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Report No: PAD915

INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT PAPER

ON A

PROPOSED ADDITIONAL CREDIT

IN THE AMOUNT OF SDR 9.80 MILLION
(US$15 MILLION EQUIVALENT)

AND A PROPOSED LOAN

IN THE AMOUNT OF US$45 MILLION

TO THE

REPUBLIC OF CONGO

FOR A

WATER, ELECTRICITY AND URBAN DEVELOPMENT PROJECT

AUGUST 25, 2014

Social, Urban, Rural and Resilience Global Practice
Country Department
Africa Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective July 31, 2014)

Currency Unit	=	CFAF
490.00	=	US$1
SDR1	=	0.65303564US$

FISCAL YEAR

January 1 – December 31

ABBREVIATIONS AND ACRONYMS

AfDB	African Development Bank
AFD	French Development Agency (*Agence Française de Développement*)
AMI	Advanced Metering Infrastructure
ARSEL	Electricity Sector Regulatory Agency *(Agence de Régulation du Secteur de l'Electricité)*
CAS	Country Assistance Strategy
CFL	Compact Fluorescent Lamps
CPS	Country Program Strategy
DGGT	General Delegation for Large-Scale Projects (*Délégation Générale des Grands Travaux*)
DSM	Demand Side Management
EDF	French Electricity Utility (*Electricité de France*)
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
ENI	Italian Energy Company
ESMF	Environmental and Social Management Framework
ESIA	Environmental and Social Impact Assessment
EU	European Union
FM	Financial Management
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GIS	Geographic Information System
HIPC	Highly Indebted Poor Countries
HR	Human Resources
IDA	International Development Association
IEC	Information, Education and Campaign
IFR	Interim Financial Reports
IPP	Independent Power Producer
MV	Medium Voltage
MCC	Metering Control Center
MDM	Metering Data Management
M&E	Monitoring and Evaluation
MEH	Ministry of Energy and Hydraulics

MEPW	Ministry of Equipment and Public Works
MTR	Mid-Term Review
LV	Low Voltage
NCB	National Competitive Bidding
NGO	Non-Governmental Organization
PCU	Project Coordination Unit
PDO	Project Development Objective
PEEDU	Water, Electricity and Urban Development Project (*Projet Eau, Electricité et du Développement Urbain*)
PFM	Project Financial Management
PO	Private Operator
PPP	Public Private Partnership
PRSP	Poverty Reduction Strategy Paper
RAP	Resettlement Action Plan
RoC	Republic of Congo
RPF	Resettlement Policy Framework
RPP	Revenue Protection Program
SBDs	Standard Bidding Documents
SC	Steering Committee
SDR	Special Drawing Rights
SNDE	National Water Utility (*Société Nationale de Distribution d'Eau*)
SNE	National Electricity Utility (*Société Nationale d'Electricité)*
T&D	Transmission and Distribution

Regional Vice President:	Makhtar Diop
Country Director:	Eustache Ouayoro
Senior Director:	Ede Jorge Ijjasz-Vasquez
Practice Manager:	R. Mukami Kariuki
Task Team Leader:	Mahine Diop

REPUBLIC OF CONGO
WATER, ELECTRICITY, URBAN DEVELOPMENT PROJECT
(ADDITIONAL FINANCING)

CONTENTS

ADDITIONAL FINANCING DATA SHEET

Republic of Congo

CG-Add. Fin. Water, Electricity & Urban Dev. SIL (P147456)

AFRICA

GSURR

Basic Information – Parent			
Parent Project ID:	P106975	Original EA Category:	B - Partial Assessment
Current Closing Date:	31-Dec-2015		

Basic Information – Additional Financing (AF)			
Project ID:	P147456	Additional Financing Type (from AUS):	Scale Up
Regional Vice President:	Makhtar Diop	Proposed EA Category:	B - Partial Assessment
Country Director:	Eustache Ouayoro	Expected Effectiveness Date:	15-Dec-2014
Senior Global Practice Director:	Ede Jorge Ijjasz-Vasquez	Expected Closing Date:	31-Dec-2019
Practice Manager/Manager:	Rosemary Mukami Kariuki	Report No:	PAD915
Team Leader:	Mahine Diop		

Borrower				
Organization Name	Contact	Title	Telephone	Email
UC-PEEDU	Maurice Bouesso	Coordinator	+(242) 055568787	mbouesso@yahoo.fr

Project Financing Data–Parent (Rep. of Congo - Water, Electricity & Urban Development SIL (LEN)-P106975)

Key Dates

Project	Ln/Cr/TF	Status	Approval Date	Signing Date	Effectiveness Date	Original Closing Date	Revised Closing Date
P106975	IDA-47010	Effective	25-Mar-2010	25-May-2010	27-Oct-2010	31-Dec-2015	31-Dec-2015

Disbursements

Project	Ln/Cr/TF	Status	Currency	Original	Revised	Cancelled	Disbursed	Undisbursed	% Disbursed

P106975	IDA-47010	Effective	XDR	16.50	16.50	0.00	11.82	4.68	71.65

Project Financing Data –Additional Financing CG-Add. Fin. Water, Electricity & Urban Dev. SIL (P147456)

[X] Loan [ ] Grant [ ] IDA Grant

[X] Credit [ ] Guarantee [ ] Other

Total Project Cost:	150.00	Total Bank Financing:	60.00
Financing Gap:	0.00		

Financing Source – Additional Financing (AF)	Amount
BORROWER/RECIPIENT	90.00
International Bank for Reconstruction and Development	45.00
International Development Association (IDA)	15.00
Financing Gap	0.00
Total	150.00

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	Title	Specialization	Unit
Mahine Diop	Senior Municipal Engineer	Team Lead	GURDR
Pedro Antmann	Lead Energy Specialist	Lead Energy Specialist	GEEDR
Ernestina Attafuah	Senior Program Assistant	Senior Program Assistant	GWADR
Fabrice Karl Bertholet	Sr Financial Analyst	Sr Financial Analyst	GEEDR
Jean-Christophe Carret	Program Leader	Sector Leader	AFCC2
Bella Lelouma Diallo	Sr Financial Management Specialist	Sr Financial Management Specialist	GGODR
Aissatou Diallo	Senior Finance Officer	Senior Finance Officer	CTRLA

Faly Diallo	Finance Officer	Finance Officer	CTRLA
Angelo Donou	Financial Management Specialist	Financial Management Specialist	GGODR
Ana Paula Fialho Lopes	Senior Country Officer	Senior Country Officer	GURDR
Abdoulaye Gadiere	E T Consultant	Environmental Specialist	GENDR
Franklin Koffi S.W. Gbedey	Energy Specialist	Peer Reviewer	GEEDR
Soraya Goga	Lead Urban Specialist	Peer Reviewer	GURDR
Antoine V. Lema	Senior Social Development Specialist	Senior Social Development Specialist	GURDR
Karine N. MOUKETO-MIKOLO	Team Assistant		AFMCG
Christine Makori	Senior Counsel	Senior Counsel	LEGAM
Henri Nkuepo	Associate Counsel	Associate Counsel	LEGAM
Jose Francisco Perez Caceres	Energy Specialist	Energy Specialist	GEEDR
Dina Nirina Ranarifidy	E T Consultant	Urban Specialist	GURDR
Leopold Sedogo	Energy Specialist	Energy Specialist	GEEDR
Clement Tukeba Lessa Kimpuni	Senior Procurement Specialist	Procurement	GGODR

Non-Bank Staff

Name	Title	City

Locations

Country	First Administrative Division	Location	Planned	Actual	Comments
Congo, Republic of	Pointe-Noire	Pointe-Noire		X	
Congo, Republic of	Commune de Brazzaville	Brazzaville		X	

Institutional Data

Parent (Rep. of Congo - Water, Electricity & Urban Development SIL (LEN)-P106975)

Practice Area / Cross Cutting Solution Area

Social, Urban, Rural and Resilience Global Practice

Cross Cutting Areas

[ ] Climate Change

[ ] Fragile, Conflict & Violence

[ ] Gender

[ ] Jobs

[ ] Public Private Partnership

Sectors / Climate Change

Sector (Maximum 5 and total % must equal 100)

Major Sector	Sector	%	Adaptation Co-benefits %	Mitigation Co-benefits %
Public Administration, Law, and Justice	Sub-national government administration	59		
Water, sanitation and flood protection	Water supply	30		
Public Administration, Law, and Justice	Public administration-Water, sanitation and flood protection	8		
Public Administration, Law, and Justice	Public administration-Energy and mining	3		
Total		100		

Themes

Theme (Maximum 5 and total % must equal 100)

Major theme	Theme	%
Urban development	City-wide Infrastructure and Service Delivery	52
Environment and natural resources management	Water resource management	27
Urban development	Urban services and housing for the poor	13
Urban development	Municipal governance and institution building	5
Public sector governance	Public expenditure, financial management and procurement	3
Total		100

Additional Financing CG-Add. Fin. Water, Electricity & Urban Dev. SIL (P147456)

Practice Area / Cross Cutting Solution Area
Social, Urban, Rural and Resilience Global Practice

Cross Cutting Areas

[ ] Climate Change

[ ] Fragile, Conflict & Violence

[ ] Gender

[ ] Jobs

[ ] Public Private Partnership

Sectors / Climate Change

Sector (Maximum 5 and total % must equal 100)

Major Sector	Sector	%	Adaptation Co-benefits %	Mitigation Co-benefits %
Public Administration, Law, and Justice	Public administration-Energy and mining	100		
Total		100		

☒I certify that there is no Adaptation and Mitigation Climate Change Co-benefits information applicable to this project.

Themes

Theme (Maximum 5 and total % must equal 100)

Major theme	Theme	%
Urban development	City-wide Infrastructure and Service Delivery	100
Total		100

I. Introduction

1. This Project Paper seeks the approval of the Executive Directors to: (a) provide an additional IDA credit in an amount equivalent to US$15 million and to provide a loan in the amount of US$45 million to the Republic of Congo for the Water, Electricity and Urban Development Project (PEEDU) (Cr. 47010) (collectively "Additional Financing"); and (b) to restructure the original project.

2. The Additional Financing (AF) is proposed to address urgent needs in the energy sector in Congo. The AF would scale up activities envisaged under the Electricity component of the original project to finance investments needed for electrical infrastructure in selected zones of Brazzaville and Pointe Noire. The AF will focus on the implementation of the electricity sector reform to achieve a sound and dynamic electricity sector able to cope with the country's economic growth and its many challenges. The AF would involve an extension of the project closing date and a revision of the Project Development Objective (PDO) and Results Framework. An additional 48 month-extension of the project closing date from December 31, 2015, to December 31, 2019, is required to implement the proposed additional activities.

II. Background and Rationale for Additional Financing

Project Background and Performance

Background and context

3. *Country context*. In the early 2000's, the Republic of Congo (RoC) began a process of reconstruction and stabilization of institutions and public administration, thus marking the end of the series of civil conflicts of the 1990's. The country successfully held presidential, senatorial and legislative elections between 2002 and 2012. Although the political environment remains fragile, substantial progress in rebuilding and consolidating peace has been made. Prospects for full restoration of peace offer RoC a unique opportunity to focus its full attention on strengthening its still fledgling institutions, and stimulating a robust economic growth in order to combat poverty and inequality. From 2010 to 2013, Congo's average annual growth rate has been 4.8 percent, which is lower than the 7-to-8 percent target by the National Development Plan (NDP) over the period 2012-2025 to achieve the country's ambition. In addition, in the past three years, the average annual growth rate of real GDP per capita was only 2.2 percent, while the targeted rate lies between 4.5 and 6.5 percent. The main challenge for Congo is how to use its oil resources effectively to develop the non-oil sector which is better equipped to turn GDP growth into an inclusive growth and a shared prosperity. Indeed, according to the 2011 household survey, the poverty rate has dropped only by 4 percentage points to 46.5 percent in 2011 from 50.5 percent in 2005.

4. *Sector context*. RoC continues to face limited access to modern energy services with only 38 percent of the population having access to electricity. The energy mix is highly dependent on gas and hydro generation. The country's electricity sector faces five main challenges: (i) reforming the energy sector, the power utility in particular (see next paragraph); (ii) providing security of supply in the face of frequent interruptions and poor service quality; (iii) expanding generation capacity to meet a rapidly increasing demand and securing sufficient supply of low cost electricity to increase access; (iv) improving the efficiency and equity in energy services provision by reforming tariff and rationalizing subsidy policies in a context of high operation costs, and (v) improved demand-side management.

5. The financial condition of the *Société Nationale d'Electricité* (SNE) is fragile. The financial problems stem from below-cost tariffs that do not reflect the increasing operation costs due to recent investments in generation, low collection rate and high losses leading to a significant additional cost burden. Transit capacity is weak, transmission network conditions are poor and power supply is frequently disrupted. Inadequate and uncoordinated investments in network infrastructure and preventive maintenance have led to deterioration in electricity distribution infrastructure. This in turn has resulted in poor quality of electricity supply and operational inefficiencies. Losses in the distribution network are above 50 percent while total commercial losses are close to 70 percent. To address some of these key issues, the Government's sector reform strategy aims at: (i) increasing generation capacity to foster economic development; (ii) restoring the financial viability of the power companies; (iii) improving the operational performance of the SNE; and (iv) scaling up access to electricity to reduce the urban-peri-urban imbalances.

6. SNE is reported to have a capital of US$100 million and a turnover of approximately US$80 million in 2013; the company is not efficient: up to 35 percent of turnover is spent on staff costs against ratios of 486 kwh sold per agent, and 71 customers per agent, which is far below the standards of moderately performing companies in the sub-region. SNE's financial survival is essentially guaranteed by various subsidies from the Government. This artificial back-up from the Government is having negative consequences on the smooth-running of the electricity sector. The financial statements from recent years have not been certified and therefore do not constitute a reliable data source to assess the financial health of the company. Nonetheless, results from the sector diagnosis carried out under the original project allow for the following observations (i) SNE's equity is negative due to accumulation of losses over several years; the utility has avoided bankruptcy only because of the Government support, and (ii) the evolution of the debt ratio shows the total dependence of SNE towards the State, and its inability to mobilize its own resources to live up to its financial commitments.

7. The Government has made significant investments in the power sector since 2003, namely with the construction of the 120 MW Imboulou hydropower plant located 260 km away from Brazzaville, and a 30 MW thermal power plant to further secure the supply of electricity in Brazzaville. Additionally, the Government, in partnership with ENI, an Italian energy company, has implemented two 300 MW turbine gas power plants (CEC) commissioned respectively in 2010 and in 2011. Furthermore, efforts have been made to extend the transmission network to the northern part of the country to Owando and Boundji, therefore

doubling its length. The installed generation capacity is now close to 600 MW: 209 MW hydro, 350 MW thermal gas and 41 MW diesel power.

8. The original project, the PEEDU, mainly concentrated in the cities of Brazzaville and Pointe Noire, aimed to assist the Government to strengthen its efforts in implementing its agenda of urban poverty reduction through: (i) the construction or rehabilitation of basic infrastructure (drainage, roads, rehabilitation/construction of community facilities, treatment of erosions), institutional strengthening, targeted municipal support programs to strengthen municipal management and fiscal performance at the local level in Brazzaville and Pointe-Noire; (ii) the implementation of measures to increase sustainable access to safe drinking water including the water sector reform, investment and institutional support; and (iii) technical assistance to develop a comprehensive strategy for the electricity sector reform, and support to the Government to effectively implement the reform.

9. The studies in the electricity sector financed under the first phase of the project reveal the need to reform the power sector, the utility in particular, and the urgency to proceed with some investments in order to restore the system's reliability and viability along with the entire sector credibility vis-à-vis the economic agents. Building on those studies, the Government has already initiated some changes towards achieving the recommendations set forth by those studies and recently also contracted *Electricité de France* (EDF) to help define a strategy to improve the SNE's commercial performances.

10. Through investments targeted to improve the efficiency of electricity supply, the AF would help improve the financial viability of the sector, which in turn will reduce the power sector's fiscal burden on the economy and create space for social investments. The proposed AF would: (a) provide financing for network reinforcement and rehabilitation; and (b) provide knowledge and experience for improved distribution system management, particularly with respect to commercial performance.

Project description

11. *The original credit*. The original credit was approved by the World Bank Board of Directors on March 25, 2010. The project is an example of the Bank's new partnership program with the RoC where its role is that of acting as a catalyst for change, assisting the country to improve selectivity and efficiency in its own programs. The PEEDU was approved for an IDA amount of US$25.5 million equivalent and leveraged US$100 million from the Government. The proposed AF builds on the same strategy and aims at ensuring sound and effective investments with co-financing from the Bank and the country. The Government will contribute to the AF for an amount of US$90 million.

12. *Objective and scope of the project.* The PDO of the initial project is to "increase sustainable access to basic infrastructure, services and safe drinking water for the inhabitants of targeted areas in the Recipient's cities of Brazzaville and Pointe-Noire". To reflect the investments in the electricity sector, the PDO will be changed in the AF and will read as follows "*to increase access to basic infrastructure services, safe drinking water and electricity for the inhabitants of targeted areas in the cities of Brazzaville and Pointe-Noire''*.

Project implementation record and results to date

13. The Implementation Status and Results Reports (ISR) rating for progress towards achieving the Project Development Objective (PDO) has been Satisfactory since project effectiveness in October 2010. Performance indicators for the three components are on track and are expected to be fully achieved by the end of the project. Implementation Progress (IP) has been rated Satisfactory.

14. The July 2013 mid-term review (MTR) of the Project confirmed the relevance of the PDO, given the current economic and social situation in the country, and the urbanization rate which continues to increase. Yet, in spite of the significant investments by the Government, access to basic social services remains a challenge. After three years of implementation, disbursement is at about 69 percent and about 84 percent of the total project amount has been committed.

15. *Progress, key achievements and risks for the components.* To date, the project has benefited 251,700 people. The numbers are expected to improve when the implementation of the Water component is completed. The main strong points of the project are: (i) the effective commitment of the Government; (ii) the regular monitoring of the project by the Ministry of Equipment and Public Works; (iii) the timely payment of counterpart funds; (iv) the results achieved on the ground (see paragraphs below); and (v) the favorable opinion of project beneficiaries –89 percent of the population is reported to be satisfied with the services provided. Furthermore, the positive and visible impacts of the initial project on the populations' living conditions in Brazzaville and Pointe-Noire, have convinced the Government and the Bank to co-finance a new urban operation worth US$400 million, to improve access to basic urban services in the poorest neighborhoods in these two cities.

16. All dated legal covenants beyond effectiveness have been met.

17. The AF is not expected to trigger environmental and social impacts which are different from those triggered by the original project and covered by OP 4.01 and OP 4.12. Overall safeguards compliance (Environmental Assessment OP/BP 4.01 and Involuntary Resettlement OP/BP 4.12) is rated Moderately Satisfactory due to late preparation of safeguards documents (Environmental Management Plan-EMP and Resettlement Action Plan-RAP). Recommendations to improve performance have been made to ensure that all safeguards requirements are properly implemented. These recommendations are being implemented and closely monitored by the Bank Safeguards specialists. The impacts of this close supervision are expected to be reflected in the overall safeguard rating during the supervision mission of October 2014. An Environmental and Social Management Framework (ESMF) and a Resettlement Policy Framework (RPF) prepared for the original project were updated and disclosed respectively in-country on February 28, 2014, and in the Infoshop on April 24, 2014 and in-country on May 15, 2014 and in the Infoshop on May 16, 2014 for the purposes of this AF.

18. Procurement activities are handled by the Project Coordination Unit (PCU) which is familiar with Bank procedures. The procurement plan has been updated as required during project

implementation and implemented at a rate of 95 percent. Some weaknesses[1] have been recorded in its management, mainly in the area of contract management, leading the rating of the procurement management to Moderately Satisfactory.

19. An action plan has been agreed with the Client to improve procurement management. This action plan is being implemented and closely monitored by the Bank and results so far achieved are showing that the rating will be upgraded during the supervision mission of October 2014. The procurement specialist was trained on Bank procurement procedures. A procurement assistant will also be recruited within the framework of the AF to reinforce the team. The Procurement Specialist in the PCU has access to the appropriate tools and knowledge that enable him to carry out his functions effectively.

20. The project complies with financial management requirements such as timely submission of quarterly interim unaudited financial reports and annual audit reports thanks to a qualified fiduciary staff, and an adequate manual of procedures supported by a computerized accounting system. The mobilization of the Government's contribution is rated highly satisfactory (at 90 percent as of April 30, 2014, or CFAF 44.99 billion out of CFAF 50 billion). The Government has been able to allocate on time the required counterpart funds throughout project implementation. The FY 2012 audit report was received on time and found acceptable. An in-depth financial management review carried out in May 2013, revealed the existence of US$26,000 of ineligible expenditures due mainly to the absence of no objection from the Bank. The Government has just refunded this amount. Due to these ineligible expenses, the project financial management performance was downgraded from Satisfactory to Moderately Satisfactory and will be upgraded during the next supervision mission.

Rationale and eligibility for Additional Financing

21. The proposed AF will scale-up the project's activities to enhance the electricity utility's managerial, technical and commercial performances through the financing of new activities that complement the ongoing activities under the Electricity component. The AF will support the following: (i) Upgrading of the National Electricity Company (SNE) Electricity Distribution and Transmission System; (ii) Improving the Operational Performance of SNE in Key Business Areas; and (iii) Institutional Strengthening and Capacity Development of SNE.

22. The AF instrument is the preferred mechanism because it allows scaling up the project's impact and development effectiveness with the proposed new activities. There are significant cost-effectiveness gains in implementing the scaled-up activities as part of the ongoing operation, building on implementation arrangements already in place, and the scale-up can feasibly be accommodated in the context of the original project. The AF is also leveraging a government co-financing which ensures Government commitment and sustainability in the long run.

[1] These refer mainly to (i) failure to respect provisions of contracts (delays in the implementation of works, supervising firms insufficiently supervised, no conformity of performance bank guarantee and bank guarantee for advance); (ii) failure to follow Bank guidelines on conclusion and signing addendums to contracts.

Consistency with CPS and Contribution to Higher Level Objectives

23. *Consistency with Country Partnership Strategy.* The project is fully aligned with the Country Partnership Strategy (CPS) for the Republic of Congo (2013-2016 discussed by the Board on November 1, 2012) and the country's Poverty Reduction Strategy Paper (PRSP 2012-2016). Both strategies identified the energy sector as one with a high potential for shared economic growth and poverty reduction. In addition, the CPS defines the Bank's role in the framework of a partnership with the Congo to assist the Government in effectively using its abundant oil revenues to transform its economy and reduce poverty. Bank-funded projects and programs will be developed to maximize synergy, demonstrate best practices, and encourage the transfer of knowledge. As part of this strategy, the AF will contribute to the implementation of pillar 3 of the CPS - Strengthen the capacities of public authorities and governance – and, particularly, the improvement of management and programming of investments. The AF is also consistent with: (i) the Sustainable-Energy-for-All initiative which aims to ensure universal access to modern energy services, double the global rate of improvement in energy efficiency, and double the share of renewable energy in the global energy mix; (ii) the African Action Plan objectives; and (iii) the World Bank Group Energy Directions Paper. Additionally, as the AF will support electricity access to the poor population living in Brazzaville and Pointe Noire, it will also support the twin development goals the World Bank has committed to, eliminating extreme poverty by 2030 and boosting shared prosperity, measured as the income of the bottom 40 percent in any given country.

24. The AF will reinforce the initial project's ambition to be a catalyst for channeling domestic oil-related resources to infrastructure, the electricity sector per se, and therefore materialize the Government's and the Bank's determination and commitment to fight and reduce poverty.

III. Proposed Changes

Summary of Proposed Changes	
(i) To scale up project activities under Component 3 to enhance the electricity utility's managerial, technical and commercial performances. (ii) To extend the project completion date from December 31, 2015 to December 31, 2019 to allow for the implementation of the proposed activities. (iii) To revise the current PDO to include access to electricity. (iv) To update the Results Framework in order to improve the capacity to measure actual results.	
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 [ ] No [X]
Change in Implementation Schedule	Yes [X] No [ ]
Other Change(s)	Yes [ ] No [X]

Development Objective/Results

Project's Development Objectives

Original PDO

To increase sustainable access to basic infrastructure, services and safe drinking water for the inhabitants of targeted areas in the Recipient's cities of Brazzaville and Pointe Noire.

Change in Project's Development Objectives

Explanation:

To remove "sustainable" and include access to electricity in the PDO. The original project has financed several studies in the electricity sector that reveal the need to reform the power sector, the utility in particular, and the urgency to proceed with some investments in order to restore the system's reliability and viability along with the entire sector credibility vis-à-vis the economic agents. Building on those studies, the RoC has already initiated some changes towards achieving the recommendations set forth by those studies and recently also contracted Electricité de France to help define a strategy to improve the Société Nationale d'Electricité's commercial performance. Building on the momentum developed by the GoRoC in implementing the reform agenda over the past years, the AF would enable SNE to achieve significant loss reduction and revenue collection improvements for a better quality of service in a comprehensive manner within a well-defined operational area (Brazzaville and Pointe Noire).

Proposed New PDO - Additional Financing (AF)

To increase access to basic infrastructure services, safe drinking water and electricity for the inhabitants of targeted areas in the cities of Brazzaville and Pointe Noire.

Change in Results Framework

Explanation:

To update the new indicators in order to improve the capacity to measure actual results. The key

performance indicators are presented in detail in Annex 1. The indicators related to: (i) Pupils with access to improved school facilities in targeted areas; (ii) People with access to improved health facilities in targeted areas; (iii) Annual expenditures on infrastructure maintenance in Brazzaville and Pointe Noire; (iv) Improvement of transit capacity of network distribution are now considered as intermediate indicators. The indicator related to: Satisfaction of the population with the services provided has been difficult to verify and therefore was dropped from the result framework. As a result the number of PDO level indicators is 5. Indicators under the Water component were adjusted, in coordination with the Client, to reflect the change in the scope of the component. With the reduced number of new piped household water connections and standpipes to build, the number of people in urban areas provided with access to Improved Water Sources has been reduced accordingly. The target indicator related to People with access to improved health facilities in targeted areas was also adjusted based on the number of health centers to be built -9 compared to 10 anticipated.

Compliance

Covenants - Additional Financing (CG-Add. Fin. Water, Electricity & Urban Dev. SIL - P147456)

Source of Funds	Finance Agreement Reference	Description of Covenants	Date Due	Recurrent	Frequency	Action
IDA	C.1 of this Section II of Schedule 2	In order to ensure the timely carrying out of the audits referred to in paragraph B.3 of this Section II, the Recipient shall: (a) not later than three (3) months after the Effective Date, appoint an internal auditor; and (b) not later than six (6) months after the Effective date, appoint an external auditor, all in accordance with the provisions of Section III of this Schedule 2.	15-Jun-2015	☐		New
IDA	Part C.1 of	To facilitate the	16-Mar-	☐		New

	this Section II	proper maintenance of its financial management system referred to in Part B.1 of this Section II, the Recipient shall, not later than three (3) months after the Effective Date, upgrade its financial management system, in form and substance satisfactory to the Association.	2015			
IDA	Section V.A of Schedule 2	The Recipient shall, not later than one (1) month after the Effective Date, finalize and adopt the Electricity Master Plan in form and substance satisfactory to the Association.	15-Jan-2015	☐		New
IDA	Section II of this Schedule 2	The Recipient shall, not later than one (1) month after the Effective Date, update its accounting and financial management manual, in form and substance satisfactory to the Association.	15-Jan-2015	☐		New

IDA	Section III of this Schedule 2	The Recipient shall, not later than three (3) months after the Effective Date, appoint in accordance with the provisions of Section III of this Schedule 2, and thereafter maintain at all times during the implementation of the Project; a procurement assistant.	16-Mar-2015	☐		New
IDA	Section I of this Schedule 2	The Recipient shall, not later than three (3) months after the Effective Date, revise said Governance and Anti-corruption Plan in form and substance satisfactory to the Association.	16-Mar-2015	☐		New

Covenants - Parent (Rep. of Congo - Water, Electricity & Urban Development SIL (LEN) - P106975)

Ln/Cr/TF	Finance Agreement Reference	Description of Covenants	Date Due	Status	Recurrent	Frequency	Action
IDA-47010	Sch 2 Section II B.4	Recruit external auditor	30-Nov-2010	Complied with	☐		No Change
IDA-47010	Sch 2 Section I.A	Recruit Safeguards, Communication & M&E Specialists	30-Nov-2011	Complied with	☐		No Change

IDA-47010	Sch 2 Section I. A.3	Establish SAICs (Community Dev. support Units) in each urban district.	30-Sep-2011	Partially complied with	☐		No Change
IDA-47010	Sch 2 Section I. A.3	Reactivate CDQs (Community Development Committees) in each Project neighborhood.	31-Mar-2011	Complied with	☐		No Change
IDA-47010	Sch 2 Section II C	Upgrade records management system.	31-Mar-2011	Complied with	☐		No Change
IDA-47010	Sch 2 Section I. D	Conclude services contract for selected water supply activities.	31-Jan-2012	After delay complied with	☐		No Change
IDA-47010	Sch 2 Section III. E	Conduct annual procurement audits		Complied with	☒	Yearly	No Change
				☐			

Conditions

Source Of Fund	Name	Type
IBRD	Loan Agreement	Effectiveness

Description of Condition

The Loan Agreement has been executed and delivered and all conditions precedent to its effectiveness or to the right of the Recipient to make withdrawals under it (other than the effectiveness of this Agreement) have been fulfilled.

Source Of Fund	Name	Type
IDA	Project Counterpart Funds	Effectiveness

Description of Condition

The Recipient has deposited an amount in CFA Francs equivalent to nine million United States Dollars (US$9,000,000) into the Project Counterpart Funds Account in accordance with the provisions of Section I.F of Schedule 2 to the Financing Agreement.

Source Of Fund	Name	Type
IDA	SNE Contract	Effectiveness

Description of Condition

The Implementation Agreement has been executed on behalf of the Recipient and SNE, in accordance with the provisions of Section I.C of Schedule 2 to the Financing Agreement.

Finance

Loan Closing Date - Additional Financing (CG-Add. Fin. Water, Electricity & Urban Dev. SIL - P147456)

Source of Funds	Proposed Additional Financing & Loan Closing Date
IBRD	31-Dec-2019
IDA recommitted as a Credit	31-Dec-2019

Loan Closing Date(s) - Parent (Rep. of Congo - Water, Electricity & Urban Development SIL (LEN) - P106975)

Explanation:

Implementation of the AF would require the extension of the project for an additional 48 months beyond the current closing date of December 31, 2015, bringing the new closing date to December 31, 2019.

Ln/Cr/TF	Status	Original Closing Date	Current Closing Date	Proposed Closing Date	Previous Closing Date(s)
IDA-47010	Effective	31-Dec-2015	31-Dec-2015	31-Dec-2019	

Change in Disbursement Arrangements

Explanation:

The project will continue to use the transaction-based disbursement procedures. The existing disbursement arrangements will also be used for the AF. One new Designated Account will be opened at a commercial bank acceptable to the Bank and will receive an initial advance upon project effectiveness. The Designated Account will co-mingle IDA and IBRD financing to jointly co-finance eligible expenditures under the Project. Counterpart funds will be channeled to a separate Bank Account and will also jointly co-finance eligible expenditures under the project. In

addition to advances to the designated account, other disbursement methods will be available for use under the project, such as direct payment, reimbursement, and special commitment methods. Further instructions on the withdrawal of proceeds will be outlined in the disbursement letter. As is the case under the initial Project, the AF will finance 40 percent of all expenditures, inclusive of taxes and duties. The total amount of the AF is expected to be disbursed by FY19.

The total cost of the AF is US$150 million equivalent, US$15 million equivalent of which will be financed by IDA, US$45 million by IBRD, US$90 million by the Government. Ten percent of government's contribution, estimated at US$9 million, is required as a condition of effectiveness. Subsequent replenishments will be done by RoC on the basis of the disbursement schedule agreed upon during negotiations and included as a covenant in the financing agreement.

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

Explanation:

Due to extension of project closing date.

Expected Disbursements (in USD Million) (including all Sources of Financing)

Fiscal Year	2015	2016	2017	2018	2019	2020
Annual	9.00	12.00	15.00	15.00	9.00	0.00
Cumulative	9.00	21.00	36.00	51.00	60.00	60.00

Allocations - Additional Financing (CG-Add. Fin. Water, Electricity & Urban Dev. SIL - P147456)

Source of Fund	Currency	Category of Expenditure	Allocation	Disbursement %(Type Total)
			Proposed(US$)	Proposed
IDA	XDR	Goods, works, non-consulting services, consultants' services, Training and Operating Costs for Parts C.3, C.4 and C.5 of the Project	15.00	10
		Total:	**15.00**	
IBRD	US$	Goods, works, non-consulting services, consultants' services, Training and Operating Costs for Parts C.3, C.4 and C.5 of the Project	45.00	30
		Total:	**45.00**	

Components				
Change to Components and Cost				

Explanation:

Geographic Scope. The AF will continue to cover the areas targeted by the original project, in Brazzaville and Pointe Noire.

Proposed changes concern Component III Electricity Sector Reform (IDA US$0.70 million equivalent, Government US$2.7 million) which will be modified as follows:

- Three new sub-components will be added to the two initial subcomponents: (3.3) Upgrading of the National Electricity Company (SNE) Electricity Distribution and Transmission System; (3.4) Improving the Operational Performance of SNE in Key Business Areas; (3.5) Institutional Strengthening and Capacity Development of SNE.
- To capture the scope of the new activities, Component 3 will be accordingly renamed "Sector reform, Commercial and Electricity Supply Systems Upgrade''

• Sub-component (3.3). Upgrading of the National Electricity Company (SNE) Electricity Distribution and Transmission System (total cost US$86 million of which Government US$51 million, IDA US$8.75 million equivalent, IBRD US$26.25 million) will focus on technical investments. The sub-component will support investments in infrastructure to improve the operational efficiency of the distribution system and remove electricity supply bottlenecks within the network. This improvement will translate into system reliability by reducing system interruptions and outage times as well as lowering technical and commercial losses.

This sub-component will provide financing to: (a) Rehabilitate segments of the transmission network; (b) Reinforce and complement the sub-transmission network improvements undertaken by Government to develop a sound backbone for electricity supply, including the construction of an electric loop in Brazzaville; (c) Upgrade and extend the distribution network to increase and fully re-establish its overall transit capacity for a better end-user supply, voltage quality and provide access to new customers; (d) Implement a simple Demand Side Management (DSM) program through the distribution of Compact Fluorescent Lamps (CFL) to save energy and help customers manage bills - which are likely to increase with the termination of the lump sum billing system.

• Sub-component (3.4). Improving the Operational Performance of SNE in Key Business Areas, with specific emphasis on sustainable loss reduction. (total cost US$50 million of which Government US$30 million; IDA US$5 million equivalent; IBRD US$15 million).

The sub-component will finance the incorporation of management information systems (MIS) to enable efficient, transparent and accountable performance in key business areas including: (a) Commercial Management System (CMS); (b) Incidents Recording and Management System (IRMS); (c) Implementing a Corporate Resource Management

System (CRMS); and (d) Implementing a Geographic Information system (GIS); (e) Implementation of a revenue protection program (including, smart metering and establishment of a metering control center) designed to reduce non-technical losses; (f) Supply and installation of approximately 100,000 meters (including approximately 30,000 pre-paid meters); (g) Rehabilitation of existing and construction of new SNE customer service offices; (h) Provision of subsidized/low cost connections to approximately 50,000 Eligible Households.

• Sub-component (3.5): Institutional Strengthening and Capacity Development of SNE (Total US$9.80 million of which Government 6 million; IDA US$0.95 million equivalent, IBRD US$2.85 million):

This sub-component will finance (a) Institutional Strengthening of SNE, (b) Logistics and office equipment, (c) training, and (d) Studies and consultancies.

The AF will also finance operating costs (US$3.4 million, of which IDA US$0.25 million equivalent; IBRD US$0.75 million and Government US$2.4 million), project management costs (audits and M&E) (US$0.8 million, of which IDA US$0.05 million equivalent; IBRD US$0.15 million and Government US$0.6 million).

Current Component Name	Proposed Component Name	Current Cost (US$M)	Proposed Cost (US$M)	Action
Urban Infrastructure and Services	Urban Infrastructure and Services	13.50	13.50	
Water Supply	Urban Water Supply	8.80	8.80	
Electricity Sector Reform	Electricity Sector Reform, Commercial and Electricity Supply Systems Upgrade.	0.70	59.50	Revised
	Total:	23.00	81.80	

Other Change(s)

Change in Implementation Schedule

Explanation:

Implementation of the AF would require the extension of the project for an additional 48 months beyond the current closing date of December 31, 2015, bringing the new closing date to December 31, 2019.

Appraisal Summary

Economic and Financial Analysis

Explanation:

Rationale for public sector provision/financing. Private sector funding would be difficult to secure as an alternative source of funding for the proposed AF due to the risk profile of the energy sector in RoC, in particular, the Transmission, Distribution and Commercial segments. SNE's operational performance is an obstacle for private sector's effective participation in the sector. On the other hand, Government has committed to a development agenda where infrastructure is at the cornerstone, energy in particular, and is willing to direct large amounts of funding into the sector, in the context of a partnership with a sound and experienced technical and financial partner such as the World Bank.

Value added of Bank's support. The AF is the result of both longstanding country dialogue and technical discussions between the Government and the Bank. Within this context, the value added of Bank support goes far beyond the mere provision of financing, and relates to the Bank's experience in the proposed interventions and investments. The Bank is also able to mobilize leading international experts who can bring cutting-edge knowledge to bear on the analytical activities and institutional reform effects being undertaken by the Government.

Economic and financial analysis:

Context

Investments under the proposed AF are part of a wider investment program to reduce Transmission & Distribution (T&D) bottlenecks, improve revenue collection and open the possibility for power supply expansion. The Congolese authorities are assisted at the technical level by EDF for the design, technical preparation and implementation of the investment program. The present analysis has been prepared primarily on the basis of costs and benefits estimates provided by EDF, with additional assumptions by the WB team when needed.

T&D rehabilitation and strengthening investments often have multiple benefits: reduction of technical distribution losses, increased reliability (reduction of unserved energy), and allowing access expansion and in some cases reducing generation costs (by removing transmissions constraints). In order to simplify the analysis, this document focuses on the primary benefit of each investment.

Overview of components

The investments under the program are:

- New distribution feeder lines: the existing distribution network in Brazzaville is saturated resulting in very high technical distribution losses. The analysis takes into consideration the immediate reduction of technical losses with the existing level of electricity demand. This economic benefit will accrue primarily to the utility as reduced generation costs. On this basis, for investment costs estimated at US$6 million, the NPV would be US$5.9 million and the economic and financial internal rates of return would be 23 percent (the utility captures all the costs and benefits).
- Commercial loss reduction: The cost of this activity for the part supported by the Bank is US$18.0 million corresponding to the financing of new meters to be deployed for 4 years,

following the installation/replacement of about 170,000 meters by the utility (financed by the Government). The deployment of meters would inter alia allow generalized metering thereby reducing fraud, illegal resale of electricity by households whose consumption is not metered and to connect new households. The financial analysis considers the total costs of new meters (including those financed by the Government) and the expected benefits in terms of extra revenue. The expected benefits from the commercial performance plan would consist of (i) a reduction of non-technical distribution losses (currently at 40 percent) which would be reduced to 20 percent by 2020 and (ii) improvement in the collection rate (from 70 percent currently to 90 percent in 2020). The Bank estimate assumes that only 50 percent of the performance improvement objectives will be achieved. On this basis, the FIRR of this sub-component is estimated to be above 26 percent. The primary impact of the program will be to transfer revenue from electricity users to the utility which is a financial transfer. There would be an indirect economic benefit in creating incentives for more efficient energy use by consumers which otherwise would not pay for electricity. Based on the assumption that this benefit would be equivalent to 1/3 of the energy used and not paid for, the estimated EIRR of the program would be around 6 percent.

Summary of Economic and Financial Analysis - types of impact and beneficiary

	Types of impacts	*Beneficiaries*
New distribution feeder lines	Technical loss reduction	Utility
Loss reduction	Higher revenue collection	Utility

Key results

- Economic impact: On the basis of the above, the investments supported by the AF would have an economic NPV of US$14.2 million for an economic rate of return of 15.3 percent.
- Financial impact: The financial NPV would be US$19.3 million for a financial rate of return of 17.6 percent.

Summary of Economic and Financial Analysis - key results

	Invest m.	**Econ NPV**	**EIRR**	**Fin NPV**	**FIRR**
	MUSD	MUSD	%	MUSD	%
New distribution feeder lines	6.0	5.9	22.7	5.9	22.7
Loss reduction	18.0	-3.3	6.5	19.4	26.6
Overall program	**41.4**	**14.2**	**15.3**	**19.3**	**17.6**

The results reflect the weight of the loss reduction program in the total of the investment selected. It should be noted however that subsequent investments (not yet selected and therefore not

analyzed here) will target the expansion of access in urban areas especially in direction of poor households. Overall urban access is currently quite low in RoC given the country's level of GDP per capita.

Technical Analysis

Explanation:

The project does not present any unusual construction or operational challenge. The technical design of the Project is considered sound and presents no unusual construction or operational challenges. The AF has adopted the principle of a technology-neutral approach, looking for reasonable and cost-effective solutions to both providers' and customers' needs. Quality control and conformity of equipment with environmental standards will be enforced. The rehabilitation and extension of transmission and distribution networks will be based on the Electricity Master Plan designed with the assistance of an internationally recognized consulting firm. The component includes urgent investment needs of the company for the upcoming five years selected based on their potential for loss reduction and/or improved supply reliability and service quality per US$ invested. Technical parameters and estimated project costs for the transmission and distribution component have been established by EDF, the owner Engineer, and checked against actual unit costs for similar undertakings in the sub-region. The GHG emissions accounting has been carried out and the estimates sent to the Climate Change Group Policy. With the assistance of international consultants, the project will be implemented according to internationally accepted technical criteria and standards.

Regarding the demand-side management and the meters components, no particular issue arises as the activities are technically straightforward.

The main technical challenge of the Project will be the design and implementation of the new customer management system and the one related to Enterprise Resource Planning (ERP); the associated implementation risks are related to lack of capacity and inadequacy of business processes, which will be mitigated through business process reengineering and provision of substantial technical assistance and training to SNE staff to properly implement and operate the new systems. The technical and functional specifications will be defined based on the ongoing assessments conducted here again by qualified international consultants. These assessments also include detailed reviews of existing business processes of SNE and recommendations for changes in the organizational structure and process reengineering, aimed at improving efficiency of all core functions with the support of the new systems.

The equipment and technologies for implementation and operation of the project are commercially proven, have been widely used by utilities in developed and developing countries worldwide, and will be implemented according to internationally accepted technical standards and practices.

Sustainability

The Government and SNE are fully committed to the project's success and sustainability. The Government is currently engaged in the implementation of new policy measures and investment

operations that intend to: (i) reform the electricity sector; (ii) rationalize energy pricing; (iii) increase access rate; and (iv) develop its large hydro potential to foster the economic sector.

The sustainability of the Project also depends on the successful completion of the upgrading and modernization of the transmission and distribution networks, on an effective implementation of SNE's restructuring plan to improve its commercial and technical performances and on its ability to roll out a sound maintenance strategy.

SNE's weak financial situation and operational capacity are the major issues to be addressed to ensure achievement of all project outcomes. Thus, application of a cost-reflective tariff scheduled by the regulatory agency on the basis of the tariff study will improve the utility's financial performance. This will allow the Government to gradually reduce subsidies provided to the sector, especially with the expected improvement of collection and loss rates.

Lastly, the sustainability of the Project will be ensured by effective measures of risks mitigation. Likewise, Government's commitment to design and implement a medium- to long-term plan for sector recovery, fed by the results of the planned analytical and technical works and studies, will be a major factor to ensure the durability of the investments.

Social Analysis

Explanation:

The AF is expected to deliver significant social benefits by improving the living and environmental conditions of low-income communities in Brazzaville and Pointe Noire. Most of the performance indicators are related to improving the provision of electricity to the two cities. Baseline and performance indicators are available and the project is designed to avoid relocation issues as much as possible.

Environmental Analysis

Explanation:

The Environmental and Social Management Framework (ESMF) and the Resettlement Policy Framework (RPF) prepared for the original project have been updated to reflect the AF scale-up and restructuring, and they have been consulted upon. The ESMF was publicly disclosed in-country on February 28, 2014, and in the Infoshop on April 24, 2014. The RPF was publicly disclosed in the country on May 15, 2014 and in the Infoshop on May 16, 2014. ESIAs as well as associated EMPs and resettlement action plans (RAPs) will be prepared as needed, as required by the ESMF and RPF should a sub-project investment trigger the requirement. Those instruments, ESIAs, EMPs and RAPs will be prepared prior to the commencement of associated works, and will be completed prior to initiating those works; and the commencement of the civil works will be subject to World Bank's confirmation that the works may commence. The Bank also ensured that the PIU which will be in charge of the AF implementation has a specific environmental specialist. This staff is well versed in safeguard issues and has benefitted from safeguards training provided by Bank supervision missions. The PCU staff will continue to regularly monitor all safeguards requirements. The Bank's supervision missions will also continue to include environmental and social safeguards specialists.

Risk

Explanation:

The overall risk rating for the original project was high. As assessed during the MTR in July 2013, the implementation performance of the project is Satisfactory and the main risks identified during the initial Project preparation have not materialized.

The risks associated with the AF identified during project preparation are the following: (i) weak commitment of Government to utility reform process; (ii) risk of wide spread customer resistance to the tariff change and to move to billed consumption; and (iii) lack of follow-up on performance improvements/reforms. The overall risk associated with the AF is rated as substantial. The risk rating, as well as the updated mitigating measures, is detailed in the ORAF.

The Governance and Anti-corruption action plan developed by the Government will be updated to include the additional activities within three months of effectiveness and will include oversight mechanisms such as the participation of beneficiaries, development of effective communication strategy, investigation of wrongdoing, and sanctioning of those found guilty. Among other measures, at least three missions will be conducted in the first year of additional financing implementation.

Mitigation measures: In addition, close supervision, frequent procurement post-reviews, and close Bank country office involvement will be critical to help mitigate fiduciary risks, involving, to the extent possible, NGOs to improve supervision in the field. This will be possible as the Bank country offices in Kinshasa and Brazzaville have been significantly strengthened in the areas of procurement, FM, social and environmental safeguards. A mid-term assessment will be of particular importance as it will offer the opportunity to review progress made after 18 months of implementation and, if necessary, take corrective measures to better support the Government and ensure timely fulfillment of the project objectives.

Regular reviews will be carried out after effectiveness to assess progress, achievement of overall objectives, as well as the role of the different partners and to eventually reorient the Project if needed to ensure achievement of objectives.

Project costs

25. The revised financing plan and project costs by component for the AF are shown below:

Table 1: Revised financing Plan (US$ million)

Source	Original Project	Additional Financing	Total revised
Recipient	100.0	90.0	190.0
IDA	25.5	15.0	40.5
IBRD		45.0	45.0
Total	125.5	150.0	275.5

Table 2: Revised Project Costs by Component (US$ million)

	Project			Government		IBRD		IDA	
Component	Initial	AF	Total	Initial	AF	Initial	AF	Initial	AF
1. Urban Infrastructure and Services	70.50	-	70.50	57.00	-	-	-	13.50	-
2. Water Supply	45.50	-	45.50	36.70	-	-	-	8.80	-
3. Sector Reform, Commercial and Electricity Supply Systems Upgrade	3.40	145.80	149.20	2.70	87.00	-	44.10	0.70	14.70
3.3. Upgrading of the National Electricity Company (SNE) Electricity Distribution and Transmission System	*-*	*86.00*	*86.00*	*-*	*51.00*	*-*	*26.25*	*-*	*8.75*
3.4. Improving the Operational Performance of SNE in Key Business Areas	*-*	*50.00*	*50.00*	*-*	*30.00*	*-*	*15.00*	*-*	*5.00*
3.5 Institutional Strengthening and Capacity Development of SNE	*-*	*9.80*	*9.80*	*-*	*6.00*	*-*	*2.85*	*-*	*0.95*
4. Operating costs	3.60	3.40	7.00	2.90	2.40	-	0.75	0.70	0.25
5. Audits	0.90	0.80	1.70	0.70	0.60	-	0.15	0.20	0.05
6. PPA Refinancing	1.60	-	1.60	-	-	-	-	1.60	-
Total	125.50	150.00	275.50	100.00	90.00	-	45.00	25.50	15.00

Policy exceptions and project readiness

26. *Policy exceptions.* The proposed project does not require any exceptions from Bank policies. The project is ready for implementation, and key steps have already been taken, as summarized below:

- The PCU has already been established and is fully functional.
- A priority investment program of US$40 million is being prepared to address the sector's urgent needs. Works under this program are expected to be launched as soon as the project becomes effective. The priority investment program includes the construction of 14 MT

distribution feeders, the acquisition of prepaid meters, Rehabilitation/Construction of customer agencies (technical and commercial), the acquisition of equipment maintenance, purchase of vehicles and acquisition of safety, tools and IT equipment.

- A procurement plan for the first 18 months of the AF has been prepared with the PCU. A list of the main contracts ready to be launched is available.

Annex 1: Revised Framework and Project Indicators

Project Name:	CG-Add. Fin. Water, Electricity & Urban Dev. SIL (P147456)			Project Stage:	Additional Financing	Status:	DRAFT
Team Leader:	Mahine Diop	Requesting Unit:	GURDR	Created by:	Ernestina Attafuah on 22-May-2013		
Product Line:	IBRD/IDA	Responsible Unit:	GURDR	Modified by:	Ernestina Attafuah on 08-August-2014		
Country:	Congo, Republic	Approval FY:	2014				
Region:	AFRICA	Lending Instrument:	Investment Project Financing				
Parent Project ID:	P106975	Parent Project Name:	Rep. of Congo - Water, Electricity & Urban Development SIL (LEN) (P106975)				

Project Development Objectives

Original Project Development Objective - Parent:

To increase sustainable access to basic infrastructure, services and safe drinking water for the inhabitants of targeted areas in the Recipient's cities of Brazzaville and Pointe Noire.

Proposed Project Development Objective - Additional Financing (AF):

To increase access to basic infrastructure services, safe drinking water, and electricity for the inhabitants of targeted areas in the cities of Brazzaville and Pointe Noire.

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
No Change	People benefitting from	☐	Number	Value	0.00	62000.00	200000.00

	improved drainage in areas served by the project			Date	30-Mar-2010	20 May 2014	31-Dec-2015
				Comment		Data related to areas where drainage works are already rehabilitated.	
No Change	Number of people in urban areas provided with access to all-season roads within a 500 meter range under the project	☒	Number	Value	0.00	62000.00	200000.00
				Date	30-Mar-2010	20 May 2014	31-Dec-2015
				Comment		Works are ongoing. Results based only on project impact. People have already moved to rehabilitated streets.	
Revised	Number of people in urban areas provided with access to Improved Water Sources under the project	☒	Number	Value	0.00	13000	500.000.
				Date	30-Mar-2010	20 May 2014	31-Dec-2016
				Comment		Works are ongoing	Results based only on project impacts
Marked for deletion	Satisfaction of the population with the services provided	☐	Percentage	Value		89.00	75.00
				Date	30-Mar-2010	20 May 2014	31-Dec-2015
				Comment		Surveys are related to health centers and roads.	
Revised	Direct project beneficiaries	☒	Number	Value	0.00	251700.00	1400000.00
				Date	30-Mar-2010	20 May 2014	25-Dec-2019
				Comment			
				Date			

				Comment			
Revised	Female beneficiaries	☒	Percentage	Value	0.00	143000	714000.00
				Date			
				Comment			
				Date			2019
				Comment			
New	Additional people provided with access to electricity under the project by household connections- (Number)	☒	Number	Value	0.00		400,000
				Date			2019
				Comment			

Intermediate Results Indicators

Status	Indicator Name	Core	Unit of Measure		Baseline	Actual(Current)	End Target
New	Improvement of transit capacity of network distribution		MVA	Date	430		**590**
				Comment			
			Sub Type Supplemental				
No Change	Annual expenditures on	☐	Percentage	Value	0.00	3	6.00

	infrastructure maintenance in Brazzaville and Pointe Noire			Date	30-Mar-2010	20 May -2014 2014	31-Dec-2015
				Comment	% of budget	Too early to assess	% of budget
No Change	Pupils with access to improved school facilities in targeted areas.	☐	Number	Value	0.00	7200.00	13320.00
				Date	30-Mar-2010	2o-May-2014	31-Dec-2015
				Comment		Five schools have been rehabilitated in Brazzaville and Pointe Noire and transferred to the Ministry of Education. Additional classrooms have been built in these schools.	
No Change	People with access to improved health facilities in targeted areas	☐	Number	Value	0.00	67000.00	90000.00
				Date	30-Mar-2010	20-May 2014	25-Dec-2015
				Comment		Four health centers have been rehabilitated in Brazzaville and Pointe Noire and transferred to the line administration.	
				Date			
				Comment			
No Change	Assistance to MEH on budget implementation and investment	☐	Yes/No	Value	No	No	Yes
				Date	30-Mar-2010	20 May 2014	31-Dec-2015

	planning completed.			Comment		Not yet started	
No Change	Legal framework for the ARSEL has been reviewed and updated	☐	Yes/No	Value	No	No	Yes
				Date	30-Mar-2010	20 May 2014	31-Dec-2015
				Comment		Not yet started	
No Change	Tariff study has been completed.	☐	Yes/No	Value	No	No	Yes
				Date	30-Mar-2010	20-May-2014	31-Dec-2015
				Comment		Study ongoing	
No Change	Reform plan for the electricity sector has been prepared	☐	Yes/No	Value	Yes	No	Yes
				Date	30-Mar-2010	20 May 2014	31-Dec-2015
				Comment		Studies ongoing	
No Change	Timely certified accounts and financial statements.	☐	Yes/No	Value	No	No	Yes
				Date	30-Mar-2010	20 May 2014	31-Dec-2015
				Comment		the Private Operator is functional less than one year	
No Change	Submission of previous year's audit reports to clients by May 15 of each year.	☐	Yes/No	Value	No	No	Yes
				Date	30-Mar-2010	20 May 2014	31-Dec-2016
				Comment		the Private Operator is functional less than one year	
No Change	Revised SNDE HR management system in place	☐	Yes/No	Value	No	No	Yes
				Date	30-Mar-2010	20 May 2014	31-Dec-2016

	and operational			Comment		Not yet implemented. A diagnostic oh HR management was carried out and recommendations	
No Change	Collection ratio (cash income/billed revenue)	☐	Percentage	Value	47.00	47.00	75.00
				Date	31-Mar-2010	20 May 2014	31-Dec-2017
				Comment		Data expected in the first annual report of the PO.	
Revised	Connections with operating water meter.	☐	Number	Value			
				Date	30-Mar-2010	20 May 2014	31-Dec-2016
				Comment	In percentage. See breakdown for numbers.	Linked to ongoing works.	In percentage
No Change	New water legal and regulatory framework fully defined and	☐	Yes/No	Value	No	No	Yes
				Date	30-Mar-2010	20 May 2014	31-Dec-2015
				Comment		Study not yet started	
No Change	New water tariff system designed	☐	Yes/No	Value	No	No	Yes
				Date	30-Mar-2010	20 May 2014	31-Dec-2015
				Comment		Study ongoing	
No Change	Boreholes constructed under the project	☐	Number	Value	0.00	1	2.00
				Date	30-Mar-2010	20 May 2014	31-Dec-2014
				Comment		Works not yet completed. Results based on project	

						achievement.	
No Change	Length of secondary and tertiary water supply network built in each city	☐	Kilometers	Value		98	204
				Date	30-Mar-2010	20 May 2014	31-Dec-2014
				Comment		Works not yet completed. Results based on project achievement	
No Change	Brazzaville	☐	Kilometers	Value		60	172
			Sub Type	Date	30-Mar-2010	20 May 2014	31-Dec-2014
			Breakdown	Comment			
No Change	Pointe-Noire	☐	Kilometers	Value		38	32
			Sub Type	Date	30-Mar-2010	20 May 2014	31-Dec-2014
			Breakdown	Comment			
No Change	Length of primary water supply network built in Pointe Noire	☐	Kilometers	Value	0.00	0.00	8
				Date	30-Mar-2010	20 May 2014	31-Dec-2014
				Comment		Works not yet completed. Results based on project achievement	
Revised	New piped household water connections that are resulting from the project intervention	☒	Number	Value	0.00	300000	31-Dec-2015
				Date	30-Mar-2010	20 May 2014	31-Dec-2015
				Comment		Works not yet completed. Results based on project achievement	
Revised	Improved community water	☒	Number	Value	0.00	0.00	89

	points constructed or rehabilitated under the project			Date	30-Mar-2010	20 May 2014	31-Dec-2015
				Comment		Works not yet completed. Results based on project achievement	
No Change	Annual increase in towns' own resources (municipal taxes and return on municipal assets)	☐	Percentage	Value		15.00	20.00
				Date	30-Mar-2010	20 May 2014	31-Dec-2015
				Comment	Not applicable	Pointe Noire results	
No Change	Surface area of eroded areas treated	☐	Square Meter(m2)	Value	0.00	6000.00	6000.00
				Date	30-Mar-2010	20 May 2014	31-Dec-2015
				Comment		Target achieved.	
No Change	Marketplaces renovated that are fully functioning	☐	Number	Value	0.00	0.00	4.00
				Date	30-Mar-2010	20 May 2014	31-Dec-2016
				Comment		Works not yet completed. Results based on project achievement	
No Change	Health facilities constructed, renovated, and/or equipped (number)	☒	Number	Value	0.00	4.00	9
				Date	30-Mar-2010	20 May 2014	31-Dec-2015
				Comment		Rehabilitation of 4 health centers ongoing	
No Change	Roads rehabilitated, Non-rural	☒	Kilometers	Value	0.00	16	36
				Date	30-Mar-2010	20-May-2014	31-Dec-2015
				Comment		Works not yet	

						completed. Works for 20 km of urban roads ongoing. Results based on project achievement	
No Change	Drainage network constructed / rehabilitated	☐	Kilometers	Value	0.00	16	54
				Date	30-Mar-2010	20-May-2014	31-Dec-2015
				Comment		Works not yet completed. Works for 20 km of urban roads ongoing Results based on project achievement	
New	Total distribution losses per year in the project area – (percentage)	☒	%	Value	54%		35%
				Date			2019
				Comment		% losses	
New	Collection rate per year in the project area – (percentage)	☒	%	Value	70%		90%
				Date			2019
				Comment		% collection rate	
New	Operationalization of the Planning & Study Unit in SNE	☒	Yes/No	Value			yes
				Comment			
New	Transmission lines constructed		Kilometers	Value	0		600

	or rehabilitated under the project						
New	Number of meters installed under the project		Number	Value	0		100,000

Annex 2

Operational Risk Assessment Framework (ORAF)

Congo, Republic: CG-Add. Fin. Water, Electricity & Urban Dev. SIL (P147456)

Risks

<table>
<tr><td>Stakeholder Risk</td><td>Rating</td><td colspan="5">Moderate</td></tr>
<tr><td rowspan="2">Risk Description:

Investments in the Electricity sector are always carried out by the Ministry of Energy and Hydraulics and the Délégation des Grands Travaux (DGGT) without SNE being associated with their design and implementation. Absence of commitment to the AF could be observed at the level of SNE;

Lack of coordination between the various stakeholders intervening in the sector;

Lack of adhesion by SNE staff to the services contract signed between the MEH and EDF (Electricité de France) could negatively affect the outcomes of the AF</td><td colspan="6">Risk Management:

SNE will be fully involved in the implementation of the AF. A dedicated unit is set up within SNE to work closely with the Project Coordination Unit;
An implementation Agreement will be signed between the Ministry of Energy and Hydraulics , SNE and the PCU to ensure that investments are properly carried out
A coordination mechanism will be created to ensure full planning and coordination of activities;
A communication campaign will be developed by the AF to foster SNE staff to the ongoing reforms in the sector</td></tr>
<tr><td>Resp: Both</td><td>Stage: Implementation</td><td>Recurrent:</td><td>Due Date:</td><td>Frequency:</td><td>Status: In Progress</td></tr>
<tr><td colspan="7">Implementing Agency (IA) Risks (including Fiduciary Risks)</td></tr>
<tr><td>Capacity</td><td>Rating</td><td colspan="5">High</td></tr>
<tr><td>Risk Description:

PEEDU, the implementation agent has no Electricity specialist in its unit. This may delay the implementation of the AF;</td><td colspan="6">Risk Management:

During the preparation of the AF an Energy Specialist will be hired to especially follow up on activities funded under the AF
(i) To reduce delays and ensure proper financial reporting system, a computerized accounting system is</td></tr>
</table>

PEEDU has qualified staff in specific areas of the project such as disbursements, accounting and budgeting. However, the increase of activities may lead to delays in submission of the project accounts and FMR. Lack of capacity of SNE to supervise projects activities	in place and is being used (ii) recruitment of additional FM staff There are training activities financed under the capacity building sub-component in the AF this will ensure that all levels of stakeholders staff are well versed in the project implementation details. They will be trained in processes and will have a clear understanding of their role before the project is launched. Close supervision of the project will take place by the team; additionally the TTL based in Brazzaville will support the implementation process on the ground and will be readily available to provide solutions to implementation gaps. AFD is also financing various trainings through the implementation of the EDF's TA contract. These trainings will focus mainly on network studies, operation, management and maintenance and also provide skills for works supervision/monitoring.						
	Resp: Client	Stage: Implementation	Recurrent:	Due Date:	Frequency:	Status:	In Progress
Governance	Rating	Moderate					
Risk Description: ROC is gradually emerging from a decade of mismanagement of public finances, but its institutions are still weak. Structural reforms have been launched in the areas of economic governance, public expenditure management and transparency, but it will take a long time for these reforms to yield substantial improvement in public funds management. The fiduciary environment is fragile. Nontransparent Procurement processes and delays in signing contracts leading to delays, high cost, and poor quality of works.	**Risk Management:** Current reforms are helping to strengthen capacity, though tangible impacts may take some time to materialize. Recent progress has been made by the Government on this specific HIPC trigger and support is being provided by the Bank-financed Capacity Building for Transparency and Governance Project. Furthermore, the creation of oversight structures to address corruption, both in government (*Commission Nationale de la Lutte contre la Corruption*) and outside (*Observatoire Lutte contre la Corruption*) has given an important impulse to improving governance systems. As part of preparation of the AF, the Government will update the Governance and Anti-corruption plan developed under the original project. This plan will continue to be implemented and closely monitored under the AF. The bulk of procurement would be managed by the PCU to ensure that responsibility for implementation can be placed unequivocally. Posting of the procurement plan in local newspapers in addition to dgMarket, as well as an anti-corruption hotline, will contribute to strengthening the governance framework in which the project will be implemented. Procurement training on Bank guidelines will be provided to PCU staff. Progress reports on procurement will be published regularly highlighting bottlenecks and regular interaction with respective ministries in charge of approving and signing evaluation reports and contracts. Regular post-procurement reviews will be carried out throughout implementation.						
	Resp: Client	Stage: Implementation	Recurrent:	Due Date:	Frequency:	Status:	In Progress

Project Risks							
Design	Rating	Moderate					
Risk Description: Although the design of the project is not complex, it needs to involve several actors. The dialogue between these actors can be a challenge.	**Risk Management:** Keep the design of the project as simple as possible. Ensure good communication about the project and a strong involvement of all stakeholders during project preparation. Continued interaction with donors during design and implementation						
	Resp: Both	Stage: Implementation	Recurrent:	Due Date:	Frequency:	Status: In Progress	
Social and Environmental	Rating	Substantial					
Risk Description: Implementation of infrastructure works can have negative impacts and lead to displacements. Further, institutional capacities remain weak for ensuring a sound supervision of safeguards, especially in MEH and SNE.	**Risk Management:** Environmental and Social Management Framework (ESMF) and Resettlement Policy Framework (RPF) were updated to guide the management of environmental and social safeguards risks. ESIAs (and any associated EMP) and resettlement plans will be prepared in line with the ESMF and the RPF requirements; they will be prepared as part of the annual work plan agreed with the Bank and subject to the Bank's approval. The actions required under the approved EMP/RAP to be taken prior to commencement of the associated works will be completed prior to initiating the works, and commencement of the works will be subject to the Bank's confirmation that the works may commence. will be closely monitored by the Bank Safeguards Specialists. Mitigation measures to address the risks include: (a) training of MEH, and SNE staff in environmental and social issues, including Bank's safeguards policies; (b) establishment of appropriate work programs for environmental and social mitigation measures; (c) proper implementation of project safeguards instruments; (d) close supervision and monitoring of the activities by the Bank Safeguards Specialist						
	Resp: Client	Stage: Implementation	Recurrent:	Due Date:	Frequency:	Status: In Progress	
Program and Donor	Rating	Moderate					
Risk Description: The EU, AfDB, AFD, China, India and private operators such as the oil company ENI Congo, are among technical and	**Risk Management:** Ensure close contact with other donors, Continued communication effort to clarify what is financed by the AF versus what is financed by other agencies.						

financial partners involved in the segments of generation, transmission and distribution or rural electrification. Delays in their financing could hinder impact of the AF. There is a reputational risk to the WB, which could be held accountable for the whole government electricity program although financing only a part of it.	Resp: Both	Stage: Implementation	Recurrent:	Due Date:	Frequency:	Status: In Progress
Delivery Monitoring and Sustainability	Rating	Moderate				
Risk Description: Monitoring and Evaluation are not being used effectively in the context of ROC; furthermore, the National Statistic System is weak and doesn't produce reliable data.	**Risk Management:** Monitoring and Evaluation (M&E) is a key component of this project; data are critical in order to inform the Government, the World Bank and other development partners about the results and impacts of the various sub-components. More specifically, the project will finance: (i) annual process evaluation; (ii) spot checks; (iii) one full impact evaluation, and (iv) annual independent audits of the system. In addition, there are annually community client satisfaction surveys which will inform the public and the government on client satisfaction.					
	Resp: Client	Stage: Implementation	Recurrent:	Due Date:	Frequency:	Status: In Progress

Overall Risk

Overall Implementation Risk: Substantial

Risk Description:

The overall risk rating is Substantial. Given the above discussion of the key risks and issues the team is cautious about the overall risk, but is optimistic that the various mitigation measures explained in the ORAF coupled with the Government's commitment will help to avert such risks during implementation.

Annex 3. Description of New Activities

Component 3: Sector Reform, Commercial and Electricity Supply Systems Upgrade

Sub-component 3.3. Upgrading of the National Electricity Company (SNE) Electricity Distribution and Transmission System (US$86 million)

1. SNE, with support from Government, had already undertaken a program to reinforce the network; however due to financial constraints and lack of sound planning and coordination, the results did not meet the expected objectives. In its present state, the distribution networks in Brazzaville and Pointe Noire cannot stand the level of transit required to supply the existing customers, not to mention those in need and not yet connected, paradoxically when generation is available.

2. With an average growth rate of approximately 15 percent per year nowadays, the electricity demand is expected to double between now and the completion of the project in five years: massive investments are then required in order to meet with the current increasing demand. Most of the major transmission lines, essential to the supply of both cities in electricity, in particular Brazzaville, need to be retrofitted or upgraded to improve operation and management of the power system. This will increase the transit capacity, provide more security for the supply, improve power flow and reduce technical losses. New substations and MV lines will be constructed in Brazzaville and Pointe Noire to increase the transit capacity of the networks and also improve the quality of service and reduce technical and non-technical losses.

3. The project will also remove the existing old 6.6 kV network and replace it with MV lines more in phase with the status of development of the cities; MV lines allow more transit capacity and longer feeders. This will also provide an opportunity to reduce the number of voltage levels in the network, improve reliability and reduce technical losses. In order to strengthen the network structure and provide more reliability to the electricity supply, a HV loop is also necessary around Brazzaville to basically bring the transmission grid near the consumption zones. Moreover, loops are essential as they allow better management of the grid and therefore more reliability and an improved quality of service. Indeed, in case of a failure of the loop or a plant, the time and number of customers affected are minimized. The reason is that any substation located on the path of the loop may be fed from any production source in the system. Several schemes have been identified for the 150 kV loop, and feasibility studies are planned to define the best route.

4. The bulk of the proposed activities would focus on improving the electricity distribution network and service delivery in Brazzaville and Pointe Noire, where SNE experiences the higher losses, and where there is the most significant increase in demand for electricity. An integrated approach will be adopted in order to address distribution and commercial challenges in the two cities.

5. Sub-component 3.3 focuses on technical investments, and supports investments in infrastructure to improve the operational efficiency of the distribution system and remove electricity supply bottlenecks within the network. This improvement will translate into the system reliability by reducing system interruptions and outage times as well as lowering technical and commercial losses.

   The sub-component will:

   (i) Rehabilitate segments of the transmission network; (ii) Reinforce and complement the sub-transmission network improvements undertaken by Government to develop a sound backbone for electricity supply, including the construction of an electric loop in Brazzaville; (iii) Upgrade and extend the distribution network to increase and fully reestablish its overall transit capacity for a better end user supply, voltage quality and to provide access to new customers; (iv) Implement a simple Demand Side Management (DSM) program through the distribution of Compact Fluorescent Lamps (CFL) to save energy and help customers manage bills - which are likely to increase with the termination of the lump sum billing system.

6. Some projects are already defined in detail with available pre-feasibility studies but others will require further analysis in particular through the Electricity Master Plan being prepared by EDF (expected in December 2014). In particular, a detailed analysis is necessary (i) to define the main characteristics of the planned electrical loop in Brazzaville, the capacities and designs of the substations in both cities, and (ii) to assess the state of the transmission lines and networks. However, the main issue faced by the country electric system which relates to the network transit capacity, and is the driver for this project in the first place, is well defined and being addressed by the erection of new feeders in Brazzaville and Pointe Noire. All remaining feasibility studies will be available by 2015, but works related to the most acute issues will be implemented.

7. Envisaged investments to be financed under sub-component 3.3 are listed in the table below:

Investments	Needs (US$M)	WB (US$M)
Construction of 14 Medium Voltage feeders in Brazzaville and Pointe Noire	6.0	6.0
Procurement of transmission/distribution spare parts and maintenance equipment	5.0	5.0
Procurement of Compact Fluorescent Lamps (CFLs)	2.0	2.0
Erection of a HV loop around Brazzaville	10.0	17.0
Rehabilitation and construction of Substations in Brazzaville and Pointe Noire	90.0	40.0
LV network upgrade and expansion	10.0	8.0
Works Supervision		8.0
Upgrading of the southern network 220KV substations and the National Control Center	24.0	0.0

Upgrading of the 220 kV Moukoukoulou-Mindouli transmission line & Substations	11.0	0.0
Total	**182.0**	**86.0**

8. *Sub-component 3.4. Improving the Operational Performance of SNE in Key Business Areas, with specific emphasis on sustainable loss reduction.(US$50 million)*

Activity 3.4.1: Incorporation of management information systems (MIS) to enable efficient, transparent and accountable performance in key business areas (US$10 million). This sub-component will provide SNE with management information tools to improve quality of services provided to its customers (electricity supply and commercial matters), and to enhance overall efficiency, transparency and accountability of its performance in all business areas. To that end, the component will finance supply, installation and commissioning of the MISs and training of SNE staff to apply them. The MISs will be set-up company-wide and will cover three key areas of SNE's operations: commercial function, corporate management, and power network planning and operations. The incorporation of the MISs will be accompanied by reengineering of relevant business processes of SNE in the targeted key areas, aimed to maximize the use of functionalities provided by the new management tools, make the company operations more customer-oriented and efficient, and their execution transparent and accountable, both internally and to external stakeholders. For that purpose, the scope of the MISs will include:

(a) *Commercial Management System (CMS)* – The CMS will be available in all existing SNE customer service centers , as well as any other centers that the company may create in the future, and will allow: (i) integrated management of the commercial cycle (metering, reading, billing, collection, and receivables accounting); (ii) on-line management of a customer database; (iii) management of customer service orders, including registration of all activities performed for each client (e.g. service disconnection due to debts, reconnection, meter replacement, new connection, etc.); (iv) execution and monitoring of SNE's energy balance, including evolution of losses. Incorporation of the new CMS will also involve building, maintaining, and regularly updating a reliable customer database. The CMS will provide an integrated single platform for commercial processes and activities, and fully eliminate the unaccountable manual execution of key process (e.g. meter reading, transfer of data for billing, etc.). As a result, the CMS will help to: (i) minimize the risk of mistakes and intentional wrongdoing (e.g. enable detection of billing errors and fraudulent behavior), (ii) maximize efficiency and transparency of key processes and activities; (iii) ensure accountability of staff by allowing full monitoring and supervision of operations; and (iv) facilitate quick and efficient response to clients' requests (e.g. general and account information requests, contracting, service requests, claims, etc.).

(b) *Incidents Recording and Management System (IRMS)* – The IRMS (also known as Outage Management System) will be integrated with the CMS, and support better network operations, in particular aimed at ensuring good quality in power supply to customers. Specifically, the IRMS will allow SNE to better respond to client claims and complaints related to outages and other anomalies in electricity supply, and ensure better

quality of power supply by automating the detection of distribution faults. Setting up of the IRMS will be accompanied by the establishment of a network assets and supply database, which will include data on medium and low voltage networks and on each customer's connection to the corresponding transformer station. The system will allow a centralized, reliable, continued (24 hours a day, 7 days a week), transparent and accountable management of customers' claims. It will enable centralizing reception and collection of all existing information on each claim, linking claims with network installations and grouping complains by affected area, ensuring targeted dispatch of field workers to the incident area, and keeping customers updated on the status of each incident, including the estimated repair time. Accordingly, the IRMS will help to minimize the response time between reception of a customer claim and restoration of regular supply, that is, the duration of each interruption, which is a critical dimension of power supply quality. The IRMS will also allow compiling statistics of outages (by hourly interval, duration, affected people), and therefore identifying equipment requiring specific repair, maintenance or replacement due to high rate of failure. This will enable effective monitoring and controlling of the overall quality in power supply.

(c) *Implementing a Corporate Resource Management System (CRMS)* – The CRMS, usually identified as Enterprise Resource Planning (ERP) system, is a non-utility specific information tool that will provide support for efficient and transparent execution of processes and activities related to the following corporate functions: accounting; asset management; financial management (e.g. budget, treasury, receivables, payments); human resources (e.g. administration, payroll, organizational structure, occupational health and safety, training); procurement and logistics (e.g. warehouses, etc.); project management; business planning and intelligence; and information management. The CRMS will complement the CMS and IRMS by integrating the management of all corporate processes and resources of SNE under a single technological platform that eliminates erratic processes and extensive manual entry. The CRMS will help optimize management of corporate resources and, at the same time, maximize transparency and enhance corporate governance in SNE.

(d) *Implementing a Geographic Information system (GIS)* – The GIS will make it possible to create and keep permanently updated reliable customers and electricity network assets databases, which are critical to enable proper operation of the CMS and IRMS (the best systems will be worthless if they process unreliable information).

Activity 3.4.2: Implementation of a Revenue Protection Program (RPP) focused initially on large consumers, supported by "smart metering" (Advanced Metering Infrastructure (AMI)) (US$5 million).

A revenue protection program is an initiative aimed at reducing the non-technical losses (unmetered consumption) in electricity supply to acceptable values on a permanent manner, which should be a permanent objective of any service utility. Loss reduction is an initial achievement of any RPP when starting losses are high, but sustainability of that reduction is the key objective to be achieved. The driver for the design and implementation of an RPP is to ensure that every unit (kWh of electricity) consumed is metered and billed on a permanent basis. This can be initially achieved in the "high value" segment of the market served by the

utility formed by its large customers. The structure of the market served by electricity utilities in general shows the "ABC or Pareto effect": less than 5 percent of customers (large industrial, commercial and residential) represent more than 50 percent of current sales. Thus, around half of the total revenues of the utility can be protected on a permanent basis by managing less than 5 percent of the customers. When total losses are high, a significant percentage usually occurs in the large customers segment.

The conceptual approach of an RPP is: systematic recording and monitoring consumption of large customers using remote ("smart") metering, and adoption of consistent corrective action (if needed) make possible to achieve full metering and billing of consumption on a permanent basis. RPP uses AMI ("smart metering"), but it is not a "technocratic" development. It is a very powerful tool for good management of sales to target customers. Organizational arrangements and operational procedures must be adopted by the utility to actually monitor consumption of targeted users in a systematic manner, and take consistent corrective action if needed. In particular, a "Metering Control Center" (MCC) must be implemented to: (i) inspect customers' premises to ensure good condition of metering equipment; (ii) monitor consumption on a systematic manner; (iii) execute corrective field action (if needed) to ensure full metering and billing of consumption. MCC staff should be young engineers (no prior experience is necessary), with strong technical ability and high ethics. Staff must be trained in the use of IT applications supporting job functions, such as software applications Meter Data Management (MDM) specifically designed for systematic consumption recording and monitoring (not for billing purposes). Periodic rotation between staff operating the MDM and carrying out field inspections based on analysis of metering data is advisable. Information provided by the MDM should be transparently available companywide to enable audits and other controls

Activity 3.4.3: Meters (US$20 million): The project will procure 100,000 meters over its 5 year implementation period to avoid any situation where some of the customers do not have meters and are billed on a lump sum basis, and also to equip any new customer. Among these meters, around 30,000 prepaid meters will be purchased and deployed in certain areas in a well-identified type of customer; this type of meter is certainly an advantage both for the company in terms of cash and recovery, and for customers interested in a monitored management of their consumption. The lessons from this experience of using prepaid meters within the SNE will be used for the implementation of this sub-project. A detailed technical document for this sub-project has been prepared and is available for use.

Activity 3.4.4: Rehabilitation/Construction of customer agencies (technical and commercial (US$5 million). One of the major difficulties SNE experiences is the poor conditions and insufficient number of its infrastructures, and their inadequacy to serve customers in daily operations. In addition business transactions and technical operations are often conducted separately. This sub-project is expected to provide quick entry solutions to these dysfunctions; Technical documents will be prepared in a timely manner to meet the requirements of the bidding process.

Activity 3.4.5: Provision of subsidized/low cost connections (US$10 million): Connection subscriptions process at SNE is cumbersome and the cost is prohibitive for a low-income

household. Any new connection requested by a customer involves long delays due to the study period, the time taken for the quotation following the determination in the customer premises of the connection technical specification including the subscribed level of power. The prospective customer must pay the study fees, buy himself the connection equipment and advance a deposit on future electricity consumption. The high costs of these discourages some consumers willing to duly subscribe and fraudulent practices therefore become attractive to them; some who had already begun the normal subscription process are later found illegally connected to the network. The project will subsidize the execution of 50,000 economic and social connections to improve the living conditions of the low income household, restore the distribution network and increase the electricity access rate. Targeted areas and households in Brazzaville and Pointe Noire will be selected according to a set of specific criteria. These works will be executed in parallel with those related to network extension and connections will intervene once the network has been restored in order not to amplify the current distress situation of the network.

9. *Sub-component 3.5: Institutional Strengthening and Capacity Development of SNE (US$9.80 million)*

Activity 3.5.1: Institutional Strengthening (US$2 million)

Planning and Study Department. Over the years, the utility has lost its engineering capacity in terms of Distribution network planning and design, works supervision and monitoring, among others. Medium Voltage (MV) and Low Voltage (LV) networks are designed and built without a sound planning resulting in uncoordinated investments, oversized or overload electrical infrastructure. New entities responsible for planning and studies have recently been created within the new organization chart and need further empowerment. The project will finance any other specific needs necessary for these entities to ramp up and gradually play their roles. The modus operandi includes learning by doing through the implementation of this project and tailored training, as well as financing up-to-date engineering equipment and software.

Maintenance. The main objective of this component is to improve the performance and the governance of the SNE to implement sound operations and maintenance conditions of the goods, works and services financed by the project. This will grant a standard duration of them as per the state of the art rules. There is a lack of maintenance culture and strategy within the SNE: the utility practice is only based on breakdown maintenance and reparations are undertaken to the extent of spare parts or funds availability. The component will support SNE efforts to implement a comprehensive maintenance system, based in a yearly program associated to a budget that will take in account both types of maintenance (preventive and corrective) to grant a good operation of the goods financed by the project.

Activity.3.5.2: Training (US$3 million): SNE recently completed a training policy project and a training plan for the period 2013 to 2015, covering all the areas of the company: generation, transmission, distribution, commercialization, communication, administration, planning, etc. It is based in three strategic axes: (i) reinforcement of technical abilities within

basic electrical functions, (ii) managerial capacity building and (iii) a recycling process of SNE personnel aiming to adapt to new technologies and functions. The objective of the project is not to provide for the financing of the entire training plan, but to update it as far as possible because of SNE's new organization chart and finance selected components necessary to reach the set objectives and targets related to commercial management, planning and studies and maintenance. The component will also focus on the improvement of SNE's capacity in projects management, in particular to become familiar with the World Bank Group procedures. Specific trainings on procurement, environmental and social safeguards and results monitoring will be provided to selected staffs and management as needed. The component will also finance participation of SNE agents to specific and pertinent workshop and seminars.

Activity 3.5.3: Logistics and office equipment (US$2 million): The project will finance the purchase of vehicles and equipment mainly for technical and commercial activities improvement, including rates of collection and commercial losses improvement. The utility is in urgent need of some basic office equipment from PCs to printers: these needs are going to be satisfied as soon as the project is effective.

Activity 3.5.4: Studies and consultancies (US$2.8 million): This sub-component finances studies, consultancy services and software to help the Government and SNE develop medium and long term strategies for the energy sector and to provide SNE with the modern and efficient tools essential for utility management.

(i) Diversification**:** this sub-component will finance technical assistance activities designed to facilitate analytical work necessary to define the sector's diversification strategy. The following studies will, in particular, be supported under this sub-component:
   a) Support to the development of new IPPs: the country has already developed knowledge and experience on IPPs; the project will provide for (i) legal support; (ii) expert technical advice, (iii) social and environmental studies, etc. The subcomponent will also be available to solve any pending or new issue with existing IPPs.
   b) *Integration of renewable energy in the energy mix.* This activity will help to design and will support a strategy to deal with the renewable energy share in the generation mix.

(ii) Energy sector governance and private sector participation: this sub-component aims to assist the sector for :
   a) *Definition, implementation and audit of a performance contract:* Once the main and critical technical issues are solved after the first years of the project, a performance contract will be envisaged between the Government and SNE for the sake of efficiency, transparency and accountability. This performance contract will be audited yearly in order to assess both parties' commitments.
   b) *Prospective/strategic studies on medium to long term private sector participation:* this sub-component will assist the Government in its strategy for private sector participation in the energy sector.

(iii) Implementations of recommendations from the ongoing tariff study, financial model, standardization and SNE financial restructuring

a) *Tariff study:* The aim of this subcomponent is to assist the Government in the implementation of the recommendations and actions of the ongoing tariff study.

b) *SNE financial restructuring:* This activity will support any study or action needed for the financial restructuring of SNE and will address issues related to investments granted by Government and public entities billing analysis and compensation

c) *Financial model:* the project will assist SNE in acquiring sound financial model software along with the required training, and ensure that it is implemented and fluently used as a decision tool.

d) *Standards:* the purpose is to design specific standards for SNE based on the set of voltage levels, demand pattern, existing and new more efficient equipment in order to reach technical standard bidding documents and improve the utility procurement strategy and mechanism.

Envisaged investments to be financed under Component 3 are listed in the table below:

Institutional Strengthening and Capacity Development of SNE	**WB (US$M)**
Institutional Strengthening	2.00
Training	3.00
Logistics and office equipment	2.00
Studies and consultancies	2.80
Total	**9.80**

Annex 4: Estimate of Project Costs (all sources of funds)

Activity No.	Description	Cost (US$ million)
3.3. Upgrading of the National Electricity Company (SNE) Electricity Distribution and Transmission System - (US$86 m)		
3.3.1	Construction of 14 MV feeders in Brazzaville and Pointe Noire	6.00
3.3.2	Procurement of spare parts and maintenance equipment	5.00
3.3.3	Procurement of Compact Fluorescent Lamps (CFLs)	2.00
3.3.4	Erection of a HV loop around Brazzaville	17.00
3.3.5	Rehabilitation and construction of Substations in Brazzaville and Pointe Noire	40.00
3.3.6	LV network expansion	8.00
3.3.7	Works Supervision	8.00
3.4 Improving the Operational Performance of SNE in Key Business Areas - (US$50m)		
3.4.1	Incorporation of management information systems (MIS)	10.00
3.4.2	Implementation of a Revenue Protection Program (RPP) supported by an AMI	5.00
3.4.3	Procurement of Meters (Electronic postpaid, prepaid, Split-Type Pre-paid)	20.00
3.4.4	Construction of six (6) Customer Service Centers in Brazzaville and Pointe Noire	5.00
3.4.5	Provision of subsidized/low cost connections	10.00
3.5 Institutional Strengthening and Capacity Development of SNE - (US$9.80m)		
3.5.1	Institutional Strengthening	2.00
3.5.2	Training	3.00
3.5.3	Logistics and office equipment	2.00
3.5.4	Studies and consultancies	2.80
	Overall Total	**145.80**

NB: Physical and Funding Contingencies: The total cost of all projects under the three components is US$150 million. 10 percent physical and price contingencies of US$15.0 million is included and embedded in project costs.

Annex 5: Institutional and Implementation Arrangements

1. Given the need for rapid results on the ground and the satisfactory results of the arrangements which are already in place for the original Project, the AF will be implemented through the same mechanism. The current Project Coordination Unit will ensure effective coordination and implementation of project activities. Overall guidance for project coordination and operations will be provided by a steering committee chaired by a representative of the Ministry of Planning. Details on the operating procedures are spelled out in the Project Implementation Manual (PIM). With respect to the electricity sector under the AF, SNE will have an implementation agreement with the Government with similar terms to the one between SNDE (the Water utility) and the Government - under the Water Supply Component of the original project. The agreement will specify that investments under the new activities which fall under the responsibility of the Government (as owner of the network), will be implemented by the PCU, and SNE will participate in the procurement process and implementation of the works, by providing the PCU with its technical views on the works. SNE will benefit from this participation by gaining a better understanding of the investments. In this regard, a special unit has been set up within SNE including staff dedicated to the implementation of the additional financing activities.

   - The PCU will remain the Bank's main counterpart and focal point for Project implementation. It will be responsible for: (i) overall implementation; (ii) coordination with technical ministries and other relevant entities for the successful implementation of all components; (iii) management of contracts awarded under the project; (iv) financial management; (v) reporting to the Bank; and (vi) management of a proactive communication campaign. The PCU has satisfactorily handled similar responsibilities under the initial Project.

   - *The Steering committee* (SC): (i) oversees the PCU activities, with a focus on effectiveness and transparency; (ii) provides overall guidance as may be needed; and (iii) facilitates the coordination of the various public institutions involved in the Project. The SC will continue playing this role for the AF.

   - *Selected technical entities* will be involved in the implementation of the Project. The Ministry of Energy and Hydraulic will remain involved for the Additional financing for electricity investments through DGE (*Direction Générale de l'Electricité*).

   - *Two mid-term reviews* will be carried out, at intervals of 18 months, the first one with the objective to firm up the baseline and the targets.

Closing date

2. The activities financed under the AF are expected to be fully implemented by the end of FY20.

Procurement arrangements

3. Priority will be given to ensuring adequate transparency of the procurement process, even if it causes delays. Procurement methods and arrangements used under the initial project will be used.

4. **Procurement for the AF will be carried out in accordance with the World Bank's Guidelines**, "Guidelines: Procurement under IBRD Loans and IDA Credits" dated January 2011 (Procurement Guidelines); and "Guidelines: Selection and Employment of Consultants by World Bank Borrowers" dated January 2011 (Consultant Guidelines) and the provision stipulated in the Financing Agreement. "Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA and Grants" dated October 15, 2006 (the Anti-Corruption Guidelines) shall apply to the project.

5. Since the Bank has found the national procurement system acceptable, it may be authorized to use it for all contracts for goods and services (other than consultants' services) under NCB procurement method subject to modification of clauses or practices that should not be partially or entirely applicable to a World Bank funded operation. This application refers to the decree itself, the texts of application, the related standard bid documents and national institutions assigned control and regulation function. The national competitive bidding procedures currently in force in the Republic of Congo deviate slightly from the World Bank Procurement Guidelines NCB procedures for procurement of Goods and services (other than consultants services). If the Government modifies the procurement code itself or one or more texts of application that includes the SBD after the agreement on the clauses to be modified or to be neutralized, the Bank has the right to review the said modifications so as to check to what extent they are in compliance with Bank procurement rules and procedures. After its review, the Bank will simply notify the Government its recommendations on the clauses to modify or to neutralize. This exercise will be done any time the Government modifies the procurement code or the texts of application.

Disbursement arrangements

6. The project will continue to use the transaction-based disbursement procedures. The existing disbursement arrangements will also be used for the AF. One new Designated Account will be opened at a commercial bank acceptable to the Bank and will receive an initial advance upon project effectiveness. The Designated Account will co-mingle IDA and IBRD financing to jointly co-finance eligible expenditure under the Project. Counterpart funds will be channeled to a separate Bank Account and will also jointly co-finance eligible expenditure under the project. In addition to advances to the designated account, other disbursement methods will be available for use under the project, such as direct payment, reimbursement, and special commitment methods. Further instructions on the withdrawal of proceeds will be outlined in the disbursement letter. As is the case under the initial Project, the AF will finance 40 percent of all expenditures, inclusive of taxes and duties. The total amount of the AF is expected to be disbursed by FY19.

7. The following table specifies the categories of Eligible Expenditures that may be financed out of the proceeds of the Financing ("Category"), the allocations of the amounts of the Financing to each Category, and the percentage of expenditures to be financed for Eligible Expenditures in each Category:

Category	**Amount of the Credit Allocated (expressed in SDR)**	**Percentage of Expenditures to be Financed (inclusive of Taxes)**
(1) Goods, works, non-consulting services, consultants' services, Training and Operating Costs for Parts C.3, C.4 and C.5 of the Project	9,800,000.00	10%

Category	**Amount of the Loan Allocated (expressed in USD)**	**Percentage of Expenditures to be financed (inclusive of Taxes)**
(1) Goods, works, non-consulting services, consultants' services, Training and Operating Costs for Parts C.3, C.4 and C.5 of the Project	44,887,500	30%
(2) Front-end Fee	112,500	Amount payable pursuant to Section 2.03 of this Agreement in accordance with Section 2.07 (b) of the General Conditions
(3) Interest Rate Cap or Interest Rate Collar premium	0	Amount due pursuant to Section 2.07(c) of this Agreement
TOTAL AMOUNT	45,000,000	

Financial management, reporting, and auditing

8. **Financial management**: All arrangements made for the original Project are confirmed. The PCU will stay responsible for financial management. The financial management system and performance of the PCU are acceptable to IDA. Payment modalities will be similar to those

currently used under the original Project for similar activities. They are already described in detail in the operations manual. The PCU will ensure that internal and external audit arrangements made under the original Project will stay valid and applicable for the AF. No additional staffing is required for the AF.

9. As part of the original project, a financial management assessment of the capacity of the fiduciary unit was carried out during the last preparation mission conducted in April 2014. The results showed that the unit has adequate financial management arrangements that satisfy the World Bank's minimum requirements under OP/BP10.00. The overall project financial management residual risk was assessed to be substantial due to the Country context, otherwise the fiduciary risk at the project level and the overall control risks are modest.

10. The fiduciary unit has good experience in implementing IDA projects and is currently the implementing agency of the PCU. Unaudited Interim Financial Reports (IFRs) for this project are submitted on time, reviewed and found to be satisfactory. The external auditors issued clean audit reports for the last few years of implementation and the management letter did not raise any major issues; there are no overdue audit reports and interim financial reports from this entity. The project maintains proper books of accounts which include a cash book, ledgers, journal vouchers and a contract register through the suitable Project software "TOMPRO".

11. It is expected that a separate bank account will be opened at a reliable commercial bank for this AF. The fiduciary arrangement which will be used for the management of this bank account will be the same as for the PCU designated account.

12. The following financial management action plan will have to be implemented in order to strengthen the existing system.

	Action	**Date due by**	**Responsible**
1	Selection of project internal auditor	Three months after effectiveness	PCU
2	Selection of project 'external auditor	Six months after effectiveness	PCU
3	Update the existing accounting and FM manual	One month after project effectiveness	PCU
4	Upgrade the existing project software namely TOMPRO.	Three months after Effectiveness	PCU

13. **Reporting**: The PCU will submit quarterly Financial Monitoring Reports (FMRs) within 45 days following the first day of each calendar quarter after effectiveness. The formats and the content of the FMRs and of the Annual Financial Statements have been discussed and agreed upon. The activities under the Additional Financing will be included in the FMRs.

14. **Auditing.** The AF will also require an external auditor. A firm of qualified independent auditors with terms of reference acceptable to IDA will be selected on a competitive basis to

carry out an external audit of the AF's financial statements on an annual basis. In addition, an internal auditor function already exists within the PCU and will continue to ensure that the AF's fiduciary procedures and requirements are adhered to by all implementing units

Annex 6: Economic and Financial Analysis

Summary

		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2030	2035
Net annual Economic cost/benefit	MUSD													
New distribution feeder lines		-2.4	-2.8	0.2	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
Loss reduction		-6.6	-4.7	-1.2	-1.0	-0.5	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Total	MUSD	(9.0)	(7.5)	(1.0)	0.8	1.2	3.4	3.5	3.5	3.5	3.5	3.5	3.5	3.5
EIRR	16.1%													
Economic NPV @10%	11.4	MUSD												
Net annual Financial costs/benefits	MUSD													
New distribution feeder lines		-2.4	-2.8	0.2	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
Loss reduction		-6.6	-3.5	0.4	1.2	2.6	5.1	5.3	5.3	5.3	5.3	5.3	5.3	5.3
Total	MUSD	(9.0)	(6.3)	0.6	2.9	4.3	6.8	7.0	7.0	7.0	7.0	7.0	7.0	7.0
FIRR	26.4%													
Financial NPV @10%	28.1	MUSD												

Summary of Economic and Financial Analysis - key results

		Investm.	Econ NPV	EIRR	Fin NPV	FIRR
		MUSD	MUSD	%	MUSD	%
New distribution feeder lines		6.0	6.2	24.0%	6.2	24.0%
Loss reduction		18.0	-3.3	6.5%	19.4	26.6%
Overall program		**24.0**	**11.4**	**16.1%**	**28.1**	**26.4%**

Summary of Economic and Financial Analysis - types of impact and beneficiary

New distribution feeder lines	Technical loss reduction	Utility
Transmission rehabilitation	Reduced load shedding	Electricity users
Loss reduction	Higher revenue collection	Utility

New feeders - impact analysis

		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	
Investments	MUSD	(2.4)	(3.0)	(0.6)																			(6.0)
Technical losses without feeders (peak)	kW				8,356																		
Technical losses with feeders (peak)	kW				4,653																		
Annual saving on loss reduction	MUSD		0.17	0.77	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	
Net annual cost/benefit - Economic	MUSD	(2.4)	(2.8)	0.2	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	
Net annual cost/benefit - Financial	MUSD	(2.4)	(2.8)	0.2	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	

EIRR	24.0%	
Economic NPV @10%	6.21	MUSD
FIRR	24.0%	
Financial NPV @10%	6.21	MUSD

Sources, basis for assumptions:

Assumptions for investment costs, technical loss volume and value are derived from EDF study.

The ratio of of average technical losses to peak time losses is 26.5% (EDF estimate) and average loss valuation 100 FCFA/kWH (EDF estimate reflecting peak time generation costs).

Construction time estimates, phasing in of benefits during construction, and exchange rate (500 FCFA per 1 US$) are Bank preparation team estimates.

Commercial plan

		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	
Meters installed	*"000"*	113	77	20	20	20																	
Investments	*MUSD*	(14.4)	(11.5)	(4.5)	(4.5)	(4.5)																	(39.3)
Non technical losses - baseline	*%*	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	
	In GWH /y	658	678	698	719	741	763	786	786	786	786	786	786	786	786	786	786	786	786	786	786	786	
Non technical losses - with plan	*%*	40%	30%	27%	25%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	
Difference	*In MUSD/y*	0.0	7.0	9.4	11.2	15.4	15.9	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	
Non recovered revenue baseline	*%*	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	
	In MUSD/y	28	29	30	31	32	32	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	
Non recovered revenue - with plan	*%*	30%	28%	25%	20%	15%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	
Difference	*In MUSD/y*	0.0	0.6	1.5	3.1	4.7	6.5	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	
Annual Extra revenue with plan objectives met in half	*MUSD*	-	3.8	5.5	7.1	10.1	11.2	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	
Indirect benefits from more efficient energy use	*MUSD*	-	1.3	1.8	2.4	3.4	3.7	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	
Net annualEconomic costs/benefits	*MUSD*	(14.4)	(10.2)	(2.7)	(2.1)	(1.1)	3.7	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	
Net annual Financial costs/benefits	*MUSD*	(14.4)	(7.7)	1.0	2.7	5.6	11.2	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	

EIRR	6.5%	
Economic NPV @10% (WB share of program)	-3.26	MUSD
FIRR	26.6%	
Financial NPV @10% (WB share of program)	19.37	MUSD
Average EUT tariff	52	FCFA/kWH
	0.104	Usc/kWH
	0.46	
World Bank share	0.46	