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Report No: PAD904

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED CREDIT

IN THE AMOUNT OF SDR 14.6 MILLION  
(US\$22.6 MILLION EQUIVALENT)

AND A

PROPOSED GRANT

IN THE AMOUNT OF SDR 17.7 MILLION  
(US\$27.4 MILLION EQUIVALENT)

TO THE

REPUBLIC OF GUINEA

FOR THE

POWER SECTOR RECOVERY PROJECT

May 21, 2014

Energy Practice 2 (AFTG2)  
Sustainable Development Department  
Africa Region

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## CURRENCY EQUIVALENTS

(Exchange Rate Effective April 30, 2014)

Currency Unit = Guinean Franc (GNF)  
1 US\$ = 7030 GNF

## FISCAL YEAR

January 1 – December 31

## ABBREVIATIONS AND ACRONYMS

AFD	<i>Agence Française pour le Développement</i> (French Agency for Development)
AfDB	African Development Bank
BND	Brazilian Development Bank
CLSG	Côte d'Ivoire Liberia, Sierra Leone and Guinea
CPS	Country Partnership Strategy
EBID	ECOWAS Bank for Investment and Development
ECOWAS	Economic Community for West African States
EDG	<i>Electricité de Guinée</i> (National Power Utility)
EIB	European Investment Bank
ENELGUI	<i>Entreprise Nationale d'Electricité de Guinée</i> (Former energy asset holding co.)
ENERGY II	World Bank Second Energy Project for Guinea
ESEIP	Electricity Sector Efficiency Improvement Project
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
FDI	Foreign Direct Investment
FM	Financial Management
GPN	General Procurement Notice
GoG	Government of the Republic of Guinea
GWh	Gigawatt-hour ( $10^9$ Watt-hours)
HIPC	Heavily Indebted Poor Countries
IA	Implementing Agency
ICB	International Competitive Bidding
ICE	Inter-ministerial Committee for Energy
ICR	Implementation Completion and Results Report
IDA	International Development Association
IFC	International Finance Corporation
IFR	Interim Financial Report
IMF	International Monetary Fund
IRR	Internal Rate of Return
IS	Implementation Support
IsDB	Islamic Development Bank
FKD	<i>Fonds Koweïtien pour le Développement</i> (Kuwait Development Fund)
KPI	Key Performance Indicators
kWh	Kilowatt-hour ( $10^3$ Watts)

LPDSE	<i>Lettre de Politique de Développement du Secteur de l'Electricité</i> (Energy Sector Policy Letter - General Policy Declaration)
LV	Low Voltage
M	Million
MSC	Management Services Contract
MEH	Ministry of Energy and Hydraulics
MIS	Management Information System
MW	Megawatt ( $10^6$ Watts)
NPV	Net Present Value
OHADA	<i>Organisation pour l'Harmonisation en Afrique du Droit des Affaires</i> (Organization for the Harmonization of Business Law in Africa)
ORAF	Operational Risk Assessment Framework
PAD	Project Appraisal Document
PDO	Project Development Objective
PIU	Project Implementation Unit
PPIAF	Public Private Infrastructure Advisory Facility
PPP	Public Private Partnership
PRSP	Poverty Reduction Strategy Paper
PSRP	Power Sector Recovery Project
PSP	Private Sector Participation
RF	Results Framework
RoW	Right of Way
RAP	Resettlement Action Plan
RPF	Resettlement Policy Framework
SE4All	Sustainable Energy For All
SOGEL	<i>Société Guinéenne d'Electricité</i> (Former utility)
ToR	Terms of Reference
TWh	Terawatt-hour ( $10^{12}$ Watt-hours)
US\$	United States Dollar
US¢	US cents
WAPP	West African Power Pool
WBG	World Bank Group
WTP	Willingness To Pay

Regional Vice President:	Makhtar Diop
Country Director:	Ousmane Diagana
Sector Director:	Jamal Saghir
Sector Manager:	Meike Van Ginneken
Task Team Leader:	Moez Cherif

**REPUBLIC OF GUINEA**  
**Power Sector Recovery Project**

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**PAD DATA SHEET***Guinea**Power Sector Recovery Project (P146696)***PROJECT APPRAISAL DOCUMENT***AFRICA**AFTG2*

Report No.: PAD904

<b>Basic Information</b>			
Project ID P146696	EA Category B - Partial Assessment	Team Leader Moez Cherif	
Lending Instrument Investment Project Financing	Fragile and/or Capacity Constraints [ ]		
	Financial Intermediaries [ ]		
	Series of Projects [ ]		
Project Implementation Start Date 16-Jun-2014	Project Implementation End Date 31-Dec-2019		
Expected Effectiveness Date 16-Oct-2014	Expected Closing Date 31-Dec-2019		
Joint IFC No			
Sector Manager Meike van Ginneken	Sector Director Jamal Saghir	Country Director Ousmane Diagana	Regional Vice President Makhtar Diop
Borrower: Ministry of Economy and Finance			
Responsible Agency: Ministry of Energy			
Contact: Telephone No.: 224-230452589	Mrs. Kadiatou Balde Bah	Title: Email: <a href="mailto:katoulara2002@yahoo.fr">katoulara2002@yahoo.fr</a>	Senior Advisor to Minister of Energy & Hydraulics
<b>Project Financing Data(in USD Million)</b>			
[ ] Loan	[ ] Grant	[ ] Guarantee	
[ X ] Credit	[ X ] IDA Grant	[ ] Other	
Total Project Cost:	50.00	Total Bank Financing:	50.00
Financing Gap:	0.00		

<b>Financing Source</b>	<b>Amount</b>
BORROWER/RECIPIENT	0.00
International Development Association (IDA)	22.60
IDA Grant	27.40
Total	50.00

#### **Expected Disbursements (in USD Million)**

Fiscal Year	2015	2016	2017	2018	2019	2020	0000	0000	0000
Annual	5.00	10.00	14.00	13.00	6.00	2.00	0.00	0.00	0.00
Cumulative	5.00	15.00	29.00	42.00	48.00	50.00	0.00	0.00	0.00

#### **Proposed Development Objective(s)**

The Project Development Objective (PDO) is to improve the technical and commercial performance of the national power utility.

#### **Components**

<b>Component Name</b>	<b>Cost (USD Millions)</b>
Financing of a Management Services Contract to support Electricité de Guinée (EDG) performance improvement	14.00
Selected investments to support improvement of Conakry distribution network and commercial performance of EDG	33.70
Technical Assistance to Ministry of Energy and Hydraulics (MEH) and Project Implementation Support	2.30

#### **Institutional Data**

#### **Sector Board**

Energy and Mining

#### **Sectors / Climate Change**

Sector (Maximum 5 and total % must equal 100)

Major Sector	Sector	%	Adaptation Co-benefits %	Mitigation Co-benefits %
Energy and mining	Thermal Power Generation	100		
Total		100		

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

<b>Themes</b>			
Theme (Maximum 5 and total % must equal 100)			
<b>Major theme</b>	<b>Theme</b>	<b>%</b>	
Financial and private sector development	Infrastructure services for private sector development	100	
Total		100	
<b>Compliance</b>			
<b>Policy</b>			
Does the project depart from the CAS in content or in other significant respects?		Yes [ ]	No [ X ]
Does the project require any waivers of Bank policies?		Yes [ ]	No [ X ]
Have these been approved by Bank management?		Yes [ ]	No [ ]
Is approval for any policy waiver sought from the Board?		Yes [ ]	No [ X ]
Does the project meet the Regional criteria for readiness for implementation?		Yes [ X ]	No [ ]
<b>Safeguard Policies Triggered by the Project</b>		<b>Yes</b>	<b>No</b>
Environmental Assessment OP/BP 4.01		X	
Natural Habitats OP/BP 4.04			X
Forests OP/BP 4.36			X
Pest Management OP 4.09			X
Physical Cultural Resources OP/BP 4.11			X
Indigenous Peoples OP/BP 4.10			X
Involuntary Resettlement OP/BP 4.12		X	
Safety of Dams OP/BP 4.37			X
Projects on International Waterways OP/BP 7.50			X
Projects in Disputed Areas OP/BP 7.60			X
<b>Legal Covenants</b>			
<b>Name</b>	<b>Recurrent</b>	<b>Due Date</b>	<b>Frequency</b>
Appointment of a Technical Auditor for the MSC		16-Feb-2015	
<b>Description of Covenant</b>			
The Recipient shall appoint, no later than four months after the Effective date, an external technical auditor to carry out annual audit of the Management Service Contract, under terms of reference acceptable to the Association.			



Name	Recurrent	Due Date	Frequency
Appointment of an external auditor (finance)		16-Apr-2015	
<b>Description of Covenant</b>			
The Recipient shall appoint, no later than six months after the Effective Date, an external auditor to carry out annual audit services for the Project, under terms of reference acceptable to the Association.			
<b>Conditions</b>			
<b>Source Of Fund</b>	<b>Name</b>	<b>Type</b>	
IDA	Subsidiary Agreement	Effectiveness	
<b>Description of Condition</b>			
The Subsidiary Agreement has been executed on behalf of the Recipient and the Project Implementing Entity.			
<b>Source Of Fund</b>	<b>Name</b>	<b>Type</b>	
IDA	Project Implementation Manual	Effectiveness	
<b>Description of Condition</b>			
The Recipient has adopted a Project Implementation Manual, in form and substance satisfactory to the Association.			
<b>Source Of Fund</b>	<b>Name</b>	<b>Type</b>	
IDA	Performance Contract between EDG and the Government	Disbursement	
<b>Description of Condition</b>			
The Performance Contract has been executed on behalf of the Recipient and the Project Implementing Entity, in form and substance acceptable to the Association			
<b>Source Of Fund</b>	<b>Name</b>	<b>Type</b>	
IDA	MEH Project Implementation Unit	Disbursement	
<b>Description of Condition</b>			
The Recipient has established the MEH-PIU, in form acceptable to the Association, and appointed therein a Project coordinator, a financial management specialist, a procurement specialist, a safeguards specialist and a monitoring and evaluation specialist, all under terms of reference and qualifications acceptable to the Association.			
<b>Source Of Fund</b>	<b>Name</b>	<b>Type</b>	
IDA	Management Services Contract	Disbursement	
<b>Description of Condition</b>			
The Management Service Contract has been executed by the parties, in form and substance acceptable to the Association.			

<b>Team Composition</b>					
<b>Bank Staff</b>					
<b>Name</b>	<b>Title</b>	<b>Specialization</b>	<b>Unit</b>		
Wolfgang M. T. Chadab	Senior Finance Officer	Senior Finance Officer	CTRLA		
Kishor Uprety	Senior Counsel	Senior Counsel	LEGAM		
Raima Oyenyin	Senior Program Assistant	Senior Program Assistant	AFTG1		
Hocine Chalal	Lead Environmental Specialist	Lead Environmental Specialist	AFTN1		
Allan Rotman	Lead Procurement Specialist	Lead Procurement Specialist	AFTPW		
Racky Dia Camara	Program Assistant	Program Assistant	AFMGN		
Thierno Hamidou Diallo	Disbursement Asst.	Disbursement Asst.	AFMGN		
Moez Cherif	Senior Energy Economist	Team Lead	AFTG2		
Christopher Saunders	Operations Officer	Operations Officer	AFTG2		
Yussuf Uwamahoro	Energy Specialist	Energy Specialist	AFTG2		
Alpha Mamoudou Bah	Senior Procurement Specialist	Senior Procurement Specialist	AFTPW		
Paivi Koskinen-Lewis	Social Development Specialist	Social Development Specialist	AFTCS		
Bassem Abou Nehme	E T Consultant	Economic and Financial Analysis	AFTG2		
Celestin Adjalou Niamien	Sr Financial Management Specia	Sr Financial Management Specialist	AFTMW		
Manuel Jose Millan Sanchez	Power Engineer	Power Engineer	AFTG2		
<b>Non Bank Staff</b>					
<b>Name</b>	<b>Title</b>	<b>Office Phone</b>	<b>City</b>		
<b>Locations</b>					
<b>Country</b>	<b>First Administrative Division</b>	<b>Location</b>	<b>Planned</b>	<b>Actual</b>	<b>Comments</b>

## I. STRATEGIC CONTEXT

### A. Country Context

1. The Republic of Guinea is located on the West coast of Africa and is bordered by Guinea-Bissau, Senegal and Mali to the North, Liberia and Sierra Leone to the South, and Côte d'Ivoire to the East. The country is relatively small, with a landmass comparable to that of the United Kingdom or Uganda. The population is young (45 percent of Guineans are between ages 15 and 19) and density is low: in 2012, it stood at 46 inhabitants per square kilometer, with the population estimated at 11.4 million. The current demographic growth rate is 3.1 percent and, if this trend continues, the population will double by 2035.

2. Despite an abundance of natural resources, Guinea is one of the poorest countries in the world. Per capita GDP was about US\$492 in 2012 and the country is a prime example of the paradox of plenty: it is home to 25 percent or more of the World's known bauxite reserves and one of the largest hydro potentials in West Africa. Furthermore, poverty has worsened in recent years with the 2012 Limited Poverty Evaluation Survey showing that 55 percent of the population is considered to be poor, compared with 53 percent in 2007 and 40 percent in 1995. Most of the poor live in rural areas.

3. On June 27, 2010, the country held its first competitive presidential election after more than 50 years of authoritarian rule. The assumption of power by a democratically elected president, Alpha Condé, also marked a return to constitutional order and paved the way for new economic opportunities. The army had seized power on December 23, 2008 following the death of long-time President Lansana Conté, and a military junta had since led the country during a difficult transition period. In late 2010, a series of reforms were introduced and Guinea reached the completion point for the Heavily Indebted Poor Countries (HIPC) Initiative in September 2012. The country held legislative elections on September 28, 2013 and the elected MPs were sworn in in January 2014. The political transition will be completed through local elections planned for the near future.

4. The current recovery is fragile. Ongoing implementation of the 2012-2014 economic and financial program supported by the IMF Extended Credit Facility has helped to reduce macro-economic imbalances. In 2012, despite the international crisis, economic activity remained strong, supported by the acceleration of investments in agriculture and the mining sector. Real GDP grew by 3.9 percent in 2011 to reach 4.8 percent in 2012, compared with a 1.9 percent growth rate in 2010. The economy is expected to grow at 3.7 percent in 2013, down from an estimated 4.8 percent in 2012. Assuming the political and external trading climates improve, growth is expected to rebound to 5 percent in 2014. The recovery could be derailed if political stability is not fully restored or if the global economy remains weak.

5. Inflation eased dramatically in 2012, dipping below the government's stated objective of 15 percent year on year, ending the year at 12.8 percent and averaging 15.2 percent. The downward trend is the result of successful reductions in government spending and similar successful efforts by the central bank to sterilize excess liquidity. Tackling inflation is a government priority, chiefly for political reasons. Given that price increases have triggered riots in the past, there remains a risk of political unrest, which could in turn disrupt supply chains.

6. The Guinean economy is dominated by the mining sector. The country is well endowed with minerals particularly iron ore, bauxite, gold, uranium and diamonds. The Simandou iron ore deposit is one of the finest worldwide and its exploitation would result in a quantum change in the country's exports and GDP. Given the lack of a reliable supply of electricity from the grid and following common international practice, self-supply of electricity is common amongst existing mining operations: a total of 139 MW of thermal capacity in island systems was operated by mines in 2010 compared to approximately 235 MW on the national grid.

7. Private sector investments in Guinea remain limited due to the perceived country risk and an unfavorable business environment. Guinea is ranked 175 out of 183 countries by the Doing Business report, and ranks lowest amongst West African countries. However, the development of mining and hydropower potential has received increasing interest from private investors.

## **B. Sectoral and Institutional Context**

8. The Guinean electricity sector is performing poorly and is unable to deliver the level of service required to support economic growth and social development. Despite Government awareness of the magnitude of the issue and its consequences, little improvement has occurred over the past decade and sector performance has steadily worsened. The contributing factors are many and interlinked; these include:

- Weak planning and supervision capacity of the Ministry of Energy and Hydraulics (MEH) resulting in a generation capacity that is insufficient and economically inept;
- Pervasive tolerance by the national utility, Electricité De Guinée (EDG), and the Government of non-payment of energy that is consumed, particularly by households, as most of them are not metered and some are connected to the distribution network illegally;
- Finances in free-fall within EDG due to inadequate tariff policies and an electricity payments to supply ratio of less than 50 percent;
- Rapid deterioration of the generation and distribution assets due to insufficient maintenance (availability of the already insufficient generation capacity is only 68 percent due to the frequent breakdowns); and
- Abysmal quality of service with 56 percent of the demand unserved, preventing enforcement of payment discipline and making an adjustment of tariffs to a sustainable level very difficult to justify.

9. As a result, access to electricity remains low at 12 percent on average. Official statistics show a 96 percent access rate in urban areas and 3 percent access rate in rural areas, although these data are not very reliable. There is a high consumption of biomass, constituting 78 percent of the overall energy balance and this has heavily contributed to rapid deforestation – forest coverage has decreased from 14 million ha in 1967 to 700,000 ha in 2002. The electrical power system consists of an interconnected western network supplying the largest concentration of electricity consumers (including Conakry), a second relatively large interconnected network in the center of the country, and isolated centers scattered throughout the country.

10. The sector comprises a number of agencies with differing levels of operational capacity. MEH is responsible for setting sector strategy and supervising EDG, the state-owned utility that was created following the failed privatization of the national electricity enterprise in the 1990s. In its latest structure, EDG comprises three main departments: (i) technical operations, (ii) planning and equipment, and (iii) support to operations. The total number of agents is 1,795 translating into a low productivity ratio of 286 MWh of energy billed per agent per year, which is considered low by regional standards, particularly for a largely hydro system (less labor intensive than thermal). EDG's overstaffing, however, has little financial impact, as the payroll represented only 10 percent of total costs in 2012. It does, however, have a negative impact on staff motivation and effectiveness in the job. The Inter-ministerial Committee for Electricity (ICE) includes representatives from various ministries and government agencies and plays a strategic and coordination role. Finally, MEH is being restructured by Presidential Decree and an electricity and water regulator is being created. The director of the regulator has been named within MEH and it is envisaged that the agency will be operational by December 2014.

11. At the end of 2013, EDG had 227,027 registered customers but the total number of electricity consumers was estimated to be approximately 300,000 when 100,000 estimated illegal connections are taken into account. 65 percent of customers were located in the capital city Conakry. The demand for electricity in Guinea is not accurately known because: (i) a large number of households and businesses are connected to the network illegally and are not listed in the EDG customer database, and (ii) up to 80 percent of Low Voltage (LV) customer billing is based on a flat fee with no metering. Peak demand forecast for 2025 is hence uncertain, but is most likely to be above 550 MW, representing an average annual growth above 8.5 percent, driven by: (i) the meeting of unserved demand; (ii) the acceleration of access to electricity under SE4All as soon as sufficient capacity is available; and (iii) the likely development of industrial activities. A significant number of potential and illegal customers have asked to be connected or regularized.

12. In 2012, EDG lost 7 US¢ for every kWh it generated. The average tariff charged by EDG across all consumers was 12 US¢ per kWh in 2012. Most of the burden is borne by the public sector as households are charged on average 10 US¢ per kWh while government agencies are being charged 25US¢ per kWh. In contrast, the average cost of supplying the end users is estimated at about 19 US¢ per kWh when accounting for all of the technical and commercial losses.

13. The share of expensive thermal generation is growing, effectively increasing financial losses in the sector. Electricity generation cost is high in Guinea due to the significant share of thermal (diesel and HFO fired power plants) energy in the generation mix. The generation cost of electricity produced by thermal plants is above 30 US¢ per kWh. The share of hydropower within the generation mix has dropped from 76 percent in 2010 to 67 percent in 2012. The near-term outlook is negative and has worsened since September 2013 when the Government procured 50 MW of emergency rental diesel-fired power. The cost is likely to remain high until relatively cheap generation of power from Kaléta and other hydropower projects will become available after 2017. At the end of 2013, EDG owned 107 MW of thermal generational capacity and 128 MW of hydropower generation capacity. Only 30 percent of the installed thermal

capacity is currently operational, due to technical incidents and poor maintenance. In 2013, actual supply in urban areas reached 162 MW while unsuppressed peak demand is estimated to have reached 277 MW. EDG has resorted to rolling blackouts as a result of a significant shortfall in power production and frequent incidents in the network.

14. EDG is dependent on Government support for survival. Only about 58 percent of total electricity generated is billed due to high technical and non-technical losses (power theft or fraud). In addition, only 77 percent of energy billed is actually collected. The overall system efficiency is therefore only 45 percent, one of the lowest in Africa. Maintenance is insufficient to ensure reliability of assets at the expected standard or in a sustainable manner and service quality has consistently deteriorated since 2000. Systematic and unpredictable rationing has been applied as the result of insufficient supply and the poor condition of the distribution system leading to load imbalances and frequent failure of transformers. As a result of the overall inefficiency, although public funding for infrastructure decreased between 2006 and 2010, budget resources to financially support EDG since 2010 have increased and all investment is directly supported by the Government of Guinea's (GoG) budget:

- i. Direct budget subsidies to pay for fuel for EDG thermal plants amounted to US\$36 million in 2012 and about US\$64 million in 2013;
- ii. The non-payment by EDG of its tax liability to the government amounted to US\$46 million by end-2012, mainly consisting of Value-Added Tax (VAT) collected by EDG but not paid to the government; and
- iii. The payment of subsidy capital to repay EDG loans reached US\$13 million in 2012.

15. Guinea's hydropower capacity is estimated at more than 6,000 MW. The Kaléta hydropower plant with an installed capacity of 240 MW is under construction and scheduled to come online in late 2015 but the current grid condition is such that, if unchanged, it will be unable to absorb much of this additional power supply. Other low cost hydropower developments for which feasibility studies are ongoing include Souapiti (installed capacity of 515 MW) and Fomi (90 MW).

16. The World Bank is currently engaged in Guinea's energy sector through investment activities and technical assistance. These include:

- i. The Electricity Sector Efficiency Improvement Project (ESEIP): This US\$30 million IDA grant focused on improving the distribution network in the city center of Conakry, including the introduction of prepayment meters and actions to rehabilitate power generation facilities and improve the management of EDG.
- ii. Sustainable Energy for All initiative (SE4All). This US\$1.8 million Bank-executed technical assistance activity focuses for the next 18 months on achieving two main outcomes: (i) an agreed set of priority projects and associated funding requirements outlined in an investment prospectus to meet the medium term energy targets; and (ii) increased capacity of the Ministry of Energy in sector planning.

- iii. Regional interconnection projects, including the Côte d'Ivoire Liberia, Sierra Leone and Guinea (CLSG) Interconnector project, and the Organisation de Mise en Valeur du fleuve Gambie (OMVG) project (Gambia, Guinea, Guinea Bissau and Senegal), which are part of the West African Power Pool (WAPP) and financed by the Bank and other donors.

17. The Government is committed to the reforms needed to ensure the sector's recovery and eventual viability. The Government's energy strategy in the medium to long term, as articulated in its latest Energy Sector Policy Letter - General Policy Declaration (LPDSE) of December 2012, provides for a 20 year vision that includes:

- i. Providing improved energy access and quality of service through the accelerated rehabilitation of existing capacities and development of additional generation capacity (thermal and hydro);
- ii. Achieving sector financial autonomy through a suitable tariff structure and commercial management and implementation of an Action Plan for EDG endorsed by GoG and the main donors on January 16-17, 2012;
- iii. Supporting the participation of private partners in generation, transmission and distribution in a fair regulatory framework, relying in particular on partnerships with the mining industry established in Guinea;
- iv. Redirecting the role of the Government toward definition of policies and strategies with a reinforcement of the Electricity Regulator; and
- v. Accelerating the development of the country's hydropower potential for increased energy security and lower production cost.

18. In 2011-2012, the World Bank and French Agency for Development (AFD) co-financed a comprehensive Power Sector Diagnostic and Recovery Plan (PSDRP). The recovery plan provided recommendations that centered on improving the commercial performance of EDG, restructuring and reorganization of EDG, and updating the legal framework for the sector and Public Private Partnerships (PPP). The study also outlined a medium term investment plan of over US\$1 billion over the next three years to fulfill those recommendations. Along with investments designed to address institutional and regulatory hurdles outlined above, this plan includes the 240MW Kaleta hydropower plant (US\$527 million) 75% of which is funded by the Exim Bank, as well other power generation, transmission and distribution infrastructure. In the short term, seven priority power projects in need of an estimated US\$676.1 million in financing have been identified, with a US\$ 118.7 million gap remaining. These projects are:

- PP1: Rehabilitation and reinforcement of the existing hydropower plants;
- PP2: Rehabilitation of the existing thermal power plants;
- PP3: Support to improve commercial performance of EDG;
- PP4: Institutional reform and restructuring of the power sector;

- PP5: Rehabilitation and extension of the transmission system;
- PP6: Commissioning of additional 100 MW of thermal capacity;
- PP7: Rehabilitation and extension of the distribution network.

19. The Government of Guinea has requested World Bank Group (WBG) support to reform the energy sector. IDA has been a strong supporter of reforms in the past year. Furthermore, GoG has concluded based on the sector diagnostic and recovery plan of 2012 that a Management Services Contract (MSC) is the best way to implement the medium term power sector recovery to strengthen EDG performance. In December 2013, the GoG signed a technical assistance contract with the International Finance Corporation (IFC) to provide business advisory services to the GoG in the design of an MSC and recruitment of a private Operator to manage EDG during an initial recovery period of 3 to 5 years. GoG has therefore specifically requested IDA support to finance an MSC.

### **C. Higher Level Objectives to which the Project Contributes**

20. The project is designed to contribute to the World Bank’s overarching goals of ending extreme poverty and boosting shared prosperity. Reliable and expanded electricity supply is a key determinant of productivity and competitiveness and is critical to enable economies to attract investments, expand and diversify production and ultimately create jobs. Insufficient and unreliable electricity is clearly one of the most severe constraints for Guinea businesses. Power shortages mean large losses in terms of foregone production to Guinea’s firms, estimated at 14 percent of overall sales. At the household level, inadequate electricity access constrains the delivery of the most basic social services, especially among the poorer groups. Efforts to increase electricity generation capacity are already under way but will not translate into better access without addressing, in parallel, transmission and distribution capacity bottlenecks due to the poor state of the grid. Investments under the project will target the extensive rehabilitation and upgrade of the national distribution system to alleviate distribution capacity constraints, reduce losses, and ultimately support the expansion of electricity supply and access, in line with the goals of reducing poverty and promoting shared prosperity.

21. The proposed project complements existing Bank engagements, and is included in the WBG FY 14-17 Country Partnership Strategy (CPS) for Guinea. The project will contribute to strategic objective 2: catalyzing shared growth and economic diversification, for which the priority sector is energy. The CPS states that the WBG will support the Government’s action plan to improve energy services in the country over a 3 to 5 year horizon through: (i) urgent investments and financial/institutional measures to turnaround EDG and improve the reliability of energy services; and (ii) support the development of the hydropower potential in Guinea.

22. The project is in line with the recently approved “Energy Sector Directions Paper for the World Bank Group”. The strategy that was approved in 2013 puts a strong emphasis on leveraging private sector resources and experience to enable reliable and more efficient energy sectors.

23. The proposed project contributes to the achievement of the first goal of the joint UN-WBG Sustainable Energy for All (SE4All) initiative launched in September 2011. SE4All



promotes new partnerships to set up conditions for energy transformation in developing countries leading to: (i) achieving universal access to energy, including electricity and modern cooking fuels; (ii) doubling the renewable energy share in the global energy mix; and (iii) doubling the rate of improvement of energy efficiency measured through the decrease in the energy intensity of the country (tons of oil equivalent per US\$ million of GDP). The World Bank is already assisting the GoG through the SE4All Technical Assistance Project (S-TAP/Guinea) in developing a comprehensive investment prospectus for a medium term electricity access scale-up program. This program is to be presented to potential financiers, including donors, the private sector and civil society as the basis for raising sector financing resources for the next 5 years, once the Government has demonstrated its commitment to improving sector performance. In the first stage, S-TAP/Guinea intends to map all the existing hydro power potential sites and create a hydro atlas for Guinea to assist the Government to develop these green and renewable energy resources that the country is endowed with in abundance.

## **II. PROJECT DEVELOPMENT OBJECTIVES**

### **A. Project Development Objective**

24. The Project Development Objective (PDO) is to improve the technical and commercial performance of the national power utility.

### **B. Project Beneficiaries**

25. The direct project beneficiaries will include the estimated 227,027 existing EDG customers, who will benefit from improved and more reliable electricity service, as well as the sector professionals trained under the project.

26. Overall, the project will contribute to enhanced management, operation and financial viability of the electricity sector, thus laying a solid foundation for expanding electricity services to Guinea's population and firms. Indirect project beneficiaries will therefore also include private sector participants in the energy sector who will enjoy a more attractive investment climate and viable national counterpart, and potential or irregular customers who will be legally connected to the grid as a result of improved technical and commercial capacity within the utility.

### **C. PDO Level Results Indicators**

27. The key indicators for the PDO level results:

- i. Direct project beneficiaries (number of people), of which are female (percentage);
- ii. Electricity losses per year (percentage);
- iii. EDG bill collection rate (percentage); and
- iv. Average daily hours of service (number).

### III. PROJECT DESCRIPTION

28. The proposed project is designed to restore the viability of the Guinean energy sector based on the recommendations of the Power Sector Diagnostic and Recovery Plan adopted by the Government. Though currently performing poorly, the Guinean power system could become financially sustainable in the medium term. Such a turnaround is only possible if: (i) sector governance were improved, (ii) electricity losses (technical and commercial) were reduced; (ii) efficient sector maintenance and investment were enforced; and (iii) additional resources were to be mobilized from donors and increasingly from the private sector to accelerate the implementation of rehabilitation and system development investment, and energy conservation measures.

29. The project is part of a multi-partner collaborative effort to finance the aforementioned priority power projects that includes the African Development Bank (AfDB), the Islamic Development Bank (IsDB), the European Investment Bank, the ECOWAS Bank for Investment and Development (EBID), the French Development Agency (AFD) and the Kuwait Fund. Specifically, the project will support EDG's commercial improvement (PP3), institutional reform and power sector restructuring (PP4), and rehabilitation and extension of the distribution network (PP7). In doing so, the project aims to contribute to restoring the financial viability of the sector by sufficiently improving EDG's commercial and technical performance so as to limit dependence on Government support and attract increased private sector participation (PSP). This will be achieved in part by financing the MSC to facilitate the hiring of a private Operator with the capacity necessary to effectively execute a turnaround in the utility.

30. While the success of the turnaround will depend in large part on commercial factors such as increasing billings, collections, and reducing electricity theft, it will also require technical improvements to deliver a greater amount of the energy generated to end users and expand the paying customer base. As such, the project will provide financing for necessary rehabilitation of the distribution grid in targeted areas. Finally, the project will help to create the business environment required for sustainable operation of a utility, including the legislative basis for reducing electricity theft and capacity development for better sector oversight at the government level.

#### A. Project Components

31. The project is therefore structured around three main components: (1) Financing of a Management Services Contract to support EDG performance improvement, (2) Selected investments to support improvement of Conakry distribution network and commercial performance of EDG, (3) Technical assistance to MEH and project implementation support.

32. **Component 1: Financing of a Management Services Contract to support EDG performance improvement (US\$14 million).** This component will finance an MSC between MEH and a private firm ("the Operator") with sufficient technical and fiduciary capacity to provide management, operation and capacity building services for EDG over 3-5 years. The Operator is being selected through a rigorous and competitive process on the basis of technical capacity and a proposed business plan. This component will fund the fees to be paid to the Operator, including fees for mobilizing a full-time team of senior managers to run EDG, experts

in specialized areas of utility management for specific needs such as training and capacity building for utility personnel, and communications to target EDG customers. The MSC will also include a performance component to be paid only if EDG exceeds certain performance outputs or targets.

33. The Operator will be given fully delegated authority to run EDG as a vertically integrated electricity utility, including carrying out the reorganization or restructuring in line with recommendations made in the Power Sector Diagnostic and Recovery Plan. It will be the solely authorized agent to administer its assets and control all business functions for the duration of the contract. The main deliverable of the MSC will be the implementation of a business plan proposed by the Operator – and agreed with the Government – that will reflect the objectives and investment activities of the Power Sector Diagnostic and Recovery Plan. As such, the MSC will be signed between the Government and the Operator, and designed to strengthen performance of EDG through improvements in staff skills and morale, data management, and grid infrastructure.

34. Services to be provided by the Operator will center on, but will not be limited to: (i) organizational reinforcement, (ii) improvements to commercial performance, (iii) demand side management, (iv) infrastructure rehabilitation; and (v) improvements to operation and maintenance of EDG infrastructure.

35. **Component 2: Selected investments to support improvement of Conakry distribution network and commercial performance of EDG (US\$33.7 million).** This component will support investments that will enable EDG to improve the reliability of electricity supply in the capital city of Conakry where 80 percent of its clients are located.

36. In response to frequent rolling blackouts, this component further adds to the ESEIP financed rehabilitation and upgrading of the network in the district of Kaloum and AfDB/IsDB financed rehabilitation works in Ratoma and Matoto. Proposed investments under this component are extracted from the Government’s priority investment plan but the exact scope of each activity will be finalized once the Operator is in place.

37. *Sub-component 2.A – Improving distribution network conditions in Conakry.* This sub-component will support the priority investment program of the GoG, including:

- i. Rehabilitating and upgrading the dilapidated distribution infrastructure in the Dixinn district of greater Conakry.
- ii. Provision of operation and maintenance equipment and tools.
- iii. Supply and installation of the protection system of hydropower plants to ensure sustainable and safe supply of power.
- iv. Equipment to compensate for reactive power and improve power factor in the system.
- v. Owner’s engineer for rehabilitation works and network extension in Dixinn district, and for rehabilitation of household connections and standardization of informal and illegal connections.
- vi. Implementation of environmental and social safeguard measures

38. Sub-component 2.B – Improvement of Commercial performance of EDG. Investments under this sub-component will include:

- i. Implementation of a census of all EDG customers and revision of the client database accordingly. Each client will be assigned a specific client code to facilitate account management.
- ii. Upgrading the integrated IT management system of EDG.
- iii. Rehabilitation of household connections, including standardization of informal and illegal connections, in Kaloum, Ratoma and Matoto districts.

39. Sub-component 2.B: Project Implementation Support. This component will cover the costs related to the utilization of experts and equipment for the efficient operation of the Project Implementation Unit (PIU) within EDG, in the following areas: (i) procurement of goods and consultant services, (ii) financial and disbursement management, (iii) safeguards supervision, and (iv) monitoring and evaluation.

40. **Component 3: Technical Assistance to MEH and Project Implementation Support (US\$2.3 million).** This component envisages the following three sub-components.

41. Sub-component 3.A: Technical Assistance to the MEH. This sub-component will support the MEH's supervision of the Operator, and provide Technical Assistance to MEH to carry out other sector policy and oversight activities. Activities will include:

- i. Technical assistance to implement a financial restructuring of EDG.
- ii. Independent technical auditing to directly monitor Operator's deliverables and verify key performance indicators provided by EDG.
- iii. Technical assistance to develop the GoG's anti-fraud policy and the legal instrument to enforce it.

42. Sub-component 3.B: Project Implementation Support. This component will cover the costs related to the utilization of experts and equipment for the efficient operation of the Project Implementation Unit (PIU) within MEH, in the following areas: (i) procurement of goods and consultant services, (ii) financial and disbursement management, (iii) safeguards supervision, and (iv) monitoring and evaluation.

## **B. Project Financing**

43. The project will be entirely financed by IDA. The lending instrument is an Investment Project Financing (IPF). The Ministry of Economy and Finance will receive an IDA grant in the amount of US\$27.4 million and an IDA credit in the amount of US\$22.6 million. Part of the IDA funds will be on-granted to EDG through a Subsidiary Agreement between the GoG and EDG.

## **C. Project Cost**

44. The total project cost is US\$50 million. Cost estimates have been prepared, reviewed and adjusted in consultation with project counterparts and are in line with similar projects in Sub-Saharan Africa. Cost estimates by component are detailed in Annex 2.

#### **D. Lessons Learned and Reflected in the Project Design**

45. The Guinea Energy II project, which closed in December 1998, did not achieve a viable private management arrangement for the power system or meet key indicators for improvement of the power sector's financial condition in line with its objective. Lessons learned from the Implementation Completion Report for that project have been incorporated in the project's design, in particular: *(i) IDA and the Borrower should ensure a clear agreement on sector priorities and the related investment program in preparing a project; (ii) Before proceeding with any restructuring or privatization operation, it is important to have internal government consensus on the objectives, detailed actions required and scheduling of activities; and (iii) A permanent private management services contract for a utility is not likely to be effective unless the private Operator has full responsibility for the power system and does not have to depend on government actions to make the utility commercially viable.* Lessons (i) and (ii) were addressed through the comprehensive Sector Diagnostic and Recovery Plan, and operationalized through the identification of seven priority investment projects in the short to medium term. Furthermore, the Government endorsed the outcomes of this study in the LPDSE conveying a strong commitment to the management services contract. Lesson (iii) will be taken on board in the design of the MSC although the latter is envisaged as a transition arrangement for a period of 3-5 years, while preparing for a deeper form of private sector participation.

46. Some of the lessons emerging from the recent experience in Liberia with a power utility management services contract include the need to have a pre-identified recovery plan prior to the selection of the Operator; clear performance targets and a remuneration that provides an incentive for the Operator to perform. These lessons are being incorporated into the design of the MSC under the proposed project.

47. Lessons from the World Bank's support to utility reforms across Sub-Saharan Africa (including Kenya, Tanzania, Liberia and Sierra Leone) have also informed the design of this Project. These are summarized in Table 1 below.

**Table 1: Lessons from previous energy sector reform experiences in Sub-Saharan Africa**

<i>Component/lesson</i>	<i>Reflection in the design of the project</i>
<p><b>Management Services Contract design</b> Contract objectives, roles and responsibilities of the parties involved and their mutual obligations should be clearly defined by the contract.</p> <p>The contract should be of sufficiently long duration (preferably 3-5 years) in order to allow enough time to conduct competitive procurement and implement the recovery plan. This is especially important if the contract is linked to an investment program to be financed by donors.</p>	<p>The MSC will be anchored by a business plan for the utility that will form the basis of the Operator selection with the support of the World Bank Group. The project will finance the MSC for a minimum of three years. An independent technical auditor to monitor the Operator's performance will be supported under Component 3 of the project.</p>
<p><b>Sustainability of Capacity Enhancement</b> Use of own staff by the selected Operator and/or recruitment of outside experts for day-to-day utility operations and project implementation does not ensure continuity and knowledge transfer to the client.</p>	<p>Capacity building and staff training will be a key deliverable of the selected Operator and obligations and target results in this area will be appropriately reflected into the MSC. The Operator is expected to work closely with the utility counterparts to ensure hands-on and learning by doing experience in utility management and operations and project management during implementation of the project.</p>
<p><b>Project Implementation Capacity</b> Weak implementation capacity within the sector can delay hiring of the Operator and execution of the project.</p>	<p>Procurement of the Operator and preparatory activities for investments will be carried out by the Government with technical assistance from IFC. A PIU will be established within MEH to manage FM, procurement, disbursements and M&amp;E related to components 1 and 3. The procurement under component 2 will be carried out by EDG under the supervision of the Operator, who will be required to ensure sufficient procurement, financial management, safeguards, and M&amp;E capacity for the implementation of this component.</p>

## IV. IMPLEMENTATION

### A. Institutional and Implementation Arrangements

48. The Inter-ministerial Commission for Energy (ICE)<sup>1</sup> and its Technical Committee<sup>2</sup> will be responsible for overall strategic guidance and oversight of the project.

49. MEH will be the overall coordinator of the project and the implementation agency for components 1 and 3 of the project, including the procurement and administration of the MSC. Given the limited capacity of MEH, a Project Implementation Unit will be established within

<sup>1</sup> The *Commission interministerielle de coordination et de suivi de la réforme du secteur de l'électricité* was formed on July 30, 2012; it is chaired by the Prime Minister and has 10 members including the Minister of Energy and Hydraulics and the Minister of Economy and Finance.

<sup>2</sup> The Technical Committee for Energy was formed in August 2012; it is chaired by the Minister of Energy and includes 10 members representing key government entities and EDG.

MEH. EDG will be the project implementation agency for component 2 and will be responsible for the management of all related technical, fiduciary, and safeguards aspects. Under the ongoing ESEIP, EDG has acquired extensive experience with project management in accordance with World Bank policies. At the closure of the ESEIP, the ESEIP PIU staff will be fully reintegrated into the utility to further strengthen fiduciary capacity and will be available to support implementation of the project. The Government has expressed its preference that EDG be responsible for the implementation of all investments financed by various donors.

50. After signature of the contract between the government and the Operator, the Board of Directors of EDG will supervise the implementation of the MSC on a day to day basis with support of the PIU to be established within MEH. To strengthen monitoring of MSC implementation and avoid potential disputes between the government and the Operator, an independent technical auditor to be financed under component 3 will be in charge of monitoring the fulfillment of key contract obligations by both parties, including the attainment of EDG performance targets.

## **B. Results Monitoring and Evaluation**

51. The Results Framework (RF) detailed in Annex 1 identifies results indicators for the project as a whole as well as for each of its components. MEH will be responsible for collecting, verifying and consolidating information and submitting progress reports to the Bank, on an annual basis for PDO indicators and on a semi-annual basis for the intermediate indicators at component level.

52. Monitoring and evaluation of the project will build on and integrate the monitoring of the Operator's performance undertaken by the technical auditor. Baseline data collected during preparation of the MSC will be used to verify and update baseline data in the Results Framework (RF, Annex1). Similarly, data collected by the independent technical auditor will be used to track progress towards achieving the results agreed for the project. The technical auditor will be required to coordinate report findings closely with the PIU to ensure that data and information are timely and effectively reflected in the RF and readily available for reporting to the Government and the Bank.

## **C. Sustainability**

53. **Government commitment to the reform process.** The sustainability of both the project investments and the broader sector will ultimately depend on the GoG's commitment to potentially difficult reforms. These reforms will need to include significant changes to control and management of the utility, and electricity tariff adjustments such that the utility is able to generate the income it needs to carry out basic operations and maintenance on existing infrastructure, coupled with enforcement of penalties to curb electricity fraud and theft. The Government has expressed this level of commitment to the course of action and has launched the procurement process for the MSC. Nevertheless, the Government will also need to sign a Performance Contract with EDG, setting out performance improvement targets of EDG and the Government's commitment to facilitate the utility recovery plan by: (i) readjusting electricity tariffs to levels that are in line with sector financial sustainability, and (ii) passing legislation that criminalizes electricity theft and fraud, along with developing a satisfactory plan to enforce the

law. Furthermore, GoG will need to further demonstrate its commitment by signing an MSC with full delegation of powers for the management of EDG to the Operator. An effective strategy for training staff at all levels will be a key component of the recovery, with clear results to be reflected in the MSC. It is envisaged that the Operator will rely to the largest extent possible on existing staff to carry out day-to-day operations of the utility, which will facilitate on-the-job training. Additional personnel could be recruited and trained for those positions for which training of existing staff is unlikely to be successful. Capacity building and career development opportunities will empower staff, build participation in the change process and ensure that new skills, practices and processes are internalized.

54. **Design and implementation of the MSC.** The establishment of an effective national electricity utility critically hinges upon adequate design, execution and monitoring of the business plan for the utility through and after the MSC. IFC will provide advice and support to the design and preparation of the MSC to help ensure that the contract creates an appropriate governance structure, properly allocates risks among the key parties involved (including the Operator, the EDG and the government), and clearly lays out their mutual obligations and responsibilities. An effective exit strategy for the MSC will be either: (i) to go into a deeper form of PSP such as a lease contract or partial or full privatization, or (ii) if GoG decided not to seek further PSP, to ensure that a team of well-trained utility staff is in place and is running the utility at least 6 months before the termination of the contract. The Operator will be required to progressively integrate EDG senior management into the running of the utility.

55. **Institutional arrangements.** The project also envisions a solid structure to ensure adequate monitoring and control of the Operator’s performance. In addition to the supervisory role of the MEH and ICE described above, the Government will also appoint a competent Board of Directors before the commencement of the MSC. Management information systems will be installed as part of the recovery plan for the utility, which will provide reliable and real time data to assess operational and commercial activities and track the Operator’s deliverables.

## V. KEY RISKS AND MITIGATION MEASURES

### A. Risk Ratings Summary

<b>Risk Category</b>	<b>Rating</b>
<b>Stakeholder Risk</b>	High
<b>Implementing Agency Risk</b>	
- Capacity	High
- Governance	High
<b>Project Risk</b>	
- Design	Substantial
- Social and Environmental	Moderate
- Program and Donor	Substantial
- Delivery Monitoring and Sustainability	Substantial
<b>Overall Risk</b>	High



## **B. Overall Risk Rating Explanation**

56. The overall risk of the project is also assessed to be High for reasons including: (i) the socio-political tensions related to the democratization process in Guinea over the past 5 years; (ii) the dire situation of the electricity sector and the failure of a previous attempt at implementing PSP in the sector in the 1990s; (iii) the low capacity of institutions including the line ministry and EDG, that will hinder the ability of the government to monitor the private Operator and fulfill its own sector reform obligations; and (iv) the sector priority investment plan, which is not fully funded so far, and whose implementation is a requirement for the full success of the Recovery Plan prepared for EDG. Appropriate risk mitigation measures are built into project design and implementation arrangements in response to identified risks at both stages. Key risks are described in detail under Annex 4 – Operational Risk Assessment Framework.

## **VI. APPRAISAL SUMMARY**

### **A. Economic and Financial Analysis**

#### *Economic Analysis*

57. Project's development impact. The primary beneficiaries of the project will be the electricity customers. The bulk of benefits are expected to derive from more reliable and expanded electricity supply to EDG customers. There will also be a reduction in government subsidies to the electricity sector. Expected improvements accruing from the management services contract (MSC) include enhanced capacity for implementing the recovery plan, better technical management of infrastructure, improved commercial performance, better governance, better human resource management and reduction in fraud. All these improvements are expected to lead to better quality of electricity service and lower cost of supply. The economic analysis (cost-benefit analysis) shows that the project is economically beneficial with an estimated Economic Internal Rate of Return (EIRR) of 33 percent and a Net Present Value (NPV) of US\$34 million (at 10 percent discount rate).

58. Appropriateness of public sector financing. Investments will be financed by the Government with support from concessional donor funds as part of an extensive recovery plan for the national electricity utility. Public financing is the only possible source of financing under the current circumstance of Guinea's dilapidated electricity sector. Substantial private investments are unlikely to flow to the sector until such time that sector financial prospects are brighter. Establishing an effective national electricity utility in the medium term is critical to ensure sector recovery, which will then enable private investments in the sector

59. World Bank Group's value added. The World Bank has a comparative advantage in supporting the Government of Guinea in its comprehensive sector reform efforts in light of its experience in supporting the execution of similar contracts in other African countries. The World Bank has worked in the power sector in Guinea for several years and has built up good client relationships. The WBG's support to this project has multiple benefits: (i) WBG will leverage lessons learned from previous and ongoing MSCs in Guinea and other countries, such as in

Tanzania, Kenya, Liberia and Rwanda; (ii) the Bank team is supporting the GoG in a coordinated approach to the financing of the sector's investment needs, with each donor focusing on a particular area; and (iii) World Bank and IFC Advisory Services are working closely together to ensure that GoG is benefitting from the WBG's long experience with promotion of PSP in the utilities sectors.

### *Financial Analysis*

60. EDG's financial deterioration has accelerated in 2011/2012. EDG incurred losses of GNF 179 billion (US\$25 million) in 2011 and GNF 133 billion (US\$19 million) in 2012. This contrasts with the period 2007-2010 when losses were more manageable ranging between US\$0.5 million and US\$2 million a year. Revenues have not kept up with a soaring cost structure; the rise in costs is driven mainly by higher fuel charges, with increased recourse to thermal plants in an environment of increasing demand, high global oil price and unfavorable hydraulic availability.

61. These significant financial losses over the period 2011-2012 have taken a toll on EDG's balance sheet. Equity has turned negative in 2011 and reached GNF -104 billion (US\$ -15 million) by end-2012. Extreme financial fragility at present inhibits EDG from maintaining its production fleet or renewing and rehabilitating its infrastructure, which translates into a constant decrease of assets' book value and a risk of increased dilapidation of infrastructure. This testifies to the urgent need of recapitalization of EDG coupled with a financial restructuring of the company to be led by the Government as owner of the utility.

62. Under the proposed Project, revenues are expected to grow considerably over the first two years, driven by the increased level of energy injected into the grid subsequent to the commissioning of Kaleta and thermal power plants. Net income in percentage will remain close to zero in 2014 and will decline by 24 percent in 2015 which is expected to be the most difficult year for EDG. Operating subsidy requirements will increase to GNF 601 billion (US\$ 86 million) in 2015 because of a more frequent recourse to thermal generation to meet increased demand, resulting in an increasing fuel bill. The temporary increase in the subsidy will help improve the reliability of supply significantly, which is expected to enhance the willingness to pay of customers.

63. The commissioning of Kaleta in 2015/2016 and the reduced level of technical and commercial losses will start bearing results in 2016. The fuel bill is expected to decline by about 30 percent between 2015 and 2018; which will have a positive impact on gross profit margin that is expected to increase from a loss of -GNF 219 billion in 2015 (-US\$ 31 million) to a gain of +GNF 332 billion (+US\$ 47 million) in 2018. The Operating subsidy is expected to decline by two thirds in 2016 and will no longer be required as of 2018.

### **B. Technical**

64. Enhancement of the utility's managerial and operational capacity. The MSC is the appropriate next reform step given the poor condition of Guinea's power sector and the scale of the challenges it faces, including lack of management capacity. Under this framework, the Operator is entrusted with full management control and authority to implement a range of

recovery measures for a relatively short time period (3 to 5 years) in return for a fee. With the investment plan and other contract obligations in place, the Operator can be effectively entrusted to implement a recovery plan for the utility designed by the Government and establish efficient management and operations.

65. Alternatives discussed with the Government also included a concession and a service contract. Under a concession, the private Operator (concessionaire) takes a majority share in the utility, and bears full commercial risks for managing its assets and liabilities. Market sounding by the Government through a consultant in 2013 indicated that private Operators were not ready to take this type of risk given current sector performance. In addition, private finance for investments is available only if the operating cash flow of the utility is expected to provide an adequate return on investment. A *service contract* is similar to a MSC, but the head of the utility is still appointed by the Government, while the rest of the management team is appointed by the private Operator. Based on the Power Sector Diagnostic and Recovery Plan, the Government concluded that such a service contract would not empower the Operator sufficiently and would lead to excessive Government interference in day-to-day utility management.

66. The investments supported by the proposed project were identified in the Recovery Plan, which was developed by a reputable international consultancy firm. Around 40 percent of total investment under the proposed IDA-funded project aims to improve distribution network conditions and around 25 percent of funds are earmarked for improvements of commercial operations, while the balance will be used to fund the MSC and technical assistance. Bank appraisal confirmed that the investments will help to remove the distribution network that are seriously reducing the capacity to reach end-users. The soon to be commissioned additional thermal capacity and the Kaleta hydro power project will not benefit end-users unless the current distribution infrastructure is revamped. It should be stressed that rehabilitation and upgrading of the distribution system will also reduce the frequency of power interruptions due to faults in the network, and hence improve the reliability of services.

67. For sustainability of the investments, capacity building of EDG's grid operations and maintenance teams is of paramount importance. The project will enhance that capacity by providing sufficient modern equipment and tools to the utility and train its technical staff involved in these activities in their use. This is expected to also minimize the intervention time of the utility in case of faults in the network and in emergency. The response to emergency situations of EDG has been slow due to limited capacity in terms of human resources and equipment.

68. Finally the project is meant to turn EDG into a cost-recovery utility, capable of generating sufficient revenues to cover its operation and maintenance expenditures. Professional management by the Operator, with sufficient investments in modern administration, financial and commercial management systems, good billing and recovery systems, and the introduction of prepayment meters for low voltage customers and post-payment meters for large consumers, are critical for EDG to improve its operations.

### **C. Financial Management**

69. The financial management arrangements will satisfy the Bank's minimum requirements under OP/BP10.00 after the proposed mitigation measures are implemented. The overall FM residual risk for the project is deemed to be Substantial (S).

70. A financial management assessment concluded that the MEH does not have sufficient FM capacity to meet Bank requirements. EDG, by contrast, has experience in managing the ongoing IDA-funded ESEIP. The last FM supervision of the project FM performance is satisfactory. As the ESEIP PIU staff are all EDG employees, their knowledge of Bank financial procedures are expected to be relied upon by the Operator (who will itself be selected on the basis of its fiduciary capacity) during the implementation phase of the project.

71. Before the project becomes effective, MEH PIU and EDG will each appoint a financial management officer familiar with Bank procedures as part of their respective project implementation teams. The project implementation manual will include FM procedures encompassing accounting, budgeting, internal control, reporting, funds flow and disbursement and audit arrangements. Furthermore, an accounting software under a multi-site version and multi-project with adequate consolidation capacity for the PIU of MEH will be set up and customize to ensure harmonization of financial data between the two Implementing Agencies (IAs). In addition, each IA is expected to recruit an accountant in support to the FM officer, who will be responsible for the day-to-day record of the financial transactions in the accounting software.

72. In order to ensure the success of the proposed sector recovery project, special attention will be paid to reducing any risks of corruption or poor governance. An independent technical auditor will be recruited to certify the Operator's performance. The payment of the Operator will be approved by the Government based on the recommendations of the technical audits.

### **D. Procurement**

73. The procurement risk is rated High (H) before mitigation and Substantial (S) after the implementation of mitigation measures. The potential risks identified are: (i) multiple implementation agencies; (ii) the insufficient skills and experience with Bank procurement procedures of the MEH's staff; (iii) the lack of a procurement department and procurement manual for EDG. Risks related to the weak capacity of MEH will be mitigated by the recruitment of a new PIU, including a well-qualified procurement specialist. Risks within EDG are mitigated by the competence of the PIU staff already established for the ESEIP project (who are EDG employees) and by the recruitment of an Operator under the MSC. The MSC will clarify roles and responsibilities of the utility and the selected Operator, including those related to procurement. The RFP for the MSC will include a requirement for a qualified Procurement Specialist with international experience in procurement and familiar with World Bank procurement procedures. Detailed procurement risk mitigation measures are presented in Annex 3.

74. Procurement for the proposed project will be carried out in accordance with the “Guidelines: Procurement of Goods, Works, and Non-Consulting Services under IBRD Loans and IDA Credits & Grants by World Bank Borrowers”, dated January 2011; and “Guidelines: Selection and Employment of Consultants under IBRD Loans and IDA Credits & Grants by World Bank Borrowers” dated January 2011, the “Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants”, dated October 15, 2006 and revised in January 2011, and the provisions stipulated in the legal agreement.

75. MEH will carry out procurement related to the implementation of activities under component 1 and 3 of the project. The selection of the MSC will be carried out by MEH and IDA non-objection will be sought at every necessary step in the procurement process. EDG will (through the ESEIP PIU or under management of the Operator) be responsible for procurement related to the activities envisaged under Component 2.

76. An assessment of the procurement capacity of EDG and MEH in February 2014 concluded that: (i) MEH is not familiar with Bank Procurement procedures; (ii) EDG does not have a procurement department but benefits from an existing PIU under the ESEIP project which has a procurement officer who is familiar with Bank’s procurement procedures. The procurement assessment recommends that MEH build procurement capacity sufficient to adequately administer Components 1 and 3 of the project through the hiring of a procurement specialist for a new PIU and that, as a transition measure, MEH will be supported by IFC during the MSC selection process.

## **E. Environmental and Social**

77. The project is expected, in general, to positively impact the beneficiary communities by improving the quality and reliability of electricity services that are provided to them. The net social and environmental effect of the project is expected to be highly positive as greater access to reliable energy will improve living conditions for the beneficiaries in Conakry. Households, which currently depend on illegal connections for electricity, will not be left without electricity but will be connected by legal connections through extension of the network; and businesses and institutional users (local government, schools, places of worship, etc.) would also benefit from more reliable service provision. The potential negative environmental and social impacts of the proposed project activities are expected to be small-scale and site-specific.

78. The Environmental Assessment (EA) category of the project is B, since there are no significant and/or irreversible adverse environmental and social issues expected from any of the project activities. Infrastructure investments largely include the existing distribution network of Conakry. Impacts are anticipated as a result of the activities to reinforce, rehabilitate, and expand the primary and secondary MV distribution grid and selected components of the LV distribution grid. The World Bank policies for Environmental Assessment (OP/BP 4.01) and Involuntary Resettlement (OP/BP 4.12) are triggered. An environmental and social audit of EDG and a Resettlement Policy Framework (RPF) have been prepared, consulted upon as well as disclosed both in-country and at Infoshop on April 16, 2014. A description of the environmental and social implementation arrangements are presented in Annex 3.

### *Social*

79. An RPF has been prepared as the exact locations for the rehabilitation of infrastructure under Component 2 have yet to be identified. The RPF contains: (i) an assessment of the country regulatory and institutional framework for land acquisition and compensation; (ii) likely categories of affected assets and parties, as well as the scope of impacts; (iii) a gap analysis and a compensation framework consistent with OP 4.12 and the national legislation; (iv) measures to assist vulnerable groups; (v) a consultation framework to enable the participation of affected populations in the preparation of specific resettlement plans; (vi) an institutional framework to implement the resettlement policy framework; (vii) a grievance redress mechanism; and (viii) a monitoring and evaluation framework and budget. The RPF will also feed into the Operator's social obligations. Consultations with stakeholders were carried out during RPF preparation and the final document has been disclosed both in-country and in the World Bank InfoShop prior to project appraisal.

80. Under Component 2, potential negative impacts are possible from the rehabilitation of the dilapidated distribution facilities (sub-component 2.A). These facilities largely include the existing distribution network of Conakry. Impacts are anticipated as a result of the activities to reinforce, rehabilitate, and expand the primary and secondary MV distribution grid and selected components of the LV distribution grid. This work is similar to the ongoing rehabilitations in the district of Kaloum in Conakry, which are financed by the ESEIP and have been implemented without any safeguards issues. OP 4.12 is triggered to cover any potential land acquisition and/or subsequent losses of assets or restrictions of access to resources. In case compensation is required, the costs will be covered by the GoG. The RPF contains guidance for preparing specific Resettlement Action Plans (RAPs) for issues related to land acquisition and loss of economic activities and assets to minimize negative impacts on Project Affected Persons. Any RAPs will need to be cleared by relevant authorities in Guinea and by the World Bank and subsequently disclosed in-country and at the World Bank's InfoShop before any civil works can begin.

81. The Operator will be responsible for the implementation and monitoring of the RPF and/or subsequent RAPs to ensure compliance with national and Bank policies and procedures. Training in safeguards will be provided by Bank safeguards staff to facilitate these activities. Regular monitoring reports (two per year) on the implementation of environmental and social safeguards provisions will be provided to the Bank for approval. These reports will be verified during project implementation support missions, which will include environmental and social safeguard experts.

### *Environmental*

82. An environmental and social audit of EDG has been finalized and was disclosed before project appraisal. It has identified the potential environmental impacts of the current practices of EDG in the context of its distribution and connection works and will spell out the requirements to be applicable to EDG in terms of environmental and social systems that will have to be implemented. These social and environmental requirements will be included in the bidding

documents for the selection of the Operator. In particular, best practices for carrying out the distribution and connection works will be spelled out and their implementation monitored during project implementation. Annex 3 presents the main requirements for environmental and social systems applicable to EDG (and MEH where relevant).

## Annex 1: Results Framework and Monitoring

### Republic of Guinea: Power Sector Recovery Project

Project Development Objective: The Project Development Objective is to improve the technical and commercial performance of the national power utility.										
Project Level Result Indicators	Core indicator	Unit of Measure	Target Values					Frequency and Reports	Responsibility for Data Collection	Description
			Baseline (2014)	YR1 (2015)	YR2 (2016)	YR3 (2017)	YR4 (2018)			
Electricity losses per year	X	percent	42%	40%	35%	30%	27%	Annually	EDG	Volume of electricity injected into the grid-volume of electricity billed)/Total net injected generation. All values refer to Conakry Capital Area. The current value of this indicator is not accurately known since the LV customer billing is mostly based on a fixed rate (without energy metering). Should the baseline be revised during implementation, the annual loss reduction in percentage will serve as reference.
Direct project beneficiaries of which female (percentage)	X	Number (million)	1500000	1630000	1760000	1900000	2000000	Annually	EDG	Number of people receiving upgraded LV supply in million. This is based on overall number of EDG customers, and the following ratios: percentage of customers who are households (79%) and average number of people per household (8).
		percent	52%	52%	52%	52%	52%			
Bill collection rate		percent	77%	80%	86%	92%	96%	Annually	EDG	The current value of this indicator is not accurately known. Should the baseline be revised during implementation, the billing improvement in percentage will be will serve as reference.
Average daily hours of service	X	number	12	14	16	17	18	Annually	EDG	Number of hours of electricity service provided across the EDG network on average per day



<b>Intermediate Outcome Indicators</b>										
Component 1: Operator appointed		Yes/No	No	Yes	Yes	Yes	Yes	Annually	MEH	Operator is expected to be selected by end of September 2014
Component 2: Distribution lines rehabilitated under the project	X	Km	0	15	40	60	96	Annually	EDG	Cumulative
Component 2: Sub-stations refurbished		Number	0	10	30	55	67	Annually	EDG	Cumulative
Component 3: Technical auditor appointed		Yes/No	No	Yes	Yes	Yes	Yes	Annually	MEH	Auditor expected to be selected early 2015

## Annex 2: Detailed Project Description

### Republic of Guinea: Power Sector Recovery Project

1. The proposed project is designed to reinstate the viability of the Guinean energy sector based on the recommendations of the Power Sector Diagnostic and Recovery Plan adopted by the Government. Though currently performing poorly, the Guinean power system could become financially sustainable in the medium term. Such a turnaround is only possible if (i) sector governance were radically improved, (ii) electricity losses (technical and commercial) were reduced; (ii) efficient sector maintenance and investment were enforced; and (iii) additional resources were to be mobilized from donors and increasingly from the private sector to accelerate the implementation of the rehabilitation and system development investment, and energy conservation measures.

2. The project is part of a multi-partner collaborative effort to finance the aforementioned priority power projects that includes the African Development Bank (AfDB), the Islamic Development Bank (IsDB), the European Investment Bank, the ECOWAS Bank for Investment and Development (EBID), the French Development Agency (AFD) and the Kuwait Fund. The priority power projects and financing are detailed in Table 1 below. Specifically, the project will support EDG’s commercial improvement (PP3), institutional reform and power sector restructuring (PP4), and rehabilitation and extension of the distribution network (PP7). In doing so, the project aims to contribute to restoring the financial viability of the sector by sufficiently improving EDG’s commercial and technical performance so as to limit dependence on Government support and attract increased PSP. This will be achieved in part by financing the MSC for a private operator with the capacity necessary to effectively execute a turnaround of the utility.

**Table 1: Priority Power Projects under EDG’s Recovery Investment Plan**

Priority Project	Budget Estimate (Million USD)	Source of Financing ( <i>intention</i> )	Unfinanced (Million USD)
PP1 : Rehabilitation and reinforcement of the existing hydropower plants	76.5	BND, FKD, EIB, IDA	-
PP2 : Rehabilitation of existing thermal plants of Tombo 3 and 5	51.5	IsDB	-
PP3 : Support to improvement of operational performance of EDG	50.6	IDA , AfDB, AFD, IsDB	0.2
PP4 : Institutional reform and restructuring of the power sector	4.4	AFD, IDA, AfDB	-

PP5 : Rehabilitation and extension of transmission system	130.1	BND, China EXIM BANK, EIB, ECOWAS, IDA	17.7
PP6 : Commissioning of additional 100 MW of thermal capacity	146.0	BND, Abu Dhabi Fund	-
PP7 : Rehabilitation and extension of Conakry distribution network	217.0	IsDB, AfDB, IDA	100.8
Total	676.1		118.7

3. While the success of the turnaround will depend in large part on commercial factors such as increasing billings, collections, and reducing electricity theft, it will also require technical improvements to deliver a greater amount of the energy generated to end users and expand the paying customer base. As such, the project will provide financing for necessary rehabilitation of the distribution grid in targeted areas. Finally, the project will help to create the business environment required for sustainable operation of a utility, including the legislative basis for reducing electricity theft and capacity development for better sector oversight at the government level.

#### A. Project Components

4. The project is therefore structured around three main components: (1) Financing of a Management Services Contract to support EDG performance improvement, (2) Selected investments to support improvement of Conakry distribution network and commercial performance of EDG, and (3) Technical assistance to MEH and project implementation support.

5. **Component 1: Financing of a Management Services Contract to support EDG performance improvement (US\$14 million).** This component will finance a Management Services Contract (MSC) between MEH and a private firm (“the Operator”) with sufficient technical and fiduciary capacity to provide management, operation and capacity building services for EDG over 3-5 years. The Operator is being selected through a rigorous and competitive process on the basis of technical capacity and a proposed business plan. This component will fund the fees to be paid to the Operator, including fees for mobilizing a full-time team of senior managers to run EDG, experts in specialized areas of utility management for specific needs such as training and capacity building for utility personnel and communications to target EDG customers. The MSC will also include a performance component to be paid should EDG exceed certain performance outputs or targets.

6. The procurement process is following Bank Consultant Guidelines, and the proposed selection method is Quality and Cost Based Selection (QCBS). Procurement has already

commenced with the publication of an Invitation of Expressions of Interest<sup>3</sup>. Preference will be given to Operators with a track record of investing in public utilities as the GoG is interested in finding a strategic partner willing to invest in EDG at a date to be mutually agreed. Under QCBS, there is scoring for technical proposal quality and for financial proposals (to a maximum ratio of 30%). Contract award is expected by the end of September 2014.

7. The Operator will be given fully delegated authority to run EDG as a vertically integrated electricity utility, including its reorganization or restructuring in line with recommendations made in the Power Sector Diagnostic and Recovery Plan, and will be the solely authorized agent to administer its assets and control all business functions for the duration of the contract. The main deliverable of the MSC will be the implementation of a business plan proposed by the Operator – and agreed with the Government – that will reflect the objectives and investment activities of the Power Sector Diagnostic and Recovery Plan. As such, the MSC will be signed between the Government and the Operator, and designed to strengthen performance of EDG through improvements in staff skills and morale, data management, and grid infrastructure.

8. To that effect, services will center on, but will not be limited to:

- a. Organizational reinforcement: This activity will include (i) an organizational audit to assess all functions and needs across the enterprise, to enable adjustments to resource allocations, procedures, or structure; (ii) deployment of integrated management software; (iii) acquisition of operation and maintenance (O&M) equipment; (iv) HR restructuring as needed; and (v) setup of a staff training curriculum.
- b. Improvements to commercial performance: This activity will include (i) the preparation and implementation of a commercial improvement strategy; (ii) the integration of client management software; (iii) the creation of a customer service center; (iv) the management of customer, infrastructure and equipment surveys to obtain accurate benchmark data; (v) the generalization of consumption based billing (currently flat rate for most households); (vi) the progressive rollout of prepayment meters to new customers; and (vii) the design and implementation of an anti-fraud policy.
- c. Demand side management: This activity will include (i) the creation of a demand side management unit within EDG; (ii) an audit of large consumers; (iii) partnering with large consumers to facilitate strategic reductions in consumption; (iv) the deployment of efficient light bulbs (minimum 1.5 million); and (v) the management of reactive power.
- d. Infrastructure rehabilitation: This activity will include the implementation of key investment improvements through procurement of equipment and works that are

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<sup>3</sup>The Ministry of Energy and Hydraulics published an Invitation for Expressions of Interest for Management Services Contract for *Electricité de Guinée* (EDG) on April 14, 2014 to solicit responses from companies having experience in the power business, in particular experience in managing, operating and investing in electricity distribution utilities.

separately financed by the government with support from donors. A portion of these investments will be financed by Component 2 of the project.

- e. Improvements to operation and maintenance of EDG infrastructure: This activity will include comprehensive training for staff at all levels within EDG.
9. The estimated cost of the MSC includes fixed fees to pay for salaries of a senior management team for the utility, specific technical assistance from the Operator in specialized areas needed to support the activities above, a comprehensive training plan for utility personnel, and a communication plan targeted at EDG customers. The contract will also include financial incentives for the Operator to exceed set performance targets.
10. The terms of reference of the MSC, to be specified by the Government in the request for proposals, will accurately define roles and responsibilities of the Government and the Operator; agreed business plan and results to be achieved by the Operator in the execution of activities included in the broader recovery plan; key performance indicators and procedures for assessing the Operator's performance; and a time schedule and available resources to implement the business plan. IFC will assist the Government in designing the MSC, selecting and negotiating with the Operator, so that the latter is in place by end of September 2014. The MSC will include a detailed business plan to be proposed by bidders and agreed with the selected Operator, which will reflect the Operator's detailed plan for fulfilling the terms of reference and achieving the objectives of the Recovery Plan. It is expected that the key performance indicators' values will be revised at the end of the first year of the MSC based on the Operator's and technical auditor's findings during implementation, as the reliability of sector data is currently poor.
11. **Component 2: Selected investments to support improvement of Conakry distribution network and commercial performance of EDG (US\$33.7 million).** This component will support investments that will enable EDG to improve the reliability of electricity supply in the capital city of Conakry where 80 percent of its clients are located.
12. In response to frequent rolling blackouts, this component further adds to the ESEIP financed rehabilitation and upgrading of the network in the district of Kaloum and AfDB/IsDB financed rehabilitation works in Ratoma and Matoto. Proposed investments under this component are extracted from the Government's priority investment plan but exact scope of each activity will be finalized once the Operator is in place.
13. *Sub-component 2.A – Improving distribution network conditions in Conakry.* This sub-component will support the priority investment program of the GoG including:
- i. Rehabilitating and upgrading the dilapidated distribution infrastructure in the Dixinn district of greater Conakry. Figure 3 below shows the detail of Conakry Districts. The scope of work will include the replacement of obsolete low voltage cables and accessories, rehabilitation of existing and construction of new medium and low voltage lines. Other works identified for financing include the rehabilitation and construction of existing and new sub-stations, provision of

transformers, and the completion of up to 15,000 single-phase and 3,000 three-phase connections.

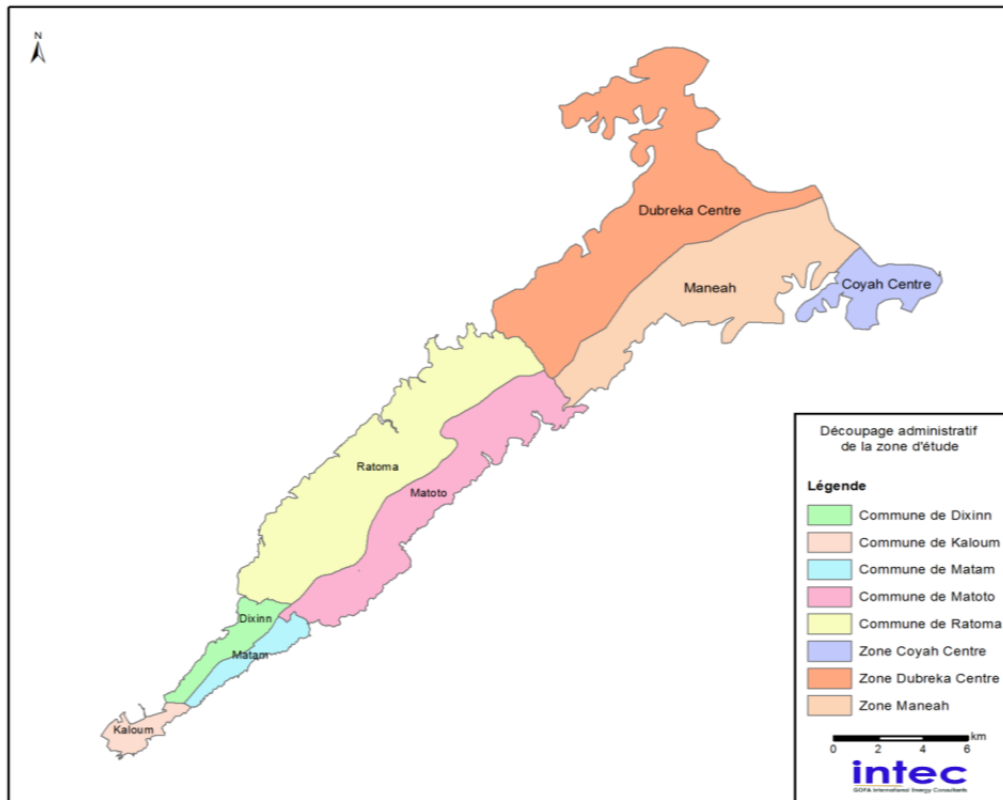


Figure 1: Conakry districts

- ii. Provision of operation and maintenance equipment and tools. This activity will finance equipment and toolkits for EDG field teams to enable them to operate and maintain the electricity grid in a safe, efficient and sustainable way. These will include but not be limited to cranes, trucks, motorbikes, ladders, scaffolds, forklifts, toolboxes, hard hats, clothes, shoes, gloves, hoods and sleeves, as these are in short supply.
- iii. Supply and installation of the protection system of hydropower plants to ensure sustainable and safe supply of power.
- iv. Equipment to compensate for reactive power and improve power factor in the system. This is essential to improve the quality of electricity for industrial customers of EDG.
- v. Owner's engineer for rehabilitation works and network extension in Dixinn district, and for rehabilitation of household connections and standardization of informal and illegal connections.
- vi. Implementation of social and environmental safeguard measures.
- vii. Contingencies and unallocated.

14. Sub-component 2.B – Improvement of Commercial performance of EDG. Investments under this sub-component will include:

- i. Implementation of a census of all EDG customers and revising the client database accordingly. Each client will be assigned a specific client code to facilitate account management.
- ii. Upgrading the integrated IT management system of EDG. The utility will be supplied with new hardware with sufficient capacity, and integrated management software to manage administration, financial and human resources, stocks, client and billing system. Relevant EDG staff will be trained on the use of the new system.
- iii. Rehabilitation of household connections, including standardization of informal and illegal connections, in Kaloum, Ratoma and Matoto districts.
- iv. Contingency and unallocated.

15. **Component 3: Technical Assistance to MEH and Project Implementation Support (US\$2.3 million).** This component envisages the following three sub-components.

16. *Sub-component 3.A: Technical Assistance to the MEH.* This sub-component will support the MEH's supervision of the Operator, and provide Technical Assistance to MEH to carry out other sector policy and oversight activities. Activities will include:

- i. Technical assistance to implement a financial restructuring of EDG: this is a key component of the Recovery Plan that will need to be implemented in the early years of the MSC. As the only shareholder, the Government will need to take the lead in implementing this restructuring.
- ii. An independent technical auditor to directly monitor Operator's deliverables and verify key performance indicators provided by EDG. Assessments will be carried out on a quarterly basis depending on the schedule agreed for achieving results in the execution of the MSC business plan, and evaluation reports will be prepared mid-way and at the end of the MSC. Reports on performance will be delivered accordingly to the MEH and the ICE. The technical auditor will also monitor the implementation by the Government of its undertakings under a Performance Contract to be signed between the Government and EDG, including tariff and anti-fraud policy.
- iii. Technical assistance to develop the GoG's anti-fraud policy and legal instrument to enforce it.

17. *Sub-component 3.B: Project Implementation Support.* This component will cover the costs related to the utilization of experts and equipment for the efficient operation of the Project Implementation Unit (PIU) within MEH in the following areas: (i) procurement of goods and consultant services, (ii) financial and disbursement managements, (iii) safeguards supervision, and (iv) monitoring and evaluation.

## **B. Project Financing**

18. The project will be entirely financed by IDA. The lending instrument is an Investment Project Financing (IPF). The Ministry of Finance will receive an IDA grant in the amount of

US\$27.4 million and an IDA credit in the amount of US\$22.6 million. Part of the IDA funds will be on-granted to EDG through a Subsidiary Agreement between the GoG and EDG.

### C. Project Cost

**Table 2: Cost estimates by Component**

	<b>Budget (Million US\$)</b>
<b>Component 1: Support the improvement of EDG's performance through a Management Services Contract</b>	
Management contract for EDG (Organizational Audit of EDG; TA on Administration and human resources management improvement; Human resources capacity building plan; Technical assistance for commercial performance; Program for commercial performance enhancement; Survey of private clients LV; etc.)	14.0
<b>Component 2: Restoring the reliability of power supply in Greater Conakry</b>	
Rehabilitation and upgrade of the distribution infrastructure in Dixinn district	11.7
Acquisition of operation and maintenance equipment and tools	5.0
Supply and installation of the protection system of hydropower plants against voltage surges	1.0
Reactive Power Compensation on the interconnected system	1.4
Integrated IT Management System	4.0
Census on EDG customers and creation of client data base management system	2.0
Rehabilitation and standardization of household connections in Kaloum, Ratoma and Matoto districts	6.0
Owner's engineer	0.8
Implementation of Safeguards measures	0.3
Contingency	1.5
Sub-total	33.7
<b>Component 3: Technical Assistance to MEH, Monitoring and Evaluation and Project Implementation Support</b>	
Financial restructuring consultant	0.7
Independent auditor for management services contract and contract between EDG and Government	0.5
Technical assistance to develop anti-fraud policy and legal instrument to enforce it	0.1
Project Implementation Support	1.0
Sub-total	2.3
<b>Total</b>	<b>50</b>



## **Annex 3: Implementation Arrangements**

### **Republic of Guinea: Power Sector Recovery Project**

#### **A. Institutional and Implementation Arrangements**

1. The Inter-ministerial Commission for Energy (ICE)<sup>4</sup> and its Technical Committee<sup>5</sup> will be responsible for overall strategic guidance and oversight of the project.
2. MEH will be the project implementation agency for components 1 and 3 of the project, including the procurement and administration of the MSC. Given the limited capacity of MEH, a Project Implementation Unit will be established within MEH. EDG will be the project implementation agency for component 2 and will be responsible for the management of all related technical, fiduciary, and safeguards aspects. Under the ongoing Electricity Sector Efficiency Improvement Project (ESEIP), EDG has acquired extensive experience with project management in accordance with World Bank policies. At the closure of the ESEIP, the ESEIP PIU staff will be fully integrated into the utility to further strengthen fiduciary capacity.
3. After signature of the contract between the government and the Operator, the Board of Directors of EDG will supervise the implementation of the MSC on a day to day basis with support of the PIU to be established within MEH. To strengthen monitoring of MSC implementation and avoid potential disputes between the government and the Operator, an independent technical auditor to be financed under component 3 will be in charge of monitoring the fulfillment of key contract obligations by both parties, including the attainment of EDG performance targets.

#### **B. Financial Management, Disbursement and Procurement**

##### *Financial Management*

4. The day to day financial management of the financing will be handled by the MEH PIU and the Operator, who will be responsible for components 1 and 3, and 2 respectively. The PIU within MEH will be appropriately staffed. EDG, after the contracting of the Operator selected under the MSC procurement process, will have sufficient fiduciary and safeguards capacity to manage Component 2 in line with Bank policies.
5. Financial management assessments of the implementing entities, i.e. MEH and EDG have been conducted by the Bank in accordance with the Financial Management Manual issued on March 1, 2010. The assessment revealed that the MEH does not have sufficient FM capacity in place to meet Bank requirements. EDG, by contrast, has experience in managing an IDA funded project, the ongoing ESEIP that has adequate FM arrangements in place. As substantiated by the last FM supervision of the project, the FM performance is satisfactory, and current arrangements

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<sup>4</sup> The *Commission interministerielle de coordination et de suivi de la réforme du secteur de l'électricité* was formed on July 30, 2012; it is chaired by the Prime Minister and has 10 members including the Minister of Energy and Hydraulics and the Minister of Economy and Finance.

<sup>5</sup> The Technical Committee for Energy was formed in August 2012; it is chaired by the Minister of Energy and includes 10 members representing key government entities and EDG.

are acceptable: (i) adequate staffing, comprising one financial officer and one accountant; (ii) the procedures manual exists and describes roles and responsibility of all involved stakeholders in ESEIP; (iii) books of accounts and supporting documents are properly kept in respect of all expenditures with a mono-project accounting software; (iv) the audit for the year ending December 2012 for the project was submitted on time, and was unqualified and the related recommendations made to strengthen the internal control system have been implemented. As the ESEIP PIU staff are all EDG employees, their knowledge of Bank financial procedures are expected to be relied upon by the Operator (who will itself be selected on the basis of its fiduciary capacity) during the implementation phase of the project.

6. MEH PIU and EDG will appoint two financial management officers (one for each IA), both familiar with Bank procedures, to be part of their respective project implementation teams. In addition, MEH and EDG will elaborate an implementation manual including FM procedures encompassing accounting, budgeting, internal control, reporting, funds flow and disbursement, and audit arrangements. Furthermore an accounting software under a multisite version with adequate consolidation capacity for the PIU of MEH will be set up and customized to ensure harmonization of financial data between the two IAs. In addition, it is expected each IA will recruit an accountant in support to the FM officer, who will be responsible for the day-to-day record of the financial transactions in the accounting software

7. A 2007 PEFA assessment noted challenges in the area of budget preparation, execution, monitoring and oversight. The report recommended a multiyear action plan to achieve measurable progress in public financial management area. In 2008, Guinea adopted a comprehensive public financial management reform strategy developed with IMF assistance that aimed, among other things, at revising an inconsistent and outdated legal framework for public financial management and adopting a new procurement bill developed with the support of an IDA grant. The first priority of the Guinean authorities is to re-establish basic controls over public finances, by enforcing compliance with existing rules and regulations before engaging in a comprehensive reform of public financial management. This is to be achieved in stages for which progress to date has been registered including the vote of a revised procurement law to parliament, the convergence toward a single treasury account, the use of exceptional budget procedures that has been drastically curtailed. The Bank supports the ongoing efforts through the implementation of the Economic Governance Technical Assistance and Capacity Building project which aims at strengthening the capacity of the Government of Guinea to prepare, implement and monitor reform programs in public financial and human resource management.

**Table 3: Financial management risks and mitigation measures**

<b><u>Risk</u></b>	<b><u>Risk Rating</u></b>	<b><u>Risk Mitigation Measures/comments<sup>6</sup></u></b>	<b><u>Residual Risk Rating</u></b>	<b><u>Remark</u></b>
<b>Inherent Risks:</b>	<b>S</b>		<b>S</b>	
<b>Country:</b> Poor governance and associated risks from a poorly performing public financial management system and weak procurement practices	<b>H</b>	The Economic and Governance TA and Capacity Building Project supports the PFM reforms	<b>H</b>	Some improvements have been noted in the PFM following the commitment of the new Government to re-establish basic controls over public finances
<b>Entity:</b> No value for money i.e. the private Operator (Operator) might be paid although agreed results are not achieved	<b>S</b>	The oversight of the ICE over the Operator payment based on its performance audited by a technical auditor would contribute to mitigate risk	<b>S</b>	
<b>Project:</b> Resistance to change within EDG could jeopardize the project development objective	<b>S</b>	Communication campaign and an implementation of a change management strategy will be made to consumers to clearly explain the benefit they can expect from the implementation of the project	<b>S</b>	
<b>Control Risks:</b>	<b>S</b>		<b>M</b>	
<b>Staffing:</b> Current capacity within MEH is not sufficient to handle FM.	<b>H</b>	Establish a PIU within MEH with sufficient fiduciary capacity, including recruitment of: (i) a well-qualified FM officer, and (ii) an accountant.	<b>S</b>	Prior to effectiveness  Two months after effectiveness (not a covenant)
<b>Budgeting:</b> (i) Variations are not authorized nor monitored and no revisions take place in the budget during the year  (ii) Budget may be based on unrealistic expenditures forecast and costing	<b>S</b>	The accounting, administrative and financial procedures including the budgeting process from elaboration and adoption to follow up described in the ESEIP manual will be included in a Project Implementation Manual and apply to all implementing entities.	<b>M</b>	Prior to effectiveness

<sup>6</sup> Those mitigation measures that are highlighted in italics will be dated covenants in the project financing agreement; other mitigation measures will be time-bound actions, but will not be dated covenants.

<b><u>Risk</u></b>	<b><u>Risk Rating</u></b>	<b><u>Risk Mitigation Measures/comments<sup>6</sup></u></b>	<b><u>Residual Risk Rating</u></b>	<b><u>Remark</u></b>
<b>Accounting :</b> Delays in book keeping due to lack of an appropriate accounting software and staff workload	S	Accounting procedures that include a chart of accounts, accounting routine and administrative activities will be included in a Project Implementation Manual and apply to all implementing entities.  Accounting software will be procured and/or upgraded to multi-projects version	M	Prior to effectiveness  Within three (03) months of effectiveness (not a covenant)
<b>Internal Control</b> Inadequate internal control procedures  Results not obtained in return of the Operator payment	S	A Project Implementation Manual, describing the roles, processes, and procedures governing the project will be prepared.  Under the responsibility of MEH, an independent technical auditor will be recruited to audit the performance of the Operator and provide the go ahead for payments	S	Prior to effectiveness
<b>Funds Flow</b> Funds might be diverted, used for non-project eligible purposes or comingled with other accounts	S	Open a Designated Account each implementing entity for the project in a commercial Bank.	M	Prior to disbursement for relevant components
<b>Reporting</b> Delays might occur in submission of Interim Financial Reports (IFR) due to inadequate accounting software	S	The acquisition or upgrade (as appropriate) of the existing accounting software to a multi projects version and its reconfiguration for automatic production of IFRs will mitigate the related risk	S	Within Three (03) months of effectiveness (not a covenant)
<b>Auditing:</b> Delays on external audit due to a lack of capacity of the Chamber of accounts of the Supreme Court	S	An external auditor with ToR acceptable to the Bank will be recruited	S	Within Six (06) months of effectiveness
<b>Overall Risk:</b>	<b>S</b>		<b>S</b>	

### Conclusion of the assessment

8. The FM residual control risk at preparation is **Substantial**. The hereafter proposed action plan and financial management arrangements for this project are considered adequate to meet the Bank's minimum fiduciary requirements under OP/BP10.00.

## FM and disbursement arrangements

### *Staffing and Training*

9. The project FM staff will consist of one financial management officer and one accountant both familiar with Bank procedures for each implementing entity. They will benefit from training conducted by Bank FM team during implementation as needed.

### *Flow of funds and disbursement arrangements*

#### *Flow of funds*

10. There will be two Designated Accounts (DA) denominated in US\$ to be maintained in a commercial bank and managed by each project implementing entity. Each DA will be managed according to the disbursement procedures described in the Administrative, Accounting and Financial procedures and the Disbursement Letter. Funds will therefore flow from the DA in US\$ to a sub-account in GNF. Local suppliers and contractors will be paid through the sub-account in GNF.

#### *Disbursement*

11. Through each DA, the disbursement will be transaction-based. The first advance would represent about four (4) months of project activities. The other methods of disbursing the funds (reimbursement, direct payment and special commitment) will also be available to the project. All documentation for all transactions shall be retained by the implementation entities and shall be made available for audit and to the Bank and its representatives, if requested. Following a review of IFRs submitted during the first year and the overall project performance, the Association may consider shifting the project to the report-based disbursement method, subject the project fulfilled all required criteria defined by CTR.

**Table 4: Allocation of Funds (IDA Credit) by Category**

<b>Category</b>	<b>Amount of the Credit Allocated (expressed in USD)</b>	<b>Amount of the Grant Allocated (expressed in USD)</b>	<b>Percentage of Expenditures to be Financed (inclusive of Taxes)</b>
(1) Goods, works, non-consulting services, consultants' services, Training and Operating Costs for components 1 and 3 of the Project	7,400,000	9,000,000	100%
(2) Goods, works, non-consulting	15,200,000	18,400,000	100%

services, consultants' services, Training and Operating Costs for component 2 of the Project			
<b>TOTAL AMOUNT</b>	22,600,000	27,400,000	

***Budgeting arrangements***

12. The project budgeting process will follow Bank procedures and be clearly defined in the Project Implementation Manual. The budget will be adopted by the ICE before the beginning of the year and monitored through the project accounting software. The project budget will be submitted to IDA for no objection.

***Accounting policies and procedures***

13. Project accounts will be maintained and supported with appropriate records and procedures to track commitments and safeguard assets. Annual financial statements will be prepared by the IAs using multi-site accounting software which will be designed during project preparation and used to generate acceptable IFRs. The software will be set up at each IA to ensure harmonization in the financial data and facilitate related consolidation for reporting or audit purposes. The accounting policies and procedures will be documented in the accounting procedures. The project through its administrative and financial management units will apply the Organization for the Harmonization of Business Law in Africa (OHADA) accounting principles.

***Internal controls and internal audit***

14. A Project Implementation Manual, including accounting administrative and financial procedures, will be elaborated prior to effectiveness. To maintain a sound control environment, the project team is expected to follow the control mechanisms that will be described in the manual of procedures. The said manual will then ensure that adequate internal controls are in place for the preparation, approval and recording of transactions as well as segregation of duties. The manual will set forth the role and responsibility of each stakeholder including the ICE, MEH, EDG, and the Operator. The manual will be subject to update as needed.

***Reporting and Monitoring***

15. EDG will be required to send financial data (including a financial report) related to activities under Component 2 in a timely manner so that the MEH PIU can prepare consolidated quarterly IFRs during project implementation. The reporting format will be documented in the administrative, financial and accounting procedures. The said Interim Financial Reports will be furnished to the Bank not later than 45 days after the end of the quarter. Consolidated annual financial statements will be prepared by the PIU and will be subject to annual external audits and

these statements will comply with OHADA accounting system (SYSCOHADA) and World Bank requirements. They will be comprised of:

- A Statement of Sources and Uses of Funds which includes all cash receipts, cash payments and cash balances ;
- A Statement of Commitments
- Accounting Policies Adopted and Explanatory Notes
- A Management Assertion that project funds have been expended for the intended purposes as specified in the relevant financing agreements.

### ***Audit arrangements***

16. The Financing Agreement will require the submission of Audited Financial Statements for the project to IDA within six months after year-end. The auditor will conduct an annual audit of the annual financial statements. A single opinion on the Audited Project Financial Statements in compliance with International Standards on Auditing (ISA) will be required. The external auditors will prepare a Management Letter giving observations and comments, and providing recommendations for improvements in accounting records, systems, controls and compliance with financial covenants in the Financial Agreement. Since the project will support EDG, the FA will also require the audited financial statements for EDG and the related management letter as well.

### ***Governance***

17. In order to ensure the success of the proposed project, special attention will be paid to reducing any risks of corruption or poor governance. An independent technical auditor will be recruited to certify the Operator's performance. The payment of the Operator will be approved by the Government based on the recommendations of the technical audits.

### ***Financial Covenants***

18. Financial covenants will include:

- a) A financial management system including records, accounts and preparation of related financial statements shall be maintained at MEH PIU and EDG in accordance with accounting standards acceptable to the Bank.
- b) The consolidated project Financial Statements will be audited in accordance with international auditing standards. The Audited Financial Statements for each period shall be furnished to the Association not later than six (6) months after the end of the project fiscal year. The Borrower shall therefore recruit an external auditor not later than six (6) months from the date of effectiveness
- c) The Borrower shall prepare and furnish to the Association not later than 45 days after the end of each calendar quarter, interim un-audited financial reports for the project, in form and substance satisfactory to the Association

## *Procurement*

19. **Country context background for procurement.** A Country Procurement Assessment Review, carried out in Guinea in February 2002 flagged the main issues such as the lack of capacity regarding the recipient's staff, the absence of standard bidding documents at the national level, the insufficient capacity of local contractors for contracts subject to ICB, and corruption. Recommendations were made to address these issues. The Bank, through an IDF (TF 55853) signed in November 2005, provided support on the public procurement reform. The main objectives were to: (i) enhance transparency of the procurement system, (ii) put in place the new institutional framework (public procurement directorate controlling procurement transactions, public procurement regulatory body including an appeal committee for complaints, (iii) update the procurement code, and (iv) design standard bidding documents. On March 2009, the legal framework was revisited and the new Procurement Law and the new Procurement Code were adopted and approved respectively on October 11, 2012 and December 3, 2012.

20. **Procurement processes.** Procurement for the project will be carried out in accordance with the World Bank's "Guidelines: Procurement of Goods, Works, and Non-Consulting Services under IBRD Loans and IDA Credits & Grants by World Bank Borrowers", dated January 2011; and "Guidelines: Selection and Employment of Consultants under IBRD Loans and IDA Credits & Grants by World Bank Borrowers" dated January 2011, and the provisions stipulated in the legal agreement.

21. The general description of various items under different expenditure categories is presented below under *Procurement Arrangements*. For each contract, the different procurement methods or consultant selection methods, the need for prequalification, estimated costs, prior review requirements, and time frame are agreed between the client and the Bank in the Procurement Plans individually prepared by the two project IAs. The Procurement Plans will be updated at least annually, or as required, to reflect the actual project implementation needs and improvements in institutional capacity.

22. **Advertising procedures.** In order to get the broadest attention from eligible bidders and consultants, a General Procurement Notice (GPN) will be prepared by the implementing entity and published in the United Nations Development Business online (UNDB online), on the World Bank's external website and in at least one newspaper of national circulation in the Republic of Guinea, or in the official gazette, or a widely used website or electronic portal with free national and international access. The client will keep record of the responses received from potential bidders/consultants interested in the contracts and send them the Specific Procurement Notices.

23. Specific Procurement Notices for all goods, works and non-consulting services to be procured under International Competitive Bidding (ICB) and Expressions of Interest for all consulting services with a cost equal to or above US\$200,000 will be published in the UNDB online, on the Bank's external website, and in at least one newspaper of national circulation in the Republic of Guinea, or in the official gazette, or a widely used website or electronic portal with free national and international access. Specific Procurement Notices (SPN) for goods, works and non-consulting services to be procured using National Competitive Bidding (NCB) will be published in at least one newspaper of national circulation in country.



24. **National Competitive Bidding.** The procurement procedure to be followed for National Competitive Bidding (NCB) shall be the open competitive bidding procedure set forth in the new Public Procurement Law and Public Procurement Code approved respectively on October 11, 2012 and December 03, 2012. However, such procedure shall be subject to the provisions of Section I, and Paragraphs 3.3 and 3.4 of the “Guidelines: Procurement of Goods, Works, and Non-Consulting Services under IBRD Loans and IDA Credits & Grants by World Bank Borrowers” (January 2011 - the “Procurement Guidelines”), and the following additional provisions:

- a. Bidding documents acceptable to IDA shall be used.
- b. Eligibility to participate in a procurement process and to be awarded an IDA-financed contract shall be as defined under Section I of the Procurement Guidelines; accordingly, no bidder or potential bidder shall be declared ineligible for contracts financed by IDA for reasons other than those provided in Section I of the Procurement Guidelines. Foreign bidders shall be allowed to participate in NCB procedures, and foreign bidders shall not be obligated to partner with local bidders in order to participate in a procurement process.
- c. Bidding shall not be restricted to pre-registered firms, and foreign bidders shall not be required to be registered with local authorities as a prerequisite for submitting bids.
- d. No margins of preference of any sort (e.g., on the basis of bidder nationality, origin of goods, services or labor, and/or preferential programs) shall be applied in the bid evaluation.
- e. Joint venture or consortium partners shall be jointly and severally liable for their obligations. Bidders shall be given at least thirty (30) days from the date of publication of the invitation to bid or the date of availability of the bidding documents, whichever is later, to prepare and submit bids. Bids shall be submitted in a single envelope.
- f. An extension of bid validity, if justified by exceptional circumstances, may be requested in writing from all bidders before the original bid validity expiration date, provided that such extension shall cover only the minimum period required to complete the evaluation and award a contract, but not to exceed thirty (30) days. No further extensions shall be requested without the prior written IDA concurrence.
- g. All bids (or the sole bid if only one bid is received) shall not be rejected, the procurement process shall not be cancelled, and new bids shall not be solicited without IDA’s prior written concurrence.
- h. Qualification criteria shall be applied on a pass or fail basis.
- i. Bidders shall be given at least twenty-eight (28) days from the receipt of notification of award to submit performance securities.
- j. In accordance with the Procurement Guidelines, each bidding document and contract shall include provisions stating the Bank's policy to sanction firms or individuals found to have engaged in fraud and corruption as set forth in the Procurement Guidelines.
- k. In accordance with the Procurement Guidelines, each bidding document and contract shall include provisions stating the Bank's policy with respect to inspection and audit of accounts, records and other documents relating to the submission of bids and contract performance.

25. **Fraud and Corruption.** All procurement entities as well as bidders and service providers (i.e., suppliers, contractors, and consultants) shall observe the highest standard of ethics during the procurement and execution of contracts financed under the Project in

accordance with paragraphs 1.16 and 1.17 (Fraud and Corruption) of the Procurement Guidelines and paragraph 1.23 and 1.24 (Fraud and Corruption) of the Consultants Guidelines, and the “*Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants*”, dated October 15, 2006 and revised in January 2011.

## **Procurement Arrangements**

26. **Procurement of Works.** Works to be procured under the project will concern the rehabilitation of primary and secondary MV network infrastructure, including substations and power lines as well as of LV network infrastructure. Contracts with an amount equal or above US\$5,000,000 equivalent shall be procured through ICB. Works orders shall be grouped into larger contracts wherever possible to achieve greater economies of scale. Contracts with an amount lower than US\$5,000,000, but equal to or above US\$200,000 may be procured through NCB. Contracts with an amount below US\$200,000 may be procured using shopping procedures in accordance with paragraph 3.5 of the Procurement Guidelines and based on a model request for quotations satisfactory to the Bank. Shopping consists of the comparison of at least three price quotations in response to a written request. Direct contracting may be used in exceptional circumstances only with the prior approval of the Bank regardless of the amount, in accordance with paragraph 3.7 and 3.8 of the Procurement Guidelines.

27. **Procurement of Goods.** Goods to be procured under the project will include equipment needed for the rehabilitation and upgrade of MV and LV distribution network infrastructure, including transformers, switchgear and conductors, service cables, poles, line hardware, LV panels; as well as associated protection equipment such as relays, batteries and battery chargers. Contracts with an amount equal or above US\$500,000 equivalent shall be procured through ICB. Goods orders shall be grouped into larger contracts wherever possible to achieve greater economies of scale. Contracts with an amount lower than US\$500,000, but equal to or above US\$100,000 may be procured through NCB. Contracts with an amount below US\$100,000 may be procured using shopping procedures in accordance with paragraph 3.5 of the Procurement Guidelines and based on a model request for quotations satisfactory to the Bank. Shopping consists of the comparison of at least three price quotations in response to a written request. Direct contracting may be used in exceptional circumstances only with the prior approval of the Bank regardless of the amount, in accordance with paragraph 3.7 and 3.8 of the Procurement Guidelines.

28. **Procurement of non-consulting services.** Procurement of non-consulting services, such as services for organizing workshops, data collection, transport services and maintenance of office equipment (if any), will follow procurement procedures similar to those stipulated for the procurement of goods, depending on their nature. The applicable methods shall include ICB, NCB, Shopping and Direct Contracting and the applicable thresholds are as for goods.

29. **Selection of Consultants.** Services of both national and international consultants will be required for project preparation and implementation support, assessment and/or preparation of feasibility studies and technical assistance for potential generation projects, transmission and distribution infrastructure, and for a technical auditing firm to monitor the implementation of the MSC, and financial auditing. Selection of consultants will be carried out in compliance with the

*“Guidelines: Selection and Employment of Consultants under IBRD Loans and IDA Credits & Grants by World Bank Borrowers”* dated January 2011. The provisions vary for consulting services provided by firms and individual consultants as follows:

- (a) Firm. Selection of consulting firms will include launching a Request for Expressions of Interest, preparing short-lists and issuing a Request for Proposal using Banks’ standard formats, when and as required by the Bank’s Guidelines. The selection method shall be chosen among the following: Quality and Cost Based Selection (QCBS) whenever possible; Quality Based Selection (QBS); Selection under a Fixed Budget (FBS); Least Cost Selection (LCS); Single Source Selection (SSS) as appropriate; Consultant’s Qualifications (CQS) for all consultancy services estimated to cost less than US\$300,000 equivalent. The shortlist of firms for assignments estimated to cost less than US\$100,000 equivalent per contract may be composed entirely of national firms in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines, provided that a sufficient number of qualified national firms are available and no foreign consultant desiring to participate is barred.
- (b) Individual Consultants. Individual consultants will be selected by comparing qualifications of at least three candidates and hired in accordance with the provisions of Section V. of the Consultant Guidelines.

30. The highest value consultant contract is planned for the firm that will provide Management Services (referred to as MSC), which is proposed to use a QCBS procedure.

31. Single-Source Selection (SSS) may be used for consulting assignments that meet the requirements of paragraphs 3.8 - 3.11 of the Consultant Guidelines and will always require Bank’s prior review regardless of the amount. Procedures of Selection of Individual Consultants (IC) will apply to assignments which meet the requirements of paragraphs 5.1 and 5.6 of the Consultant Guidelines.

32. All terms of reference (ToRs) for the selection of firms and individual consultants, regardless of the estimated value of the assignment, will be subject to Bank review and clearance.

33. The recruitment of civil servants as individual consultants or as part of the team of consulting firms will strictly abide by the provisions of paragraphs 1.9 to 1.13 of the Consultants Guidelines.

34. **Workshops, Seminars and Conferences.** Training activities may be required under the Project and would comprise workshops and training, based on individual needs, as well as group requirements, on-the-job training, and hiring consultants for developing training materials and conducting training. Selection of consultants for training services will follow the requirements for selection of consultants above. All training and workshop activities (other than consulting services) will be carried out on the basis of approved Annual Work Plans / Training Plans that would identify the general framework of training activities for the year, including: (i) the type of training or workshop; (ii) the personnel to be trained; (iii) the institutions which would conduct the training and reason for selection of this particular institution; (iv) the justification for the training, how it would lead to effective performance and implementation of the project and or sector; (v) the duration of the proposed training; and (vi) the cost estimate of the training. Report

by the trainee(s), including completion certificate/diploma upon completion of training, shall be provided to the Project Manager / General Project Coordinator and will be kept as parts of the records, and will be shared with the Bank if required.

35. **Operating Costs.** Operating Costs are incremental expenses arising under the project and based on Annual Work Plans and Budgets approved by the Bank pursuant to the Financing Agreements. They are incurred based on eligible expenses as defined in the Financing Agreement and cannot include salaries of the Borrower's civil service. The procedures for managing these expenditures will be governed by the Borrower's own administrative procedures, acceptable to the Bank.

36. **Procurement Documents.** Procurement of works and goods under ICB and recruitment of consultants will be carried out using the latest Bank's Standard Bidding Documents (SBD) and, respectively, Standard Request for Proposal (RFP). For NCB, the client shall submit a sample format of bidding documents to the Bank for prior review. Bidding documents shall incorporate the exceptions listed under paragraph 24 and shall be used throughout the Project once the format has been agreed. The Forms of Evaluation Reports developed by the Bank will be used. SBD for NCB will be updated to include clauses related to Fraud and Corruption, Conflict of Interest, Eligibility and Bank's inspection and auditing rights requirements consistently with the Bank's Procurement Guidelines dated January 2011.

#### **Assessment of Procurement Capacity of the Implementing Agencies and Risks**

37. Procurement for the project will be split between MEH and EDG. MEH will carry out procurement of the MSC and all procurement tasks related to the implementation of activities under Components 1 and 3 of the Project. EDG, through the Operator selected under the MSC, will be responsible for procurement activities related to the investments envisaged under Component 2 of the Project.

38. In February 2014, the Bank conducted an assessment of the procurement capacity of MEH and the existing PIU within EDG that is implementing the ESEIP in accordance with the Bank's Procurement Risks Assessment and Management System. The assessment concluded that: (i) MEH is not familiar with Bank procurement procedures; (ii) EDG does not have a procurement department but benefits from an existing PIU under the ESEIP project which has a procurement officer who is familiar with Bank's procurement procedures. MEH will be required to build procurement capacity sufficient to adequately administer Components 1 and 3 of the project. Satisfactory completion of a procurement assessment will be a disbursement condition of Components 1 and 2 of the project. At its discretion, the Operator will leverage the existing capacity within EDG to administer Component 2 of the project.

39. As a result, overall procurement risk for the Project in the absence of mitigation measures is rated **High**. Risks related to the weak capacity of the MEH will be mitigated by the recruitment of a new PIU including procurement staff. Risks within EDG are mitigated by the use of the PIU staff already established for the ESEIP project and by the recruitment of an Operator under the MSC. The MSC will clarify roles and responsibilities of the utility and the selected Operator, including those related to procurement. The Operator should have on board a

qualified Procurement Specialist with international experience in procurement and familiar with World Bank procurement procedures. Prior review of procurements will be applied to high value contracts.

1. The Table below summarizes key risks identified and proposed mitigation measures and/ or actions to be agreed upon to reduce the risk from High to Moderate.

**Table 5: Key procurement risks and mitigation measures**

No	Key risks	Mitigation Actions <sup>7</sup>	By Whom	By When
1	Lack of proficient skills and experience to undertake and manage normal and complex procurement	<p>Procurement tasks related to Component 2 will be carried out by the Operator selected under the MSC, which will be staffed with a qualified Procurement Specialist with international experience in procurement and familiar with World Bank procurement procedures.</p> <p><i>MEH will recruit a well-staffed PIU, including a Procurement Specialist with international experience in procurement and familiar with World Bank procurement procedures.</i></p> <p>Prior review will be applied to high value contracts as per Project Procurement Plan.</p>	<p>Utility/ Operator</p> <p>MEH</p> <p>World Bank</p>	<p>Prior to disbursement of Component 2 (not a covenant)</p> <p>Prior to disbursement of Components 1 and 3.</p> <p>Throughout project life (not a covenant)</p>
2	Lack of familiarity with World Bank procurement guidelines and procedures	<p>The procurement staff of the PIU and of the Operator selected under the MSC, as well as the members of the evaluation committee to be set up for evaluation of proposals and application as part of procurement processes shall attend the procurement clinics provided by the World Bank Country Office.</p> <p><i>A Project Implementation Manual, covering project procurement processes and requirements, will be prepared and submitted to the Bank for review.</i></p> <p>The World Bank Procurement Specialist will provide close monitoring and collaboration.</p>	<p>Utility/ Operator and MEH</p> <p>MEH's PMU</p> <p>World Bank</p>	<p>Throughout project life (not a covenant)</p> <p>Prior to Effectiveness</p> <p>Throughout project life (not a covenant)</p>
3	Delays in taking procurement actions such as preparation of BD, RFPs, BER, TER, etc.	<p>Close monitoring of the Procurement Plan on a monthly basis and close monitoring and quality control of all aspects of the procurement process, including evaluation, selection and contracts award shall be ensured.</p> <p>Delays in procurement process/decision taken shall be reported to the ICE.</p>	<p>Utility/ Operator and MEH</p> <p>Utility/ Operator and MEH</p>	<p>Throughout project life (not a covenant)</p>

<sup>7</sup> Those mitigation measures that are highlighted in italics will be dated covenants in the project financing agreement; other mitigation measures will be time-bound actions, but will not be dated covenants.

No	Key risks	Mitigation Actions <sup>7</sup>	By Whom	By When
4	Weak capacity of the members of evaluation committees to manage evaluation and understand their roles	Regular procurement training (quarterly) shall be provided to the members of the evaluation committee clarifying the evaluation process and their roles.	Utility/ Operator and MEH	Throughout project life (not a covenant)
5	Lack of adequate key staff in the Procurement Units of implementing agencies to ensure knowledge transfer and mainstreaming of project implementation practices and use of country system	Procurement staff of the utility and MEH shall attend procurement training/ workshops as part of the procurement clinics organized by the World Bank Country Office.  Procurement units and other technical staff shall be provided hands-on training and mentoring through close involvement with project activities. A continuous capacity building program shall be developed for empowering procurement and technical staff to respond to specific gaps identified.	Utility and MEH procurement staff  Utility/ Operator and MEH procurement staff	Throughout project life (not a covenant)
6	Lack of procurement plans	A procurement plan for the first 18 months of project implementation for the activities that fall under the responsibility of the MEH and EDG were agreed with the Bank. The plans will be subsequently updated in tandem with annual work plan and budget and for agreed contracts. The critical approval times will be reflected in the timelines of the procurement plans.	Utility/ Operator and MEH	Throughout project life (not a covenant)
7	Poor record keeping of the procurement documents	Adequate filing system for project records shall be set up to ensure easy retrieval of information/data. A responsible person for data management shall be designated. Procurement staff shall be provided with metallic cabinets with locks for secured keeping of the procurement documents.	Utility/ Operator Project Manager and MEH Project Coordinator	At the beginning of implementation (no later than 2 months after effectiveness) (not a covenant)
8	Fraud and Corruption (kick-backs, bids ridding)	World Bank Fraud and Corruption provisions and Bank's audit and inspection rights shall be inserted in all bidding and contract documents. All contract opportunities and contract awards shall be advertised in newspapers of national circulation and also on utility's website to ensure transparency. World Bank Guidelines, Anti-Corruption Guidelines, the Public Procurement Act on Fraud and Corruption shall be enforced. Cases of corruption/frauds shall be reported to World Bank and Anti-Corruption Commission for further investigations.	Utility/ Operator Manager and MEH Project Coordinator	Throughout project life (not a covenant)
9	Political/managerial interference in the procurement process/project implementation	Cases of political/managerial interference shall be reported to ICE and IDA.  Remedies will be enforced if GoG does not take appropriate sanctions against officials who violate procedures.	Utility/ Operator Manager and MEH Project Coordinator.  World Bank	Throughout project life (not a covenant)

## Procurement Plan

40. MEH and EDG have prepared a procurement plan for the first 18 months of project implementation. The plan specifies the procurement methods applicable to each contract and indicates those requiring Bank's prior review. The plan will be updated in agreement with the

Bank annually or as required to reflect the actual project implementation needs and improvements in institutional capacity.

41. **Prior Review Threshold:** Procurement Decisions subject to Prior Review by the Bank as stated in Appendix 1 to the Procurement Guidelines are summarized below.

**Table 6: Prior review thresholds**

No.	Expenditure Category	Contract Value Threshold (US\$)	Procurement Method	* Contracts Subject to Prior Review (US\$ )
1	Works	C $\geq$ 5,000,000	ICB	All Contracts
		200,000= <C < 5,000,000	NCB	None
		C<200,000	Shopping	None
		All values	Direct Contracting	All Contracts
2	Goods and Services (other than Consulting Services)	C $\geq$ 500,000	ICB	All Contracts
		100,000= <C < 500,000	NCB	None
		C<100,000	Shopping	None
		All values	Direct Contracting	All Contracts
3	Consulting Services	C $\geq$ 200,000 firms	QCBS, QBS, FBS, LCS, CQS	All Contracts
		C<200,000 firms	QCBS, QBS, FBS, LCS, CQS	Only ToRs
		C $\geq$ 100,000 individuals	IC	All contracts
		C<100,000individuals	IC	Only ToRs
		All Values	Single Source Selection	All Contracts
4	Training, Workshops, Study Tours	All Values	To be based on Annual Work Plan & Budgets	
<b>Note:</b> All Term of reference regardless of the value of the contract are subject to prior technical review				

ICB – International Competitive Bidding  
 NCB – National Competitive Bidding  
 FBS – Selection under a Fixed Budget  
 LCS – Least-Cost Selection

QCBS – Quality and Cost-Based Selection method  
 QBS – Quality Based Selection method  
 CQS – Consultants’ Qualification Selection method  
 IC – Individual Consultant

\* Remark: The World Bank may, at its own discretion, require that a sample of contracts below the threshold be subject to prior review, at any time or when the Procurement Plan is updated.

*Environmental and Social (including safeguards)*

42. An environmental and social audit of EDG was carried out by the an independent consultant in order to take stock of the current situation in terms of managing the environmental and social aspects; and to identify any possible gaps between national legislation, WBG safeguards policies and international standards and good practice. The audit report specifies requirements for mitigation and monitoring measures, which are to be included in the bidding documents for the MSC, as well as into the Project Implementation Manual (PIM) of the proposed project. Main focus of the audit was on identifying any risks that the new Operator would need to manage and mitigate going forward. The recommendations of the audit, including

its environmental and social management plan and monitoring framework, will feed into the environmental and social obligations of the Operator.

43. Existing challenges were found, among others, in the areas of managing solid and liquid waste and air emissions; health and safety at the work place; populations living and practicing livelihood activities in close proximity to EDG facilities despite the potentially dangerous conditions; dissatisfaction of the population who have been previously displaced by dam construction; and lack of an internal environmental policy and qualified environmental and social staff to implement it.

44. The main recommendations for improvement in order to ensure compliance with WBG policies and international standards and best practice can be divided into three broad groups: capacity building; managing the environmental and social impacts; and environmental and social monitoring. Capacity building activities will entail creating a designated environmental unit within EDG with appropriate staffing and resources. The staff, including a focal point on social aspects, needs training on the environmental and social policies and required instruments as well as health and safety guidelines.

45. Environmental and social management framework (ESMF) included within the audit contains detailed guidance on necessary actions to mitigate the potential impacts and risks identified in the current EDG practices. The first step is to develop an internal environmental policy for EDG. Other measures include for instance providing employees with protective equipment, instructing them on the proper maintenance of equipment, managing and disposing of solid and liquid waste according to environmental guidelines, paying attention to restoring degraded habitats, etc. The monitoring plan lays out the indicators for following-up on the implementation.

46. A Resettlement Policy Framework (RPF) has been prepared as the exact locations for the rehabilitation of infrastructure under Component 2 have yet to be identified. The RPF contains: (i) an assessment of the country regulatory and institutional framework for land acquisition and compensation; (ii) likely categories of affected assets and parties, as well as the scope of impacts; (iii) a gap analysis and a compensation framework consistent with OP 4.12 and the national legislation; (iv) measures to assist vulnerable groups; (v) a consultation framework to enable the participation of affected populations in the preparation of specific resettlement plans; (vi) an institutional framework to implement the resettlement policy framework; (vii) a grievance redress mechanism; and (viii) a monitoring and evaluation framework and budget. It also contains guidance for preparing specific Resettlement Action Plans (RAPs) for issues related to land acquisition and loss of economic activities and assets to minimize negative impacts on Project Affected Persons. Consultations with various stakeholder groups were carried out during RPF preparation. The RPF will feed into the Operator's social obligations in the bidding documents as well as in the PIM. The Operator will be responsible for the implementation and monitoring of the RPF and/or subsequent RAPs to ensure compliance with national and Bank policies and procedures. Training in safeguards will be provided by Bank safeguards staff to facilitate these activities. Regular monitoring reports (two per year) on the implementation of environmental and social safeguards provisions will be provided to the Bank for approval. These



reports will be verified during project implementation support missions, which will include environmental and social safeguard experts.

## Annex 4: Operational Risk Assessment Framework (ORAF)

### Republic of Guinea: Power Sector Recovery Project

<b>Project Stakeholder Risks</b>	<b>Rating: H</b>			
<b>Description :</b> Some stakeholders may feel threatened by the project (utility employees who may be colluding with customers to reduce bill collection or turn a blind eye to illegal connections). Some consumer groups may not support the project because it will enforce tighter payment discipline despite initially low quality of electricity service.	<b>Risk Management:</b> The Operator will need to incentivize managers and staff at EDG to modify their behavior, through training, performance related rewards, as well as disciplinary measures. One of the main functions of the Operator is to ensure a successful implementation of EDG’s Recovery Plan especially with respect to its commercial performance. The government is also stepping-up communication with citizens at large to explain the link between service improvement and necessity to pay electricity bills. Additional resources for the sector are being mobilized through multi-donor funding to increase access to, and reliability of electricity in urban areas. Improved availability of service will be provided in a coordinated manner with the rolling out of the distribution and collection improvement program, so clients can observe a simultaneous improvement of quality of service as payment discipline is reinforced in their area.			
	<b>Resp:</b> Client	<b>Stage:</b> Implementation	<b>Due Date :</b>	<b>Status:</b> In progress
<b>Implementing Agency Risks (including fiduciary)</b>				
<b>Capacity</b>	<b>Rating: H</b>			
<b>Description :</b> At the design stage, the main counterparts are MEH and EDG management, who clearly suffer from lack of technical capacity. During implementation, Components 1 and 3 will be implemented MEH, while EDG and its Operator will implement Component 2. There is a risk that the project will be poorly supervised, if the capacity of MEH in particular is not reinforced.	<b>Risk Management :</b> The ICE, who will provide strategic guidance during project implementation will benefit from two international consultants (engineering and institutional reform specialists) with the right skill mix to oversee the implementation of the project. Recognizing the lack of fiduciary, safeguards and M&E capacity of MEH, the project will require the setting up of a PIU with the right skills mix that will implement Component 1 and 3 on behalf of MEH. There will also be a technical auditor of the MSC with the right international experience to reinforce monitoring capacity of MEH.			
	<b>Resp:</b> Client	<b>Stage:</b> Implementation	<b>Due Date :</b>	<b>Status:</b> In progress
<b>Governance</b>				
<b>Description :</b> EDG has suffered from decades of mismanagement since the failure of the previous MSC in the late 1990s. MEH has also failed in addressing these sector governance issues through its supervisory sector role. Associated risks include: (i) Funds may be diverted away from intended purposes because of inadequate internal control by management, lack of control measures and absence of internal audit; (ii) Possible delays in the submission of project audits and/or inadequate scope of work; (iii) Delays by management in taking corrective actions on identified weaknesses, (iv) no value for money i.e. pay the private contractor (Operator) although agreed results are not achieved.	<b>Risk Management :</b> The weak governance of EDG is one of the key reasons for the strategic decision of having a private Operator lead its recovery. This is expected to mitigate governance weaknesses on the part of the government. In addition the following measures are incorporated into the project design to minimize associated risks: (i) An independent technical auditor will be recruited to certify the Operator’s performance, (ii) A change management strategy for staff at all levels including training in the recovery plan with clear capacity building results will be incorporated in the management services contract, (iii) A clear communication plan targeted at electricity consumers will be part of the project to explain the link between revenue collection by EDG and improvements in quantity and quality of service. MEH’s supervision of proper sector governance will be reinforced through the setting up of a well-staffed PIU and through technical assistance.			
	<b>Resp:</b> Client	<b>Stage:</b> Implementation	<b>Due Date :</b>	<b>Status:</b> In progress

<b>Project Risks</b>			
<b>Design</b>	<b>Rating: S</b>		
<b>Description:</b> Many MSCs for public utilities in Africa have not fully achieved their targets in the past because of government failures to mobilize sufficient funds for investments and lack of political will to adjust tariffs. These were the main reasons for the failure of the first PPP attempt in the power sector in Guinea in the 1990s. This is still a serious risk for this project.	<b>Risk Management:</b> The design of the MSC will be led by the World Bank Group, with support from international consultants, who will draw upon lessons learnt from prior MSCs in Africa and elsewhere. The design process will involve extensive consultations with sector stakeholders, before being submitted for government endorsement. The project will carefully select the most relevant associated investments in order to maximize the chances of success of the MSC. The Bank will ensure that the Government has made commitments to adjust tariffs and criminalize electricity theft, through a Performance Contract between GoG and EDG to be signed before disbursements related to Component 1 are allowed.		
	<b>Resp:</b> Client	<b>Stage:</b> Implementation	<b>Due Date :</b>
<b>Social &amp; Environmental</b>	<b>Rating: M</b>		
<b>Description :</b> The environmental and social safeguards risks associated with the project are limited. There may be resistance from customers initially to consumption metering and efforts to eliminate electricity theft.	<b>Risk Management :</b> A careful analysis of the social impact of reducing losses and increasing cash collections through pre-payment metering will be conducted, as well as a communication campaign targeted at low voltage customers. A lifeline tariff to protect the poor will be maintained.		
	<b>Resp:</b> Client	<b>Stage:</b> Implementation	<b>Due Date :</b>
<b>Program &amp; Donor</b>	<b>Rating: S</b>		
<b>Description :</b> Lack of donor funds for the sector's priority action plan may jeopardize the achievement of the MSC's targets.	<b>Risk Management :</b> This risk is mitigated because this project is financing investments that are directly linked to the success of the MSC. In November 2013, the Consultative Group meeting in Abu Dhabi confirmed strong donor interest in financing the sector investments. Further donor coordination will be necessary to ensure that the priority investment plan is fully covered throughout project implementation.		
	<b>Resp:</b> Both	<b>Stage:</b> Implementation	<b>Due Date :</b>
<b>Delivery Monitoring &amp; Sustainability</b>	<b>Rating: S</b>		
<b>Description :</b> The Operator will have to improve the technical and commercial performance of EDG in a difficult environment. Commercial performance will not be entirely under the Operator's control as the Government will still determine tariffs and whether electricity theft is actively repressed. Given lack of reliable technical and financial data from EDG, it may be hard to establish a reliable baseline to monitor progress made throughout the MSC.	<b>Risk Management:</b> The selection of the Operator will follow strict international competition standards and the WBG will ensure that a high caliber international Operator is selected. In addition to the MSC, the Recovery Plan anticipates that a Performance Contract would be signed between the Government and EDG, and would spell out the obligations of both parties. Acknowledging the data reliability problem, the MSC will set performance targets in the form of percentage improvement targets. The baseline of the various performance indicators will then be measured and validated by the technical auditor during the 1 <sup>st</sup> year of the MSC and then monitored by the same auditor throughout the duration of the project.		
	<b>Resp:</b> Client	<b>Stage:</b> Implementation	<b>Due Date :</b>
<b>Overall Risk</b>			
<b>Implementation Risk Rating: H</b>			
<b>Description:</b> At the implementation stage, the overall risk of the project is assessed to be high as well for a number of reasons including: (i) the history of political instability and ethnic tension in Guinea; (ii) the dire situation of the electricity sector and the failure of a previous attempt at implementing private sector participation in the sector in the 1990s; (iii) the low			

capacity of institutions including the line ministry and EDG, that will hinder the ability of the government to monitor the private Operator and fulfill its own sector reform obligations; and (iv) the sector priority investment plan, which is not fully funded so far, and whose implementation is a requirement for the full success of the Recovery Plan prepared for EDG. Appropriate risk mitigation measures are built into project design and implementation arrangements in response to identified risks at both stages.

## **Annex 5: Implementation Support Plan**

### **Republic of Guinea: Power Sector Recovery Project**

1. **Strategy and approach to implementation support.** The strategy for implementation support (IS) has been developed on the basis of the nature of the project and its risk profile. The IS has been designed so as to guarantee efficient and flexible support to the client and facilitate implementation of the risk mitigation measures defined in the ORAF. World Bank team members will be based both at headquarters, and in the Senegal and Guinea Country Offices to ensure timely and continued coordination with the client, perform close project implementation support and provide advice on implementation issues as they arise.
2. **Support to design and bidding of the MSC.** The design of the MSC by MEH will be supported by IFC and IDA during the MSC selection phase. The IDA team will continue to leverage internal expertise in utility reforms and performance-based contract frameworks from multiple departments to set up coordinated support in the design of a well-tailored, realistic and effective MSC and recovery plan under the project. Continued technical supervision will concern monitoring of the Operator's performance for the duration of the MSC.
3. **Support to investments execution.** The IDA team will include staff and consultants with technical knowledge of primary and secondary distribution network and substations and engineering works to support the proper assessment of technical specifications and other aspects of bids and contracts related to the investments in network rehabilitation and upgrade. The IDA team will conduct site visits to project sites on a regular basis throughout the duration of the project.
4. **Procurement requirements and inputs.** The Bank's Procurement Specialist supporting the project will ensure close support, advice and monitoring to the implementing agencies. A Lead Procurement Specialist is also part of the project team in order to ensure that the selection of the Operator adheres to World Bank policies. The Bank's project team will help strengthen procurement management efficiency by: (i) reviewing relevant procurement documentation and providing timely feedback to the project implementation unit; and (ii) monitoring procurement progress against the Procurement Plans, which will be updated as required to reflect project implementation needs and improvements in institutional capacity.
5. **Financial management requirements and inputs.** The IDA Financial Management Specialist will ensure close support to and monitoring of the implementing agencies. The IDA team will perform regular supervision of financial management functions and provide advice and capacity building on financial planning, budget preparation, reporting and other relevant matters. Supervision of the financial management arrangements will be risk based. In this regard and in view of the overall financial management residual substantial risk rating, FM supervision will be carried out twice per year. The first FM review will be carried out within 6 months of credit effectiveness. The visits will be complemented by desk review of the consolidated IFRs submitted to the Bank at the end of each calendar quarter. In addition, the FM Specialist will also review the audited project annual financial statements and the auditor's report and management letter thereon each year.

6. **Environmental and Social safeguards.** The IDA team will closely monitor environmental and social safeguards compliance of the project.

**Table 5: Implementation Support Plan**

Time	Focus	Skills needed	Resource estimate
First 12 months of implementation	Selection of MSC	Technical, procurement	US\$200,000
	Recruitment of supervision consultant for completion of the relevant engineering design and preparation of technical specification and procurement documents for network rehabilitation and upgrade		
	Establishment of FM arrangements and systems	Financial management	
	Implementation of environmental and social safeguards	Environmental, social, communication	
12-60 months	Technical supervision	Power Engineer/ Utility reform	US\$600,000
	Safeguards supervision	Safeguards	
	M&E	M&E	
	Procurement& FM supervision	Procurement/FM	

**Table 6: Skills mix required**

Skills Needed	Number of Staff Weeks/year	Number of Trips	Comments
General supervision and project management (TTL)	12	3/year	
Power Engineer	8	3/year	
Energy Specialist	10	Field Staff	Will also cover M&E
Procurement Specialist	8	Field Staff	
Financial Management Specialist	4	Field Staff	
Utility Reform Specialist	2	1/year	
Environmental Specialist	2	2/year	
Social Development Specialist	2	2/year	
Administrative support	4		
Disbursement Specialist/analyst	1		Support for administration/disbursement

## **Annex 6: Economic and Financial Analyses**

### **Republic of Guinea: Power Sector Recovery Project**

#### *I. Economic analysis*

1. The analysis focuses on direct quantifiable benefits and costs resulting from the project. The primary beneficiaries of the project will be the electricity customers. The bulk of benefits are expected to derive from reduced losses that will lead to lower cost of electricity supply than would otherwise be the case.
2. The rehabilitation of the distribution network of Dixinn is expected to enable EDG to recover 23 GWh per annum of losses in the form of actual consumption by consumers whose willingness to pay is estimated at 19 US¢ per kWh (cost of electricity supply in Guinea used as a proxy for willingness to pay).
3. Expected improvements accruing from the management services contract (MSC) include: enhanced capacity for implementing the recovery plan, rationalization of cost structure, improved commercial performance, better governance, better recognition for well performing staff and reduction in fraud. All these improvements are expected to lead to better quality of electricity service and lower cost of supply. One material economic impact of the MSC is EDG's increased capacity to reduce physical distribution losses compared to a situation with no MSC. With the planned investment in the distribution grid, physical losses are projected to decline from a baseline of 20 percent down to 15 percent by 2018. With a management contract in place as of September 2014, these losses can be further reduced down to 14 percent by the same horizon. By 2018, an energy saving of 16 GWh per annum and indexed to overall demand is attributed to the private Operator alone.
4. Based on the methodology and assumption described above, the estimated Economic Internal Rate of Return (EIRR) is 33% and the Net Present Value (NPV) is approximately US\$34 million (at 10% discount rate). This conveys a strong economic value for the proposed Project, providing an important rationale for this intervention. The matrix below summarizes the benefits and costs items on a yearly basis in millions of US\$.

**Table 1: Cost-Benefit analysis (Economic Analysis)**

Year	Quarter	Energy Available for sale without management contractor (GWh)	Energy Available for sale with management contractor (GWh)	Saved Energy under MC (GWh)	Economic Value of Saved Energy under MC(US\$)	Management Contract Fees (US\$)	Net Benefit from Management Contract	Distribution Investment (US\$)	Energy Saved under distribution investment (GWh)	Economic Value of Saved Energy under distribution investment(US\$)	Net Benefit from Distribution Investment	Net Benefit
2014	Sep-14	266	266	0.0	-	(494,475)	<b>(494,475)</b>	-	0	-	-	<b>(494,475)</b>
2015	Jan-15	249	249	0.2	45,195	(494,475)	<b>(449,280)</b>	(950,000)	1.2	218,500	<b>(731,500)</b>	<b>(1,180,780)</b>
	Apr-15	334	334	0.6	120,788	(494,475)	<b>(373,687)</b>	(950,000)	1.2	218,500	<b>(731,500)</b>	<b>(1,105,187)</b>
	Jul-15	338	339	1.0	182,829	(494,475)	<b>(311,646)</b>	(950,000)	1.2	218,500	<b>(731,500)</b>	<b>(1,043,146)</b>
	Oct-15	358	359	1.3	256,469	(494,475)	<b>(238,006)</b>	(950,000)	1.2	218,500	<b>(731,500)</b>	<b>(969,506)</b>
2016	Jan-16	359	361	1.7	320,217	(494,475)	<b>(174,258)</b>	(950,000)	2.3	437,000	<b>(513,000)</b>	<b>(687,258)</b>
	Apr-16	346	348	1.9	369,011	(494,475)	<b>(125,464)</b>	(950,000)	2.3	437,000	<b>(513,000)</b>	<b>(638,464)</b>
	Jul-16	336	338	2.2	415,134	(494,475)	<b>(79,341)</b>	(950,000)	2.3	437,000	<b>(513,000)</b>	<b>(592,341)</b>
	Oct-16	355	357	2.6	499,127	(494,475)	<b>4,652</b>	(950,000)	2.3	437,000	<b>(513,000)</b>	<b>(508,348)</b>
2017	Jan-17	356	359	3.0	561,794	(494,475)	<b>67,319</b>	(950,000)	3.5	655,500	<b>(294,500)</b>	<b>(227,181)</b>
	Apr-17	344	347	3.2	599,418	(494,475)	<b>104,943</b>	(950,000)	3.5	655,500	<b>(294,500)</b>	<b>(189,557)</b>
	Jul-17	333	336	3.3	635,776	(494,475)	<b>141,301</b>	(950,000)	3.5	655,500	<b>(294,500)</b>	<b>(153,199)</b>
	Oct-17	352	356	3.8	729,634	(494,475)	<b>235,159</b>	(950,000)	3.5	655,500	<b>(294,500)</b>	<b>(59,341)</b>
2018	Jan-18	359	364	4.2	803,361	(494,475)	<b>308,886</b>	(950,000)	4.6	874,000	<b>(76,000)</b>	<b>232,886</b>
	Apr-18	344	348	4.0	768,896	(494,475)	<b>274,421</b>	(950,000)	4.6	874,000	<b>(76,000)</b>	<b>198,421</b>
	Jul-18	331	334	3.9	738,953	(494,475)	<b>244,478</b>	(950,000)	4.6	874,000	<b>(76,000)</b>	<b>168,478</b>
	Oct-18	347	351	4.1	774,819	(494,475)	<b>280,344</b>	(950,000)	4.6	874,000	<b>(76,000)</b>	<b>204,344</b>
2019	Jan-19	360	364	4.2	804,667	(494,475)	<b>310,192</b>	(950,000)	5.8	1,092,500	<b>142,500</b>	<b>452,692</b>
	Apr-19	345	349	4.1	770,146	(494,475)	<b>275,671</b>	(950,000)	5.8	1,092,500	<b>142,500</b>	<b>418,171</b>
	Jul-19	331	335	3.9	740,154	(494,475)	<b>245,679</b>	(950,000)	5.8	1,092,500	<b>142,500</b>	<b>388,179</b>
	Oct-19	390	404	14.1	2,674,957	(494,475)	<b>2,180,482</b>	(950,000)	5.8	1,092,500	<b>142,500</b>	<b>2,322,982</b>
2020	Jan-20	378	382	4.4	844,901		<b>844,901</b>		5.8	1,092,500	<b>1,092,500</b>	<b>1,937,401</b>
	Apr-20	362	366	4.3	808,654		<b>808,654</b>		5.8	1,092,500	<b>1,092,500</b>	<b>1,901,154</b>
	Jul-20	348	352	4.1	777,162		<b>777,162</b>		5.8	1,092,500	<b>1,092,500</b>	<b>1,869,662</b>
	Oct-20	409	424	14.8	2,808,704		<b>2,808,704</b>		5.8	1,092,500	<b>1,092,500</b>	<b>3,901,204</b>
2021	Jan-21	397	402	4.7	887,146		<b>887,146</b>		5.8	1,092,500	<b>1,092,500</b>	<b>1,979,646</b>
	Apr-21	380	384	4.5	849,086		<b>849,086</b>		5.8	1,092,500	<b>1,092,500</b>	<b>1,941,586</b>
	Jul-21	365	369	4.3	816,020		<b>816,020</b>		5.8	1,092,500	<b>1,092,500</b>	<b>1,908,520</b>
	Oct-21	429	445	15.5	2,949,140		<b>2,949,140</b>		5.8	1,092,500	<b>1,092,500</b>	<b>4,041,640</b>
2022	Jan-22	417	422	4.9	931,503		<b>931,503</b>		5.8	1,092,500	<b>1,092,500</b>	<b>2,024,003</b>
	Apr-22	399	404	4.7	891,541		<b>891,541</b>		5.8	1,092,500	<b>1,092,500</b>	<b>1,984,041</b>
	Jul-22	383	388	4.5	856,821		<b>856,821</b>		5.8	1,092,500	<b>1,092,500</b>	<b>1,949,321</b>
	Oct-22	451	467	16.3	3,096,597		<b>3,096,597</b>		5.8	1,092,500	<b>1,092,500</b>	<b>4,189,097</b>
2023	Jan-23	438	443	5.1	978,078		<b>978,078</b>		5.8	1,092,500	<b>1,092,500</b>	<b>2,070,578</b>
	Apr-23	419	424	4.9	936,118		<b>936,118</b>		5.8	1,092,500	<b>1,092,500</b>	<b>2,028,618</b>
	Jul-23	402	407	4.7	899,662		<b>899,662</b>		5.8	1,092,500	<b>1,092,500</b>	<b>1,992,162</b>
	Oct-23	473	491	17.1	3,251,427		<b>3,251,427</b>		5.8	1,092,500	<b>1,092,500</b>	<b>4,343,927</b>
2024	Jan-24	459	465	5.4	1,026,982		<b>1,026,982</b>		5.8	1,092,500	<b>1,092,500</b>	<b>2,119,482</b>
	Apr-24	440	445	5.2	982,924		<b>982,924</b>		5.8	1,092,500	<b>1,092,500</b>	<b>2,075,424</b>
	Jul-24	423	428	5.0	944,645		<b>944,645</b>		5.8	1,092,500	<b>1,092,500</b>	<b>2,037,145</b>
	Oct-24	497	515	18.0	3,413,998		<b>3,413,998</b>		5.8	1,092,500	<b>1,092,500</b>	<b>4,506,498</b>
2025	Jan-25	482	488	5.7	1,078,331		<b>1,078,331</b>		5.8	1,092,500	<b>1,092,500</b>	<b>2,170,831</b>
	Apr-25	462	467	5.4	1,032,070		<b>1,032,070</b>		5.8	1,092,500	<b>1,092,500</b>	<b>2,124,570</b>
	Jul-25	444	449	5.2	991,877		<b>991,877</b>		5.8	1,092,500	<b>1,092,500</b>	<b>2,084,377</b>
	Oct-25	522	541	18.9	3,584,698		<b>3,584,698</b>		5.8	1,092,500	<b>1,092,500</b>	<b>4,677,198</b>



## II. Financial analysis of EDG

### a) Historical performance

5. The analysis of EDG's financial performance builds on an extensive analysis that was carried out by the Bank Group as part of the *Power Sector Diagnostic and Recovery Study* for the period 2006-2010. This analysis focuses on the period 2006-2013 and is based on more recent information shared by EDG.

6. EDG's revenues have grown by 18 percent per year since 2006 as a result of higher sales and tariff increases in 2008 and 2009. Most of the tariff increase was however absorbed by the government customers. Between 2007 and 2012, average tariff increased by a factor of 3.4 for government customers, exceeding 25 US¢/kWh, while the tariff for private customers has increased by 80 percent up to 10 US¢/kWh. Tariffs have stagnated since then. In 2012, revenues have reached GNF 462 billion (US\$66 million) ramping up by a staggering 76 percent compared to 2011 due to higher collection rate and recovery of bills from previous periods. In 2013, revenues dropped by 27 percent down to GNF 356 billion (partly attributable to arson of two EDG offices further to street riots related to lack of electricity).

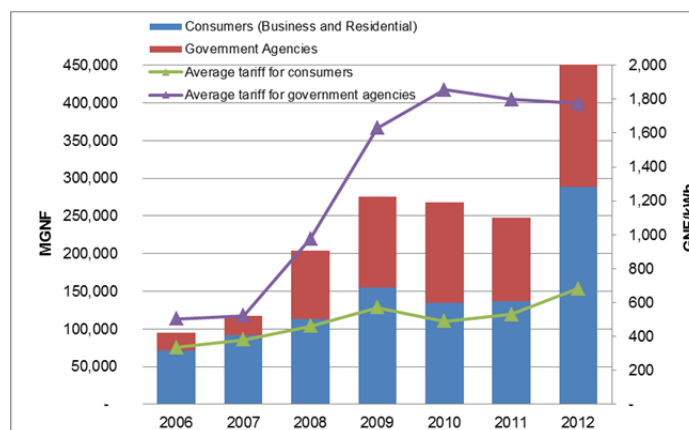


Figure 1: Breakdown of EDG's revenues between private consumers and government agencies

7. Cost of electricity sold has soared by about 31 percent annually resulting in a net income ratio falling from 51 percent in 2006 down to 3 percent in 2013. The deterioration was very steep in 2012 when operating costs were multiplied by 2.6 in the span of one year. The rise in costs is driven by higher fuel charges, with increased recourse to thermal plants in an environment of increasing demand, high global oil price and unfavorable hydraulic availability.

8. Cost of generating one unit of electricity from thermal sources has gone up from 495 GNF per kWh (7 US¢/kWh) in 2007 to 2,075 GNF per kWh (30 US¢/kWh) in 2013. Meanwhile, the share of thermal energy has increased from 23 percent in 2007 up to 33 percent in 2012 and then back to 27 percent in 2013. These fundamental changes impact the bottom line of EDG have left the utility in a state of insolvency.

**Table 2: Income Statement for 2006-2013**

MGNF	Historical	Historical	Historical	Historical	Historical	Historical	Historical	Estimate
	2006 12/31/2006	2007 12/31/2007	2008 12/31/2008	2009 12/31/2009	2010 12/31/2010	2011 12/31/2011	2012 12/31/2012	2013 12/31/2013
<b>Income Statement</b>								
Production Sold	101,434	120,962	209,164	278,253	270,072	252,197	462,440	326,933
Produits accessoires	7,249	15,446	14,491	15,313	16,551	26,559	26,915	29,615
		113%	-6%	6%	8%	60%	1%	10%
<b>Total Revenues</b>	<b>108,683</b>	<b>136,408</b>	<b>223,655</b>	<b>293,566</b>	<b>286,624</b>	<b>278,756</b>	<b>489,355</b>	<b>356,548</b>
Revenue Growth		26%	64%	31%	-2%	-3%	76%	-27%
Purchases of Goods	-161	-215	-179	-185	-174	-342	-112	-1,373
Raw materials and consumables	-53,076	-78,730	-149,872	-138,231	-135,982	-190,140	-506,093	-344,564
<b>Gross Profit</b>	<b>55,446</b>	<b>57,463</b>	<b>73,604</b>	<b>155,150</b>	<b>150,467</b>	<b>88,275</b>	<b>-16,850</b>	<b>10,611</b>
Gross Profit Margin	51%	42%	33%	53%	52%	32%	-3%	3%
Operating subsidies	0	5	17	39	491	1	254,569	450,000
Other products	83	1,098	14,620	61,255	134,509	106,602	226,311	9
Other purchases, transports and external services	-8,942	-11,266	-11,919	-17,148	-10,213	-25,925	-68,854	-66,985
Taxes	-1,050	-2,214	-1,950	-1,698	-1,974	-1,997	-2,547	-2,417
Provisions for collection losses other charges	-12,415	-16,888	-19,813	-133,140	-176,182	-214,429	-444,119	-196
<b>Value Added</b>	<b>33,122</b>	<b>28,198</b>	<b>54,559</b>	<b>64,458</b>	<b>97,098</b>	<b>-47,473</b>	<b>-51,489</b>	<b>391,023</b>
Salaries and Wages	-15,972	-19,213	-25,064	-33,792	-44,223	-52,291	-65,485	-71,340
<b>EBITDA</b>	<b>17,150</b>	<b>8,985</b>	<b>29,495</b>	<b>30,666</b>	<b>52,875</b>	<b>-99,764</b>	<b>-116,974</b>	<b>319,683</b>
EBITDA Margin	16%	7%	13%	10%	18%	-36%	-24%	90%
Depreciation of Old Assets	-21,435	-22,377	-31,097	-26,612	-24,094	-25,942	-32,652	-28,536
Provisions expense	-588	-607	-1,015	-2,694	-7,204	3,816	-2,817	
<b>Operating Income</b>	<b>-4,873</b>	<b>-13,999</b>	<b>-2,617</b>	<b>1,360</b>	<b>21,577</b>	<b>-121,890</b>	<b>-152,442</b>	<b>291,146</b>
Operating Income Margin	-4%	-10%	-1%	0%	8%	-44%	-31%	82%
Financial products	63	6,875	6,751	10,720	9,715	42,726	137,558	273
Interest Expense	-45,678	-8,114	-13,696	-17,383	-39,686	-98,726	-119,556	-28,702
Other income	338	106	123	1,992	123	130	1,338	
Other expenses	-77	-39	-182	-359	-613	-1,034	-317	
Corporate Income Taxes	-40	-40	-40					
<b>Net Profit</b>	<b>-50,267</b>	<b>-15,211</b>	<b>-9,661</b>	<b>-3,670</b>	<b>-8,884</b>	<b>-178,793</b>	<b>-133,420</b>	<b>262,718</b>
Net Profit Margin	-46%	-11%	-4%	-1%	-3%	-64%	-27%	74%

9. In addition to the burden borne by the Government through significantly higher electricity tariffs, the Government has also been providing a direct subsidy to EDG throughout this period. Operating subsidy reached GNF 255 billion (US\$36 million) in 2012. Despite this effort, EDG's financial deterioration has accelerated in 2011/2012. EDG incurred losses of GNF 179 billion (US\$25 million) in 2011 and GNF 133 billion (US\$19 million) in 2012. This contrasts with the period 2007-2010 when losses were more manageable ranging between US\$0.5 million and US\$2 million a year. 2013's net income was positive only because the amount of operating subsidy has reached a record of GNF 450 billion (US\$64 million).

10. These significant losses over the period 2011-2012 have taken a toll on EDG's balance sheet. Equity has turned negative in 2011 and reached GNF -104 billion (US\$ -15 million) in 2012. Extreme financial fragility inhibits EDG from maintaining its production fleet or renewing and rehabilitating its infrastructure. This translates into a constant decrease of assets' book values and a risk of increased dilapidation of infrastructure under lack of investment renewal, and testifies to the need for recapitalization of EDG coupled with a restructuring of the company.

b) Financial projections

11. A financial model of EDG was developed by IFC Advisory Services for the period 2014-2019 during which the private Operator is expected to turnaround EDG's performance. The projections are based on a number of assumptions that are listed below.

Supply demand balance

12. Supply is currently lagging behind demand: only half of the demand is being served by existing generation. This will continue to be the case for 2014 where a shortfall of 908 GWh is projected for a total demand of 1,966 GWh. The situation is expected to improve in 2015 with the commissioning of Kaleta hydropower plant by mid-year and Kipe thermal plant bringing the grid shortfall down to 177 GWh. By 2016, generation shortfall would have resorbed entirely.

13. In order to meet a portion of the growth in demand, thermal generation will ramp up in 2014 driven by the increase in output from Aggreko engines, Tombo 3 and Tombo 5. The share of hydropower within the generation mix, nearly 50 percent, is at its lowest level since 2006. As Kaleta is commissioned in 2015/2016, the share of hydropower in the overall mix will return to a level ranging between 60 and 70 percent.

Technical and commercial loss reduction

14. The private Operator is expected to implement the extensive sector recovery plan which was designed to yield significant loss reduction on the transmission and the distribution networks. It is projected that by 2018: (i) transmission losses will drop down to 6 percent; (ii) technical distribution losses will be capped at 14 percent; (iii) billing losses will be halved; and (iv) revenue protection efforts will be undertaken to enhance collection rate up to 96 percent from a current level of 77 percent.

**Table 3: Projections of technical and commercial losses**

	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>Transmission losses</b>	10.00%	9.23%	8.00%	6.77%	6.00%
<b>Distribution losses</b>	20%	19%	17%	15%	14%
<b>Billing losses</b>	20%	18%	15%	12%	10%
<b>Collection Rate</b>	77%	80%	86%	92%	96%

15. Average tariff is assumed to remain constant, 840 GNF /kWh (0.12 US¢/kWh), over the project's life. It is also assumed that the government maintains an operating subsidy for EDG until the latter is able to recover its operating cost. Another important assumption is that the government will be the owner of the main investments identified by the Sector Recovery Plan and hence associated debt service resulting from funding these assets will be absorbed by the government and not EDG.

## Main results

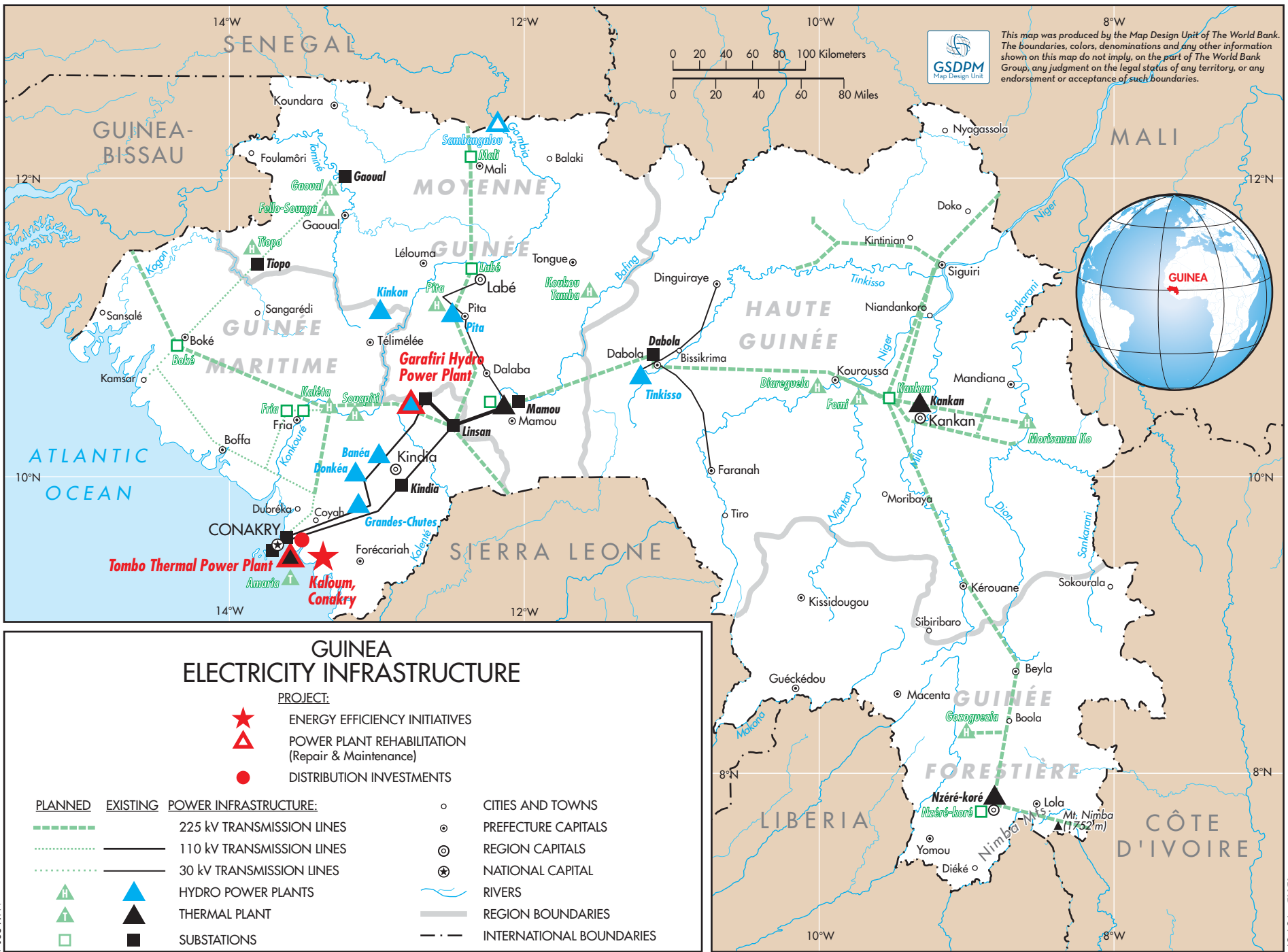
16. Revenues are expected to grow considerably over the first two years, about 60 percent per annum. This is mainly driven by the increased level of energy injected into the grid subsequent to the commissioning of new generation assets as highlighted in the assumptions above. Gross profit margin in percentage is unchanged in 2014 and declines by 24 percent in 2015 which is expected to be the most difficult year for EDG financially. Operating subsidy requirements will increase to GNF 601 billion (US\$ 86 million) in 2015 because of a more frequent recourse to thermal generation to meet increased demand, resulting in an increasing fuel bill. This is projected to double in less than a year, reaching GNF 1,134 billion (US\$ 162 million). The temporary increase in the subsidy will help improve the reliability of supply significantly, which is expected to enhance the willingness to pay of customers. This would therefore be the optimal time for the Government to proceed with an increase in tariff should it seek to reduce the burden of the investment subsidy.

17. The commissioning of Kaleta in 2015/2016 and the reduced level of technical and commercial losses will start bearing results in 2016. Fuel bill will decline by about 30 percent between 2015 and 2018; this will have a positive impact on gross profit margin which will increase from a loss of -GNF 219 billion in 2015 (-US\$ 31 million) to a gain of +GNF 332 billion (US\$ 47 million). The Operating subsidy is expected to decline by two thirds in 2016 and will no longer be required as of 2018.

18. This positive turnaround is based on three main conditions: i) the commissioning of Kaleta on time and that is key in reducing EDG's reliance on fuel for generation; (ii) the ability of the management contractor to implement the sector recovery plan successfully, which in turn depends on government support; and (iii) the reliability of baseline data from which the private Operator will be starting in 2014. Should there be a delay in commissioning of Kaleta, the milestone year 2015 would be pushed further back resulting in an increased and longer lasting operating subsidy from the government. Should the baseline of losses be higher than originally estimated, the target level of losses in 2018 will be higher entailing additional operating costs and reduced revenues.

**Table 4: Projected net income statement for 2014-2019**

MGNF	Estimate	estimate	projections	projections	projections	projections	projections
	2013 12/31/2013	2014 12/31/2014	2015 12/31/2015	2016 12/31/2016	2017 12/31/2017	2018 12/31/2018	2019 12/31/2019
<b>Income Statement</b>							
Production Sold	326,933	551,191	895,410	1,021,315	1,067,014	1,097,210	1,103,202
Produits accessoires	29,615	21,574	21,574	21,574	21,574	21,574	21,574
	10%	10%	10%	10%	10%	10%	10%
<b>Total Revenues</b>	<b>356,548</b>	<b>572,765</b>	<b>916,984</b>	<b>1,042,889</b>	<b>1,088,588</b>	<b>1,118,784</b>	<b>1,124,776</b>
<i>Revenue Growth</i>	-27%	61%	60%	14%	4%	3%	1%
	18%						
	2,075.69						
Purchases of Goods	-1,373	-722	-1,156	-1,315	-1,373	-1,411	-1,418
Raw materials and consumables	-344,564	-553,513	-1,134,794	-911,699	-830,053	-785,407	-787,938
<b>Gross Profit</b>	<b>10,611</b>	<b>18,529</b>	<b>-218,967</b>	<b>129,875</b>	<b>257,163</b>	<b>331,966</b>	<b>335,419</b>
<i>Gross Profit Margin</i>	3%	3%	-24%	12%	24%	30%	30%
	31%						
Operating subsidies	450,000	322,841	601,285	217,281	32,208	0	0
Other products	9						
Other purchases, transports and external services	-66,985	-91,000	-91,000	-91,000	-91,000	-91,000	-91,000
Taxes	-2,417						
Provisions for collection losses		-129,549	-179,126	-144,257	-85,109	-45,331	-45,244
other charges	-196						
<b>Value Added</b>	<b>391,023</b>	<b>120,821</b>	<b>112,193</b>	<b>111,900</b>	<b>113,262</b>	<b>195,635</b>	<b>199,175</b>
Salaries and Wages	-71,340	-68,992	-67,924	-65,585	-62,957	-60,994	-60,291
<b>EBITDA</b>	<b>319,683</b>	<b>51,829</b>	<b>44,269</b>	<b>46,315</b>	<b>50,304</b>	<b>134,641</b>	<b>138,884</b>
<i>EBITDA Margin</i>	90%	9%	5%	4%	5%	12%	12%
Depreciation of Old Assets	-28,536	-35,917	-39,508	-43,459	-47,805	-52,586	-57,844
Provisions expense							
<b>Operating Income</b>	<b>291,146</b>	<b>15,912</b>	<b>4,761</b>	<b>2,856</b>	<b>2,499</b>	<b>82,055</b>	<b>81,040</b>
<i>Operating Income Margin</i>	82%	3%	1%	0%	0%	7%	7%
Financial products	273	0	0	0	0	0	0
Interest Expense	-28,702	-15,912	-4,761	-2,856	-2,499	-2,143	-1,786
Other income	0	0	0	0	0	0	0
Other expenses	0	0	0	0	0	0	0
Coporate Income Taxes	0	0	0	0	0	0	0
<b>Net Profit</b>	<b>262,718</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>79,913</b>	<b>79,254</b>
<i>Net Profit Margin</i>	74%	0%	0%	0%	0%	7%	7%



MAY 2014

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