will not trigger any other safeguard policy other than the three policies (OP/BP 4.01 - Environmental Assessment, OP/BP 4.11 - Physical Cultural Resources, and OP/BP 4.12 - Involuntary Resettlement) triggered by the parent project. As the exact physical locations of future investments are not yet known and will not be known by appraisal and the activities are diverse, the Recipient has updated the ESMF and the RPF of the parent project. The updated ESMF and RPF have been validated in-country and by the World Bank and disclosed both in-country on February 23 and March 9, 2017, and at the World Bank's InfoShop on February 15 and March 6, 2017, respectively.

During implementation of the current project, screening of subprojects took place to ensure the identification and mitigation of any adverse impacts. Environmental and Social Impact Assessments and a Resettlement Action Plan (RAP) have been developed, albeit with delays. The counterpart has, to date, one staff dedicated to environmental and social safeguards. This staff will monitor and report on the implementation of the RAP for the current project with support of a social consultant in addition to capacity building and close supervision from the project team to enable the counterparts to manage the World Bank's safeguards requirements adequately. In addition, the PIU has signed an agreement with the Environmental Impact Evaluation Agency (*Autoridade de Avaliação Ambiental Competente*, AAAC) to ensure due diligence with national procedures and laws. This agreement will be renewed under the AF.

The AF will support the Government in preparing its new strategy for the development of the energy sector which will focus on energy production. As such, the AF will also finance the preparation of an SESA for the energy sector at the national level. The SESA will help identify potential adverse environmental and social impacts linked to the development of the energy sector nationwide upstream in the planning process and propose key mitigation measures to inform the final design and subsequent implementation of the strategy.

Risk

Explanation:

The overall risk of the project remains High, in view of the high macroeconomic, political and governance risk environment in Guinea-Bissau, which also may affect the Government's commitment to maintain the actual level of subsidization of EAGB's operations. The latter will be mitigated by the perspective of improved financial performances of EAGB resulting from PSP in the delivery of services.

The risks at the project level have been reassessed, in view of the implementation experience of the parent

project and by taking into account the risks associated with the proposed activities under the AF. They are as follows:

(a) **Sector strategies and policies.** The Government expressed its commitment to the sector reform and the risks remain Moderate.

(b) **Technical design.** The risks associated with the design of EAGB reform is Substantial. It is mitigated by the selection of the PSP option of an SC, which is commensurate with the country's attractiveness to potential bidders.

(c) **Institutional capacity for implementation and sustainability.** Although the implementation capacities have substantially increased, the risks related to sustainability remain High and will be mitigated by the involvement of a professional operator in key management positions in EAGB.

(d) **Fiduciary.** The rating remains Substantial, in view of the country environment. The risk will be mitigated by the continuation of the current implementation performance in procurement and FM.

(e) **Environmental and social.** The risk remains Substantial, in view of the delays in preparing safeguard documents and will be mitigated by the proposed strengthening of the PIU's safeguards team.

(f) **Stakeholders.** This risk will remain Substantial, as long as customers do not perceive significant improvements of the delivery and quality of electricity and water services.

(g) **Climate and disaster risks.** This risk will be Low as there is no Adaptation and Mitigation Climate Change Co-benefits information applicable to this AF.

V. World Bank Grievance Redress

Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit http://www.worldbank.org/GRS. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

Annex 1: Revised Results Framework and Monitoring Indicators

Emergency Water and Electricity Services Upgrading Project - Additional Financing (P161630)

Project Development Objectives
Original Project Development Objective - Parent:
The objective of the project is to (i) restore and increase the access of the population of the Recipient's capital city of Bissau to safe water and improve the quality of water services and (ii) improve the reliability of electricity supply to the population of Bissau.
Proposed Project Development Objective - Additional Financing (AF):
The objective of the project is to (a) restore and increase the access of the population of the Recipient's capital city of Bissau to safe water and improve the quality of water services; (b) improve the reliability of electricity supply to the population of Bissau and (c) improve the performance of EAGB.

Results	
Core sector indicators are considered: Yes	Results reporting level: Project Level

Project Development Objective Indicators

Status	Indicator Name	Core	Unit of Measure		Baseline	Actual(Current)	End Target
Revised	Number of people in urban areas provided with access to Improved Water Sources under the project	☒	Number	Value	0.00	0.00	134,100.00
				Date	26-Mar-2014	21-Apr-2017	31-Dec-2021
				Comment	[= (8) x 8 + (10) x 300] – One household is composed of 8 persons (2009 census) and one public standpost		Target in the parent project was 76,800

					provides water to 300 people.		
Revised	Number of people benefiting from enhanced water services under the project	☐	Number	Value	0.00	42,000.00	80,000.00
				Date	26-Mar-2014	21-Apr-2017	31-Dec-2021
				Comment			
Revised	Number of people benefitting from enhanced electricity services under the project	☐	Number	Value	0.00	0.00	208,000.00
				Date	26-Mar-2014	21-Apr-2017	31-Dec-2021
				Comment			
Marked for Deletion	Annual electricity generated	☐	Gigawatt-hour (GWh)	Value	22.94	22.94	35.00
				Date	26-Mar-2014	21-Apr-2017	30-Jun-2018
				Comment			
Revised	Direct project beneficiaries	☐	Number	Value	0.00	42,000.00	342,100.00
				Date	26-Mar-2014	21-Apr-2017	31-Dec-2021
				Comment	[= (1) + (3)] Note: (2) is excluded to avoid double counting, as existing water customers are also electricity customers. [= 51%] – based on 2009 census		Target in the parent project was 284,800

No Change	Female beneficiaries	☒	Percentage	Value	51.00	0.00	51.00
			Sub Type				
			Supplemental				
New	Nonrevenue water	☐	Percentage	Value	47.10	58.00	40.00
				Date	26-Mar-2014	21-Apr-2017	31-Dec-2021
				Comment			
New	Network transmission and distribution losses	☐	Percentage	Value	46.60	36.90	30.00
				Date	26-Mar-2014	21-Apr-2017	31-Dec-2021
				Comment			

Intermediate Results Indicators

Status	Indicator Name	Core	Unit of Measure		Baseline	Actual(Current)	End Target
Revised	New piped household water connections that are resulting from the project intervention	☐	Number	Value	0.00	0.00	12,600.00
				Date	26-Mar-2014	21-Apr-2017	31-Dec-2021
				Comment			Target in the parent project was 6,600.
Revised	Piped household water connections that are benefiting from rehabilitation works undertaken by the project	☐	Number	Value	0.00	0.00	10,000.00
				Date	26-Mar-2014	21-Apr-2017	31-Dec-2021
				Comment			
Revised	Improved community water points constructed or rehabilitated under the project	☐	Number	Value	0.00	0.00	111.00
				Date	26-Mar-2014	21-Apr-2017	31-Dec-2021
				Comment			Target in the parent project was 80.

Marked for Deletion	Operating time of ABC generators	☐	Hours	Value	9,176.00	9,176.00	14,000.00
				Date	26-Mar-2014	21-Apr-2017	30-Jun-2018
				Comment			
Revised	Prepayment meters installed under the project	☐	Number	Value	0.00	2,758.00	21,030.00
				Date	26-Mar-2014	21-Apr-2017	31-Dec-2021
				Comment			Target in the parent project was 11,030.
Revised	Distribution lines constructed or rehabilitated under the project	☐	Kilometers	Value	0.00	0.00	85.00
				Date	26-Mar-2014	21-Apr-2017	31-Dec-2021
				Comment	[= MT network + BT network]		Target in the parent project was 12.
Revised	Distribution lines rehabilitated under the project	☐	Kilometers	Value	0.00	0.00	0.00
			Sub Type	Date	26-Mar-2014	21-Apr-2017	31-Dec-2021
			Breakdown	Comment			Target in the parent project was 12.
New	Citizen engagement: percentage of complaints to the call center that are satisfactorily addressed	☐	Percentage	Value	0.00	0.00	80.00
				Date	26-Mar-2014	21-Apr-2017	31-Dec-2021
				Comment			
New	Collection rate of electricity and water bills (private customers)	☐	Percentage	Value	0.00	53.00	80.00
				Date	26-Mar-2014	21-Apr-2017	31-Dec-2021
				Comment			

New	Percentage of water service connections equipped with meters	☐	Percentage	Value	70.40	33.80	90.00
				Date	26-Mar-2014	21-Apr-2017	31-Dec-2021
				Comment			
New	Percentage of electricity connections equipped with prepayment meters	☐	Percentage	Value	59.50	42.40	95.00
				Date	26-Mar-2014	21-Apr-2017	31-Dec-2021
				Comment			
New	Services Contract executed and implemented	☐	Yes/No	Value	No	No	Yes
				Date	26-Mar-2014	21-Apr-2017	31-Dec-2021
				Comment			

Annex 2: Detailed Description of Additional Activities

Emergency Water and Electricity Services Upgrading Project - Additional Financing (P161630)

1. This annex reviews how the existing challenges facing EAGB and the PDO will be addressed by the proposed AF and provides a detailed description of the activities financed under the AF.

Situation of Services and EAGB Management

2. The following section provides a summary assessment of the current situation of EAGB services in Bissau (see Table 1 of section II for the evolution of key operational indicators since 2013), together with summary findings of an EAGB management assessment, based on the reviews carried out by consultants during previous IDA-financed operations and discussions with EAGB staff.

3. **Electricity services.** EAGB electricity services show a substantial increase of activity with regard to power generation (+242 percent) and the number of connections (+82 percent). These results are independent of project activities, as they are attributable to the shift of power generation to a rented power plant with a capacity of 10 MW (further expanded to 15 MW at the end of 2016), following the collapse of EAGB HFO-fired generators (2 x 2.5 MW). The high reliability and availability of rented facilities quickly increased the confidence of Bissau population and businesses in EAGB services. Many households and businesses left costly private electricity providers to subscribe en masse to the public utility. In addition, electricity losses have significantly decreased. However, the reliability of the distribution networks has not yet improved much, pending the completion of project-financed rehabilitation and extension works. With regard to metering, the vast majority of new customers have not yet been equipped with prepaid meters.

4. **Water services.** Water production increased by 76 percent and the number of water connections increased by 110 percent. These results are mostly attributable to the project, which financed the drilling of new boreholes and the rehabilitation of production facilities. However, the production increase is not fully reflected in the water sales, which increased only by 40 percent, pending the completion of project activities related to the rehabilitation and extension of distribution networks, the expansion of water storage, and metering. The increase of nonrevenue water (from 47 to 58 percent) likely results from (a) the increased water pressure, which in turn affects physical losses in aging pipes and (b) the deterioration of the metering rate since 2013 (only 34 percent of water customers are metered).

5. **Commercial management.** In addition to the abovementioned metering issues, EAGB's commercial management is hampered by fraud, inability to enforce adequate procedures, uncertainties on the customer base, and a deficient customer management software.

6. **FM.** Although EAGB accounting is routinely carried out, EAGB's FM team is unable to prepare financial statements without external assistance. The last audit (2013 financial statements) resulted in a disclaimer of opinion, particularly due to the absence of documentation, inconsistencies between commercial and accounting data, and deficiencies in procedures. The

subsequent financial statements (unaudited) show that EAGB is virtually bankrupt (negative net equity).

7. **Human resources management.** The critical cash issues faced by EAGB, as well as lax management, led the company to default on several of its legal obligations:

(a) EAGB has not paid mandatory health and pension contributions to the INSS since 2012. This has prevented staff who have reached retirement age from receiving pensions and all staff from benefitting from reimbursement of health costs. Consequently, EAGB has had to maintain staff on its payroll after retirement and pay for health expenditures.

(b) In the 1990s, EAGB accumulated salary arrears, up to about 35 months of earnings to about 200 staff, which have not been settled for the most part.

(c) Numerous employees do not have valid contracts or are employed in redundant positions.

8. **Legal framework of EAGB.** The legal statutes and organization of EAGB do not comply with OHADA legislation that governs public enterprises in the WAEMU. In addition, the company has operated without any statutory board of directors for a long time, which directly affects its governance.

Linkage between AF Activities, PDO, and EAGB Shortcomings

9. The objective of the project, as revised in view of the AF, is to (a) restore and increase the access of the population of the Recipient's capital city of Bissau to safe water and improve the quality of water services; (b) improve the reliability of electricity supply to the population of Bissau; and (c) improve the performance of EAGB.

10. **AF's approach.** In line with the revised PDO, the AF will expand the parent project's approach—to improve the reliability and quality of electricity and water services at distribution level and develop access to water services—by addressing EAGB's management issues, which hamper the sustainability of the project impact. The PDO will thus be achieved through (a) securing and expanding water production, storage and distribution capacities, and facilitating access to services through programs for constructing social water connections and public standposts; (b) eliminating weak points of the electricity distribution system and metering; and (c) supporting EAGB's reform by introducing PSP.

11. **Selection of water and electricity investments.** The selection of AF activities for the water and electricity components is based on (a) defining with EAGB priority works identified in the hydraulic master plan for the city of Bissau, which was financed under the parent project; (b) a joint assessment with EAGB of key remaining bottlenecks in energy transmission and distribution grid which prevent the adequate delivery of the energy generated; and (c) targeting the elimination of metering issues by replacing the remaining electromechanical meters by prepayment meters, to achieve universal prepayment meter coverage on residential customers, and expanding water metering to all private connections billed on a lump sum basis.

12. **Selection of activities supporting EAGB reform.** Technical assistance, as provided under the parent project and under previous IDA-financed operations, was adapted to the emergency environment. Technical assistance, however, is not likely to ensure either sustainable improvements of EAGB's operational performances or address the critical management issues listed above. EAGB staff, as well as the sector actors agree that the utility requires a comprehensive revamping of its governance and organization, the establishment and enforcement of adequate procedures and corporate policies, and the provision of management tools. The selection of activities draws on the various diagnostic studies performed under previous projects, as well as on the workshops held to formulate the content of the reform.

13. The AF will first support the introduction of PSP in the form of a SC, under which key management positions in EAGB (at least the general manager, the financial director and the commercial director) will be assumed by the SP. The SC will include deliverables to be carried out through short-term assignments of specialists (with regard to procedures and policies, reorganization, maintenance, training, reporting, and FM). The SP will also have access to financing under a specific subcomponent of the AF, which will provide flexibility in addressing pressing maintenance, repair, and rehabilitation issues. The AF will support the monitoring of the execution of the SC and of the performance contract between EAGB and the government through periodic technical audits.

14. The AF will also help provide (a) management tools, particularly for commercial management, with the purchase and installation of customer management software and hardware, supplemented with an exhaustive enumeration of customers carried out through NICT (see Box 2.1) and the establishment of a call center; (b) training, on the basis of training plans developed by the SP; (c) support to information, education, and communication activities; (d) assistance to the harmonization of EAGB's legal framework with OHADA legislation; and (e) a limited number of vehicles.

Box 2.1. The Potential of NICT to Improve Basic Services

A key challenge in developing access to water and electricity services is to acquire accurate data on coverage and quality of service. Inventorying current infrastructure, creating baselines, identifying areas where intervention/resources are required, and demonstrating progress requires gathering, monitoring, analyzing, and presenting data. While various manual and automated options exist to verify data, NICT projects, especially mobile phone applications, have the potential to improve the quality and quantity of data that is collected over time. They can help make data transfer more efficient, reduce manual entry errors, and increase the frequency of monitoring at a low transaction cost. The AF, as a first step of NICT use, will support an inventory of all current or potential clients in the capital city of Bissau using NICT, as it is currently being implemented in Kinshasa (the capital city of the Democratic Republic of Congo, with a population of 12 million inhabitants) under the ongoing IDA-financed Urban Water Supply Project. The consumers will thus be georeferenced, their water and electricity facilities characterized and pictured, their contact updated, and the consumers can voice their feedback on the level of services and their expectations. This large-scale operation will enable EAGB's client database to be updated and facilitate the deployment of the new commercial and billing software, thus contributing to improve EAGB's commercial performance.

15. The AF's response to the challenges facing the delivery of electricity and water services and EAGB's management is summarized in Table 2.2.

Table 2.2. AF's Response to Challenges

	Issues	AF Response	Monitoring
Client's standpoint			
Reliability and continuity of water and electricity services	Water service interruptions, insufficient water quantity, and water pressure	Increase of production capacity and elimination of bottlenecks in transmission, storage, and distribution	*Additional production capacity installed*† *Additional storage capacity*†
	Electricity service interruptions and defective distribution networks	Rehabilitation programs	*Distribution lines constructed or rehabilitated under the project*†
	Inadequate response to complaints	Establishment of a call center with a free hotline	*Client satisfaction*†
Access to water service	Excessive cost of connections and lack of standposts	Social connections and standposts programs	*Number of social connections*† *Number of standposts*†
EAGB's standpoint			
Technical sustainability	Inadequate maintenance policies and procedures	Implementation of a maintenance action plan prepared by the SP	Reports on execution of the SC
	Inadequate funding of maintenance and repair programs	Financing of maintenance, repair, and rehabilitation expenditures as planned by the SP	Disbursements of Category 3 of the AF
Commercial management	Low billing efficiency (technical and commercial losses)	• Technical losses: Rehabilitation of distribution networks • Installation of water meters and prepayment electricity meters	*Nonrevenue water*† *Metering ratio*† *Prepayment metering ratio*†
		Commercial losses: • Customer enumeration and implementation of customer management software • Commercial manager position assumed by the SP	Reports on execution of the SC
FM	Severe shortcomings of EAGB FM system	• Revamping of the FM system by the SP • Financial manager position assumed by the SP	• Reports on execution of the SC • Dated covenant for establishment of a sound FM system
	Critical financial situation of EAGB	Financial restructuring to be prepared by the SP	Dated covenant for design and completion of financial restructuring

	Issues	AF Response	Monitoring
Corporatization of EAGB	Governance issue	Appointment of EAGB's board of directors	Dated covenant and disbursement condition of EAGB restructuring activities
	Noncompliance with OHADA legislation	Assistance to revision of statutes and organization	Dated covenant

Note: † Project's monitoring indicator.

Detailed AF Activities

16. The selection of activities took stock of discussions with the Government, after the January 2017 preparation mission on the scope of EAGB's reform, and was finalized at appraisal.

Component 1. Water Supply (US$8.70 million). This component will comprise the following activities:

- **Subcomponent 1.1. Water Production and Storage (US$1.96 million)**

  (a) Increase of water production capacity through (i) the drilling and equipment of two boreholes in Airport (expected yield: 150 m^3 per hour) and *Bôr* (250 m^3 per hour) and (ii) the equipment of *Safim* and *Prabis* boreholes with a new pump (120 m^3 per hour)

  (b) Increase of the water storage capacity with (i) the construction of three elevated water storage tanks in *Bôr* (300 m^3), *Safim* (300 m^3), and *Prabis* (100 m^3) and (ii) the rehabilitation of the Airport water storage tank (100 m^3)

  (c) Securing the energy supply of boreholes with the purchase of DDO for the standby generators

  (d) Safeguarding existing boreholes by fencing the wellfields and sealing unused boreholes

- **Subcomponent 1.2. Development of Access (US$3.99 million)**

  (a) Development of access to water in Airport area neighborhood through (i) the expansion of secondary distribution networks (2 km) and tertiary networks (4 km) and (ii) the construction of about 1,500 service connections and six standposts

  (b) Development of access to water in *Bôr* through (i) the expansion of primary distribution networks (3 km) and secondary networks (6 km) and (ii) the construction of about 1,500 service connections and 12 standposts

(c) Development of access to water in *Antula Pine* through (i) the expansion of secondary distribution networks (3 km) and tertiary networks (4 km) and (ii) the construction of about 1,000 service connections and 5 standposts

(d) Development of access to water in *Safim* through (i) the expansion of secondary distribution networks (3 km) and tertiary networks (4 km) and (ii) the construction of about 1,000 service connections and 5 standposts

(e) Development of access to water in *Prabis* through (i) the expansion of secondary distribution networks (1 km) and tertiary networks (2 km) and (ii) the construction of about 100 service connections and 3 standposts

(f) The construction of 900 service connections in other areas of Bissau

- **Subcomponent 1.3. Reduction of Unaccounted-for-Water (US$1.88 million)**

(a) Replacement of asbestos-cement pipes over 5 km

(b) Installation of water meters on 10,000 existing connections that are currently being billed on a lump sum basis

- **Subcomponent 1.4. Studies and Supervision (US$0.53 million)**

(a) Design, control, and supervision of the abovementioned waterworks

(b) Technical studies of urban centers outside of Bissau

- **Subcomponent 1.5. Facilitation of Maintenance (US$0.35 million).** Goods and works for the maintenance, repair, and rehabilitation of water facilities

Component 2. Electricity Supply **(US$5.42 million**)**.** This component will comprise the following activities:

- **Subcomponent 2.1. Increase the Availability of Electricity Supply.** No additional activity

- **Subcomponent 2.2. Improvement in Reliability and Efficiency of Overload Medium and Low Voltage Networks.** No additional activity

- **Subcomponent 2.3. Electricity Supply for Water Production.** No additional activity

- **Subcomponent 2.4. Improvement in Customer Management and Revenue Management (US$0.97 million)**

(a) Supply of 10,000 prepayment meters

(b) Additional license fees for the prepayment meters

(c) Supply of 100 electricity meters for large users

- **Subcomponent 2.5. Rehabilitation, Densification and Expansion of Medium and Low Voltage Networks (US$4.10 million)**

  (a) Densification of distribution lines in *Plack2*, *Cupul*, *Enterramento,* and *Bôr* through the construction of MV underground lines (5 km) and LV lines (9 km)

  (b) Expansion of distribution lines in *Bôr-Cumura-Prabis* and *Djaal-Safim* through the construction of MV overhead lines (25 km), MV underground lines (6 km), and LV lines (28 km)

  (c) Supply and installation of 10 pole-mounted substations and 5 cabin substations

- **Subcomponent 2.6. Facilitation of Maintenance (US$0.35 million).** Goods and works for the maintenance, repair, and rehabilitation of electricity facilities

Component 3. Support to Project Implementation and EAGB (US$10.88 million). This component will comprise the following activities:

- **Subcomponent 3.1. Supporting Project Implementation, Coordination, Monitoring, and Evaluation (US$1.38 million)**

  (a) Operating costs and consultants for the PIU

  (b) Project financial audits

- **Subcomponent 3.2. Strengthening PIU Implementation Capacities (US$0.25 million)**

  (a) Training for PIU

  (b) Technical and institutional studies

- **Subcomponent 3.3. EAGB Capacities Strengthening (US$1.24 million)**

  (a) Audits of EAGB financial statements

  (b) Technical and institutional studies, including studies of social plan

  (c) SESA for the energy sector

  (d) Purchase of four vehicles

  (e) Generation plan study

  (f) Study of integration and feasibility of solar energy

- **Subcomponent 3.4 Support to Environmental and Social Management (US$0.65 million).** Support to the implementation of the Environmental and Social Management Plan

- **Subcomponent 3.5. EAGB Restructuring (US$7.36 million)**

  (a) Services Contract over (three) years, including the provision of deliverables

  (b) Provision of customer management software and hardware

  (c) Enumeration of EAGB's customers

  (d) Training for EAGB staff

  (e) Audits of SC and performance contract

  (f) Information, education, and communication activities

  (g) Establishment of a call center

Annex 3: Detailed Costs of Additional Activities

Emergency Water and Electricity Services Upgrading Project - Additional Financing (P161630)

No.	Component/Project Activities	Quantity	Unit	Unit Price (US$)	Total Cost (US$)
	TOTAL				**25,000,000**
1	**Water Supply**				**8,703,324**
1.1	**Water Production and Storage**				**1,955,910**
1.1. i	Drilling and equipment of one borehole in Airport neighborhood (150 m^3/h)	1	Number	331,772	331,771
1.1. i	Drilling and equipment of one borehole in Bôr neighborhood (250 m^3/h)	1	Number	334,828	334,828
1.1. i	Equipment of Safim and Prabis boreholes (120 m^3/h)	2	Number	50,000	100,000
1.1. iii	Construction of two water storage tanks in Bôr and Safim (300 m^3 each)	2	Number	400,000	800,000
1.1. iii	Construction of one water storage tank in Prabis (100 m^3)	1	Number	210,000	210,000
1.1. iii	Rehabilitation of one storage tank in Airport	1	Number	43,103	43,103
1.1. iv	Securing energy supply of boreholes (DDO purchase)	1	Lump sum	50,000	50,000
1.1. v	Safeguarding of existing boreholes (fencing the wellfields and sealing unused boreholes)	10	Number	8,621	86,207
1.2	**Development of Access**				**3,985,345**
	Expansion of distribution networks and construction of service connections and standposts in Airport neighborhood:				*860,345*
1.2. i	Secondary network expansion	2	km	60,345	120,690
1.2. i	Tertiary network expansion	4	km	51,724	206,897
1.2. ii	Construction of water service connections	1,500	Number	345	517,241
1.2. iii	Construction of standposts	6	Number	2,586	15,517
	Expansion of distribution networks and construction of service connections and standposts in Bôr neighborhood:				*1,117,241*
1.2. i	Primary network expansion	3	km	68,966	206,897
1.2. i	Secondary network expansion	6	km	60,345	362,069
1.2. ii	Construction of water service connections	1,500	Number	345	517,241
1.2. iii	Construction of standposts	12	Number	2,586	31,034
	Expansion of distribution networks and construction of service connections and standposts in Antula Pine neighborhood:				*745,690*
1.2. i	Secondary network expansion	3	km	60,345	181,034
1.2. i	Tertiary network expansion	4	km	51,724	206,897
1.2. ii	Construction of water service connections	1,000	Number	345	344,828

No.	Component/Project Activities	Quantity	Unit	Unit Price (US$)	Total Cost (US$)
1.2.iii	Construction of standposts	5	Number	2,586	12,931
	Expansion of distribution networks and construction of service connections and standposts in Safim neighborhood:			*0*	*745,690*
1.2. i	Secondary network expansion	3	km	60,345	181,034
1.2. i	Tertiary network expansion	4	km	51,724	206,897
1.2. ii	Construction of water service connections	1,000	Number	345	344,828
1.2.iii	Construction of standposts	5	Number	2,586	12,931
	Expansion of distribution networks and construction of service connections and standposts in Prabis neighborhood:			*0*	*206,034*
1.2. i	Secondary network expansion	1	km	60,345	60,345
1.2. i	Tertiary network expansion	2	km	51,724	103,448
1.2. ii	Construction of water service connections	100	Number	345	34,483
1.2.iii	Construction of standposts	3	Number	2,586	7,759
1.2. ii	*Construction of water service connections (citywide)*	*900*	Number	345	*310,345*
1.3	**Reduction of Unaccounted-for-Water**				**1,881,034**
1.3. i	Replacement of asbestos-cement pipes	5	km	86,207	431,034
1.3. ii	Installation of water meters on existing un-metered connections	10,000	Number	145	1,450,000
1.4	**Studies and supervision**				**531,034**
1.4. i	Design, control, and supervision of works	1	Lump sum	431,034	431,034
1.4. ii	Technical studies for secondary centers	1	Lump sum	100,000	100,000
1.5	**Facilitating Maintenance**				**350,000**
1.5	Goods and works for maintenance, repairs, and rehabilitation	1	Lump sum	350,000	350,000
2	**Electricity Supply**				**5,420,000**
2.1	**Increase the Availability of Electricity Supply**				**0**
2.2	**Improvement in Reliability and Efficiency of Overload Medium and Low Voltage Networks**				**0**
2.3	**Electricity Supply for Water Production**				**0**
2.4	**Improvement in Customer Management and Revenue Management**				**970,000**
2.4. i	Supply of prepayment meters	10,000	Number	70	700,000
2.4. ii	License ITRON (40.000 > 60.000)	1	Lump sum	70,000	70,000
2.4. iii	Meters for large users	100	Number	2,000	200,000
2.5	**Rehabilitation, Densification and Expansion of Medium and Low Voltage Networks**				**4,100,000**
	Densification of distribution lines in Plack2, Cupul, Enterramento, and Bôr				*705,000*
2.5. i	MV underground lines	5	km	60,000	300,000
2.5. i	LV networks	9	km	45,000	405,000

No.	Component/Project Activities	Quantity	Unit	Unit Price (US$)	Total Cost (US$)
	Expansion of distribution lines in Bôr-Cumura-Prabis and Djaal-Safim				*2,945,000*
2.5. i	MV overhead lines	25	km	53,000	1,325,000
2.5. i	MV underground lines	6	km	60,000	360,000
2.5. i	LV networks	28	km	45,000	1,260,000
	Substations				*450,000*
2.5. ii	Pole-mounted substations	10	Number	15,000	150,000
2.5. ii	Cabin substations	5	Number	60,000	300,000
2.6	**Facilitation of Maintenance**				**350,000**
2.6	Goods and equipment for maintenance, repairs, and rehabilitation	1	Lump sum	350,000	350,000
3	**Support to Project Implementation and EAGB**				**10,876,676**
3.1	**Supporting Project Implementation, Coordination, Monitoring, and Evaluation**				**1,381,526**
3.1. i	PIU operating costs and consultants	1	Lump sum	1,331,526	1,331,526
3.1. ii	Audits of project financial statements	1	Lump sum	50,000	50,000
3.2	**Strengthening PIU Implementation Capacities**				**250,000**
3.2. i	Training for PIU	1	Lump sum	50,000	50,000
3.2. ii	Technical and institutional studies	1	Lump sum	200,000	200,000
3.3	**EAGB Capacities Strengthening**				**1,240,000**
3.3. iv	Social plan studies	1	Lump sum	200,000	200,000
3.3. iv	Other institutional studies	1	Lump sum	200,000	200,000
3.3. v	SESA Study	1	Lump sum	100,000	100,000
3.3.vi	Purchase of vehicles	4	Number	35,000	140,000
3.3.vii	Generation plan study	1	Lump sum	300,000	300,000
3.3. viii	Study for solar integration	1	Lump sum	300,000	300,000
3.4	**Support to Environmental and Social Management**				**650,000**
3.4	Support to environmental and social management	1	Lump sum	650,000	650,000
3.5	**EAGB Restructuring**				**7,355,150**
3.5. i	Services Contract (including deliverables)	1	Lump sum	5,975,150	5,975,150
3.5. ii	Software	1	Lump sum	500,000	500,000
3.5.iii	Customer enumeration	1	Lump sum	200,000	200,000
3.5. iv	Training for EAGB	1	Lump sum	200,000	200,000
3.5. v	Audit of SC	3	Number	60,000	180,000
3.5. vi	Information, education, and communication	1	Lump sum	100,000	100,000
3.5. vii	Call center	1	Lump sum	200,000	200,000

Annex 4: Implementation Arrangements

Emergency Water and Electricity Services Upgrading Project - Additional Financing (P161630)

1. **The implementation arrangements under the AF will be similar to the ones of the parent project.** The following paragraphs list adjustments to be made to adapt the original arrangements and procedures to the AF and provide updated information on implementation experience with regard to fiduciary aspects, safeguards, and monitoring and evaluation (M&E) as needed.

2. **Oversight.** A project steering committee will be established to oversee project implementation, as well as the implementation of the SC and the performance contract. The Project Steering Committee will include representatives of the MEF, the MEI, and the Ministry of Natural Resources.

3. **Implementation responsibilities.** The PIU established at the MEF, already in charge of implementing the parent project, will also implement the AF activities.

4. **Procedures.** The PIM of the parent project is being updated to reflect proposed activities of the AF.

5. **PA.** EAGB entered in a PA with the MEF, the MEI, and the PIU to (a) facilitate the implementation of the subcomponents related to the development of access to water (Subcomponent 1.2) and the fuel purchase program (Subcomponent 2.1); (b) ensure adequate reporting; and (c) ensure timely production and audit of EAGB's financial statements. The PA was signed in June 2014 and amended on September 8, 2015, to reflect the changes introduced to the fuel purchase program. Whereas the fuel purchase program is closed, the PA is still required as the AF will include scale-up activities for Subcomponent 1.2 and EAGB obligations related to reporting, FM, and audits will continue to apply. However, EAGB has been unable to establish an adequate FM system and prepare adequate financial statements. Therefore, it is proposed to amend the PA to recognize that EAGB will require the support of the SP to comply with its obligations with regard to reporting, FM, and audits.

6. **Staffing.** The PIU team is being strengthened with the recruitment of a social specialist. Given the limited workload generated by the AF activities, no further staff recruitment is required to implement the AF.

7. **FM assessment.** The overall FM performance of the parent project was rated Satisfactory during the supervision undertaken in January 2017 and the FM risk was assessed as Low. The staffing remains adequate to handle the additional activities resulting from the AF. The interim unaudited financial reports for the ongoing project have been submitted with acceptable quality. However, the PIU should strengthen budget monitoring. The overall risk for the AF is rated Moderate. It is considered that the FM arrangements already in place satisfy the World Bank's minimum requirements under OP/BP 10.00, and therefore are adequate to provide, with reasonable assurance, accurate and timely FM information on the status of the project required by the World Bank.

8. Regarding EAGB, the accounting software has been out of order for several years causing delays of more than one year in accounting and causing delays in audit report submission. The AF will help EAGB set up an adequate FM system, including new accounting software with ToR satisfactory to the World Bank. EAGB is not directly involved in the management of the project funds.

9. **External audit.** The ToR of the auditor of the parent project will be expanded to include the AF activities.

10. **Internal control arrangements.** The existing manual of administrative, financial, and accounting procedures is adequate to be used for this AF.

11. **Accounting arrangements.** The PIU has a multi-projects computerized accounting system which is adequate to handle the additional activities.

12. **Financial reporting and monitoring.** The format of unaudited interim financial reports of the ongoing project will be updated to include the AF.

13. **Budgeting arrangements.** The budgeting process and monitoring are clearly defined in the existing Administrative and Accounting Manual of Procedures. Periodic reports of budget monitoring, variance analysis, and recommendations should be prepared by the FM team on a quarterly basis.

14. **Disbursement arrangements and flow of funds.** The disbursement categories will be modified to reflect the additional activities. Disbursements for the AF will follow the existing disbursement arrangements. Disbursements under the ongoing project are transactions based. A separate Designated Account will be opened at an acceptable commercial bank, to facilitate payment for eligible expenditures.

15. **Procurement.** The procurement arrangements of the parent project will continue to apply and the PIU will continue to manage the procurement for the AF. The procurement plan of the AF was prepared, reviewed, and agreed upon on March 29, 2017.

16. The procurement risk is Substantial due to the country environment. The project will be supervised at least twice a year to ensure that project procurement arrangements still operate well and that funds are used for the intended purposes and in an efficient way.

17. **Safeguards.** As mentioned above, the safeguards team of the PIU is being strengthened by the recruitment of one social specialist (consultant). The project's Environmental Assessment category remains B (partial assessment). The AF triggers the same safeguard policies as the parent project (OP/BP 4.01, OP/BP 4.11, and OP/BP 4.12). As the exact physical location of future investments is not yet known and will not be known by appraisal, the PIU updated the ESMF and RPF, which were reviewed by the World Bank and disclosed both in-country on February 23 and March 9, 2017, and at the World Bank's InfoShop on February 15 and March 6, 2017, respectively. Safeguards instruments provide detailed mitigation measures to ensure sustainability and compliance with country regulations and legislations, as well as with the World Bank's environmental and social policies The PIU has acquired experience in monitoring social safeguards-related aspects as it has developed a RAP for the parent project. In addition,

the PIU has signed an agreement with the AAAC to ensure due diligence with national procedures and laws. The AF project costs include a provision for the implementation and monitoring of the safeguards instruments.

18. **M&E.** The M&E arrangements of the parent project will continue to apply. EAGB, together with the PIU and the SP, will gather information on outcome indicators. The progress reports produced by the consultants in charge of control and supervision of the water and electricity works, will provide adequate reporting of indicators of the AF's intermediate results with regard to physical investments. The progress reports produced by the SP will provide data and information required on intermediate results of EAGB reform and operational performances. The latter indicators will also be included in the performance contract and will be independently verified and validated. The PIU will carry out satisfaction surveys to inform on citizen engagement and beneficiary assessments before completion.

Annex 5: Economic and Financial Analysis

Emergency Water and Electricity Services Upgrading Project - Additional Financing (P161630)

1. The economic analysis section of this annex aims to update the cost-benefit analysis carried out for the parent project by taking into account (a) the actual implementation, to date, of the parent project and (b) the impact of the activities proposed in the AF.

2. The financial analysis section aims to (a) assess the financial impact of the overall project (parent project and AF) activities and (b) review EAGB's financial situation.

3. These assessments show that

   (a) The overall project (combining the parent project and the AF) will generate an EIRR of 11.1 percent, which is lower than the PAD estimate (21.1 percent). However, the decrease of the EIRR is entirely attributable to the collapse of EAGB HFO-fired generators, which prevented benefiting from immediate cost savings in electricity generation. The proposed additional activities, particularly those related to EAGB reform will bring adequate remedies by improving the efficiency of EAGB operations.

   (b) The overall project yields a lower, albeit satisfactory, FIRR than the parent project (5.3 percent and 10.3 percent, respectively).

   (c) The expected improvement of EAGB's operational performances will enable the reduction of annual cash-flow deficits, but operating subsidies will still be required to cover cash operating expenditures until OMVG's electricity supply comes on line.

   (d) EAGB's dire financial situation requires a financial restructuring, which will likely include the settlement of cross-debts between EAGB and the Government and a recapitalization associated with a transfer of assets ownership.

Economic Analysis

4. **Methodology and scope.** The economic analysis included in the PAD consisted of a cost-benefit analysis of the water and electricity components of the parent project. The AF's scaled-up activities for water and electricity and the major part of new activities (Subcomponent 3.5, EAGB restructuring and Subcomponents 1.5 and 2.6, facilitation of maintenance) will yield economic benefits similar to the ones of the parent project (see Table 5.2). Therefore, the updated analysis consists of a cost-benefit analysis that considers the water and electricity activities of the overall project together with the performance improvement activities.

5. The updated analysis encompasses all project costs. It considers the overall investment program and the incremental (with/without project) costs and benefits (including consumer surplus) associated with these investments. All calculations are carried out over a 30-year period, using constant prices and excluding taxes and financing costs.

6. **Update of parent project's analysis.** The PAD analysis was updated to take into account the following:

(a) The time schedule of investments, project benefits, and costs that result from actual implementation.

(b) The costs of contracts already awarded under the parent project replace the corresponding PAD estimates.

(c) The monthly electricity consumption of prepayment clients has more than doubled since the commissioning of rented generators.

(d) The collapse of EAGB's generators prevented the benefits originally expected from the shift from DDO to HFO to materialize.

(e) The variable costs of power generation are estimated as (i) until 2021, the variable costs resulting from the rental contract (cost of fuel and consumables plus the variable rental fee) and (ii) from 2021 onwards, the variable costs of power supplied by OMVG and the HFO-fired BOAD plant. These variable costs apply to both the 'without project' and the 'with project' situations.

7. Table 5.1 provides the detailed assumptions used in the updated analysis.

8. **Investment costs.** The investment costs considered in the updated analysis are given in Table 5.1, together with the ones of the PAD analysis. The full costs are the sum of (a) the direct cost of the component; (b) an allocated portion of the project management cost (in accordance with the share of the component in the project cost); and (c) an allocated portion of EAGB restructuring and capacity building (in accordance with the relative share of water and electricity activities in EAGB turnover).

Table 5.1. Investment Costs for Economic Analysis (CFAF, millions)

Component/Activities	PAD Analysis		Updated Analysis	
	Direct Cost	Full Cost	Direct Cost	Full Cost
1.Water	5,571	6,285	10,122	11,956
2.Electricity	3,514	3,965	8,597	14,190
3.1, 3.2 and 3.4 Project management	960	—	2,344	—
3.3 and 3.5 EAGB Restructuring and capacity building	205	—	5,083	—
Total	**10,250**	**10,250**	**26,146**	**26,146**

Source: Contract awards and design studies.

9. **Incremental benefits.** The incremental benefits generated by the project activities are listed in Table 5.2, which also links activities and the PDO.

Table 5.2. Project Economic Benefits

Development Objective/Activities	Incremental Benefits
Increasing access to safe water (water production and distribution)	• Incremental EAGB revenues from new connections and standposts • Consumer surplus accruing to beneficiaries
Restoring access to and improving quality of water services: • Improving availability (water production and storage)	• Incremental EAGB revenues from existing connections and standposts
• Improving efficiency (new pumping equipment, network rehabilitation and metering, repair, and rehabilitation fund)	• Reduction of energy costs • Reduction of technical losses • Consumer surplus accruing to water customers currently billed on a lump-sum basis
Improving reliability of power supply: • Improving availability of distribution networks (network rehabilitation)	• Incremental EAGB revenues from existing connections • Consumer surplus accruing to electricity customers also supplied by private providers
• Improving efficiency (network rehabilitation and metering, facilitation, of maintenance)	• Reduction of technical and commercial losses
Improving EAGB performance: • EAGB restructuring and capacity building (SC, customer enumeration, commercial management software, training, and call center)	• Improved commercial management will help reduce commercial losses. • Improved maintenance policies, procedures, and technical management will help reduce technical losses.

10. **Incremental revenues.** The assumptions regarding incremental consumption, water prices, and revenues are based on current (2016) data on water and electricity consumption and current EAGB water and electricity rates and on information on actual prices paid by clients of standposts and water and electricity vendors. EAGB's incremental water sales are generated by (a) the total water consumption of the 12,600 new social connections and the 111 new standposts and (b) the incremental consumption of the existing connections and standposts. Incremental electricity sales are generated by the incremental electricity consumption of existing LV and MV customers. The assumptions for estimating incremental revenues accruing to EAGB are summarized in Table 5.3.

Table 5.3. Consumption and Tariffs

Source of Supply	Number of People Served	Consumption	Average Tariff	Average Fee (CFAF/year/connection)
Standpost	300	20 lpcd	CFAF 131/m^3	—
Social connection	8	65 lpcd	CFAF 131/m^3	7,092
Existing water connection	8	40 lpcd†	CFAF 131/m^3	no incremental fees
Existing LV customers:				
• Prepayment customers		12 kWh/month†	CFAF 160/kWh	no incremental fees
• Other		44 kWh/month†	CFAF 220/kWh	no incremental fees

Source of Supply	Number of People Served	Consumption	Average Tariff	Average Fee (CFAF/year/connection)
Existing MV customers		+15%†	CFAF 128/kWh	no incremental fees

Source: EAGB, tariff study, and World Bank estimates.
Note: † incremental consumption

11. **Consumer surplus.** For water supply beneficiaries, Table 5.4 shows the variation of daily water consumption and prices paid by a household shifting from (a) standposts to a social water connection; (b) water vendors to standposts; or (c) lump-sum billing to metered billing. The latter case corresponds to unmetered domestic clients who are currently billed a lump sum amount corresponding to 30 m^3 per month, while their actual daily consumption is on average 40 lpcd (9.6 m^3 per month).

12. For electricity, it is assumed that the incremental consumption of EAGB's MV clients under the project was previously provided by private suppliers. In the case of LV clients, it is assumed that only 10 percent of them were previously connected to private suppliers.

Table 5.4. Consumption and Prices with and without Project

Current/ Future Source of Supply	Without Project		With Project	
	Consumption (lpcd)	Average Price (CFAF)	Consumption (lpcd)	Average Price (CFAF)
Water Supply				
Standposts/social connection	20	500/m^3	65	131/m^3
Vendors/standposts	8	1,000/m^3	20	500/m^3
Lump sum/metered clients	40	409/m^3	65	131/m^3
Electricity				
Private supplier/EAGB (LV client) (CFAF)	400/kWh		200/kWh	
Private supplier/EAGB (MV client) (CFAF)	400/kWh		128/kWh	

Source: EAGB and World Bank estimates.

13. The consumer surplus is equal to the increase of consumption multiplied by the difference of the price paid before and after the project and by the price elasticity (0.5).

14. **Results.** Table 5.5 provides the results of the PAD analysis and the results of the updated analysis for the water and electricity components. The NPV is computed with the discount rate used in the PAD analysis (10 percent) and the current recommended rate for sustainable development projects (6 percent).

Table 5.5. Results of PAD Analysis, Updated Analysis for Water and Electricity Components

Component/Activity	Water	Electricity	Overall Project
PAD Analysis			
EIRR (%)	11.1	48.2	21.1
NPV@10% (US$, millions)	0.84	11.17	12.01
NPV@6% (US$, millions)	5.96	19.21	21.17
Updated Analysis			

Component/Activity	Water	Electricity	Overall Project
EIRR (%)	10.0	12.0	11.1
NPV@10% (US$, millions)	0.04	2.27	2.31
NPV@6% (US$, millions)	6.33	11.63	17.96

15. The updated analysis exhibits a lower NPV and EIRR than the PAD analysis. The decrease of the EIRR is attributable to the disappearance of benefits expected from the shift from DDO to HFO in the parent project.[8] In the absence of the AF, the EIRR would be even lower,[9] which shows that the proposed additional activities, particularly those related to EAGB reform, will bring adequate remedies by improving the efficiency of EAGB operations. It should be noted that the EIRR is very sensitive to the target value set for the improvement of electricity losses; if the target were decreased from 30 percent to 25 percent, the overall EIRR would increase to 14.4 percent.

Financial Analysis

Financial Information on EAGB

16. The PAD noted that the last available (unaudited) financial statements of EAGB had been issued for 2010, and although company's accounts and transactions had been recorded since then, annual accounts were not closed and financial statements were not produced. Accordingly, the PA (dated June 2014) between EAGB and the Government included provisions to ensure that EAGB's financial statements will be produced and audited on time. EAGB actually produced financial statements for its fiscal years 2011–2015, with the support of external accounting firms, but with considerable delays. Only one audit was carried out (for 2013 financial statements). The auditor issued a disclaimer of opinion, pointing at severe shortcomings in supporting documentation and internal controls.

Current Financial Situation of EAGB

17. The 2012–2015 financial statements of EAGB are summarized in Tables 5.6 and 5.7.

Table 5.6. EAGB Income Statements 2012–2015 (CFAF, millions)

	2012	2013	2014	2015
Sales	4,992	4,254	4,484	9,093
Private	*2,319*	*2,072*	*2,178*	—
Public	*2,673*	*2,182*	*2,305*	—
Works (clients)	—	—	—	10
Operating subsidies	0	900		860
Transfer of charges	—	—	773	—

[8] In hindsight, the PAD analysis overestimated these benefits by assuming that thermal power generation would always remain the only source of supply in Bissau, whereas the AF analysis rightly considers that hydropower would come in line in the medium term.

[9] The sensitivity analysis that was carried out in the PAD showed that, in the absence of shift from DDO to HFO, the EIRR of the parent project would be negative (–1.6 percent).

	2012	2013	2014	2015
Total operating revenues	**4,992**	**5,154**	**5,217**	**9,963**
Purchases	5,917	3,517	5,962	12,112
Variation of stock	0	0	1	
Transport	33	16	31	64
External services	78	85	98	393
Taxes	0	1	5	12
Other expenditures	4	3	5	–537
Labor costs	1,550	1,038	1,227	1,156
Cash operating expenditures	***7,582***	***4,660***	***7,329***	***13,200***
Depreciation and allowances	***254***	***140***	***188***	***111***
Total operating costs	**7,835**	**4,799**	**7,517**	**13,312**
EBITDA	**–2,589**	**494**	**–2,113**	**–3,237**
Operating income	**–2,843**	**354**	**–2,301**	**–3,349**
Working ratio (%)	151.9	90.4	140.5	132.5
Labor costs/operating revenues (%)	31.0	20.1	23.5	11.6
Financial income	**0**	**0**	**–117**	**–796**
Non operating income	**–900**	**0**	**–112**	**–1**
Income tax	0	0	0	0
Total costs	**8,736**	**4,799**	**7,824**	**14,108**
Total revenues	**4,993**	**5,154**	**5,294**	**9,963**
Net income	**–3,743**	**354**	**–2,530**	**–4,145**

Source: EAGB (unaudited).

Table 5.7. EAGB Balance Sheets 2012–2015 (CFAF, millions)

	2012	2013	2014	2015
Assets				
Gross fixed assets		11,344		11,531
Depreciation		10,226		10,790
Net fixed assets	***1,182***	***1,118***	***982***	***939***
Stocks	***0***	***0***	***0***	***0***
Net client receivables	6,144	6,582	1,082	3,342
o/w Private	*1,596*	*1,308*		
o/w Public	*4,548*	*5,274*		
Suppliers advances	288	82	14	327
Other receivables	3,700	4,109	3,762	1,073
Total receivables	***10,133***	***10,773***	***4,858***	***4,742***
Cash	***2,019***	***1,558***	***1,568***	***1,071***
Total Assets	**13,334**	**13,450**	**7,408**	**6,752**
Liabilities				
Equity capital	484	484	484	484

	2012	2013	2014	2015
Revaluation surplus	3,259	3,259	3,259	3,259
Other reserves	489	489	489	489
Retained earnings	–15,792	–19,535	–20,152	–22,697
Net income	–3,743	354	–2,545	–4,092
Net equity	***–15,303***	***–14,949***	***–18,465***	***–22,557***
Long-term debt	17,862	16,962	16,162	18,208
Other financial debt	552	552	552	580
Long-term liabilities	***18,414***	***17,514***	***16,714***	***18,788***
Client advances	2	109	2	2
Suppliers	2,478	3,928	3,080	4,934
Fiscal debts	439	453	468	479
Staff and INSS payables	1,923	2,257	2,133	2,186
Other creditors	5,202	4,130	2,980	2,920
Total payables	***10,042***	***10,877***	***8,662***	***10,521***
Bank overdrafts	***181***	***7***	***497***	***0***
Total Liabilities	**13,334**	**13,450**	**7,408**	**6,752**
Working capital	1,929	1,447	–2,733	–4,708
Working capital requirements	90	–104	–3,804	–5,779
Net cash	1,839	1,551	1,071	1,071
Client receivables/sales (months)	15.5	19.5	13.9	3.8
o/w Private	*9.9*	*9.6*	*6.4*	
o/w Public	*20.4*	*29.0*	*21.0*	

Source: EAGB (unaudited).

18. Notwithstanding the reliability of the financial statements, they provide a clear indication of EAGB's dire financial situation:

(a) With a negative net equity, the company is bankrupt and requires financial restructuring.

(b) Most of EAGB cash is not really available, as it is held in escrow accounts designed to guarantee the repayment of EAGB debt to commercial banks and credit lines.

(c) The working ratio, albeit improving, shows that EAGB revenues cannot cover its cash operating expenditures. Actually, incremental electricity sales cannot cover the variable costs (fuel cost and incremental rental fee); this is particularly true for the sales to MV customers.

Financial Impact of the Project

19. Overall, the financial impact of the parent project and of the additional activities is measured by the FIRR. The financial cash-flow stream is derived from the economic cash flows by eliminating the benefits that do not accrue to EAGB (consumer surplus) and taking into

account taxes and contingencies. The updated FIRR is estimated at 5.3 percent. The PAD estimate was 10.3 percent.

20. EAGB reform will enable (a) setting up an adequate accounting and FM system; (b) designing the financial restructuring, which will require the Government's concurrence for implementation; (c) substantially improving the commercial performances; and (d) limiting the recourse to costly commercial financing of the cash-flow deficit. However, even with a substantial reduction of technical and commercial losses, EAGB's revenues would not cover operating expenditures until OMVG's electricity supply comes on line. EAGB's current tariffs, combined with an improved level of operating performances, would be sufficient to ensure financial viability afterwards.

21. The following specific covenants will be introduced under the AF:

(a) To monitor the improvement of EAGB's FM (see paragraph 4 of Annex 4) within nine months of effectiveness

(b) To monitor the formulation of EAGB's financial restructuring within 24 months of effectiveness and its completion within 6 additional months