



**AFRICAN DEVELOPMENT
FUND**

Language : English
Original : French

RURAL ELECTRIFICATION PROJECT

COUNTRY: REPUBLIC OF GUINEA

PROJECT APPRAISAL REPORT

Date : October 2010

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TABLE OF CONTENTS

1	STRATEGIC THRUSTS AND RATIONALE	1
1.1	Project Linkages with Guinea’s Strategy and Objectives.....	1
1.2	Rationale for Bank’s Involvement	1
1.3	Aid Coordination	2
2	PROJECT DESCRIPTION.....	2
2.1	Project Description and Components.....	2
2.2	Technical Solutions Adopted and Alternatives Explored.....	3
2.3	Project Type	4
2.4	Project Cost and Financing Arrangement	4
2.5	Project Target Area and Beneficiaries	6
2.6	Participatory Approach	6
2.7	Bank Group Experience and Lessons Reflected in Project Design	7
2.8	Key Performance Indicators	7
3.	PROJECT FEASIBILITY	7
3.1	Financial and Economic Performance	7
3.2	Environmental and Social Impact.....	8
4.	PROJECT IMPLEMENTATION	10
4.1	Implementation Arrangements.....	10
4.2	Project Monitoring	11
4.3	Governance	12
4.4	Billing Policy	12
4.5	Sustainability.....	12
4.6	Risk Management	13
4.7	Knowledge Building	13
5.	LEGAL FRAMEWORK	13
5.1	Legal Instrument	13
5.2	Conditions Associated with Bank’s Intervention	13
5.3	Compliance with Bank Policies	14
6.	RECOMMENDATION	14
	Annex I. Country Comparative Socio-economic Indicators.....	1
	Annex II. Table of ADB Portfolio in the Country	1
	Annex III. Major Related Projects Financed by the Bank and Guinea's Other Development Partners	1
	Annex IV. Electricity Supply and Demand Projection	1
	Annex V. Map of Project Area	1

Guinea - Development Indicators				
Social Indicators	Guinea		Africa	Developing countries
	1990	2009 *		
Area ('000 Km²)	246		30 323	80 976
Total Population (millions)	6,1	10,1	1 008,4	5 628,5
Population growth (annual %)	3,6	2,4	2,3	1,3
Life expectancy at birth, total (years)	48,3	58,4	55,7	66,9
Mortality rate, infant (per 1,000 live births)	138,1	95,1	80,0	49,9
Physicians per 100,000 People	12,8	5,5	42,9	78,0
Births attended by skilled health staff (% of total)	...	38,0	50,5	63,4
Immunization, measles (% of children ages 12-23 months)	25,0	94,0	74,0	81,7
School enrollment, primary (% gross)	37,1	89,9	100,2	106,8
Ratio of girls to boys in primary education (%)	47,3	85,3	90,9	100,0
Illiteracy rate, adult total (% of people ages 15 and above)	...	29,5	...	...
Access to Safe Water (% of Population)	45,0	70,0	64,0	84,0
Access to Sanitation (% of Population)	13,0	19,0	38,5	54,6
Human Develop. (HDI) Rank (Over 182 Countries)	...	170,0	n.a	n.a
Human Poverty Index (% of Population)	...	50,9	3,4	...
Guinea				
Economy	2000	2007	2008	2009
GNI per capita, Atlas method (current US\$)	400	390	...	...
GDP (current Million US\$)	2 995	4 152	4 520	4 418
GDP growth (annual %)	-1,9	1,8	4,9	0,6
Per capita GDP growth (annual %)	-3,8	-0,4	2,6	-1,7
Gross Domestic Investment (% of GDP)	13,6	19,9	21,9	18,0
Inflation (annual %)	6,9	22,9	18,4	4,8
Budget surplus/deficit (% of GDP)	-3,4	0,5	-1,2	-1,5
Trade, External Debt & Financial Flows	2000	2007	2008	2009
Export Growth, volume (%)	5,0	3,9	10,2	-1,5
Import Growth, volume (%)	-3,1	22,2	-3,3	-10,2
Terms of Trade (% change from previous year)	-5,1	11,8	6,8	-12,6
Trade Balance (mn US\$)	99	29	288	193
Trade balance (% of GDP)	3,3	0,7	6,4	4,4
Current Account (mn US\$)	-162	-412	-314	-411
Current Account (% of GDP)	-5,4	-9,9	-6,9	-9,3
Debt Service (% of Exports)	14,2	8,3	9,5	7,9
External Debt (% of GDP)	108,9	78,1	66,3	65,0
Net Total Inflows (mn US\$)	329,3	232,2	224,2	...
Net Total Official Development Assistance (mn US\$)	152,9	228,1	319,0	...
Foreign Direct Investment Inflows (mn US\$)	9,9	385,9	1 349,6	...
External reserves (in month of imports)	1,6	...	...	...
Private Sector Development & Infrastructure	2000	2007	2008	2009
Time required to start a business (days)	...	41	41	41
Investor Protection Index (0-10)	...	2,7	2,7	2,7
Main Telephone Lines (per 1000 people)	2,9	2,3	2,1	...
Mobile Cellular Subscribers (per 1000 people)	5,0	208,0	390,6	...
Internet users (000)	1,0	7,8	9,2	...
Roads, paved (% of total roads)	16,5	...	...	...
Railways, goods transported (million ton-km)	...	...	...	...

Source: ADB Statistics Department, based on various national and international sources

* Most recent year

Last Update: May 2010

.....	1
Annex II	1
Table of ADB Portfolio in the Country	1
Annex III.....	1
Major Related Projects Financed by the Bank and Guinea's Other Development Partners..	1
Annex V	1
Map of Project Area.....	1



CURRENCY EQUIVALENTS, WEIGHTS AND MEASURES, ACRONYMS AND ABBREVIATIONS	
August 2010	
UA 1	GNF 9104.74
UA 1	USD 1.51852
UA 1	EUR 1.16558
Fiscal Year 1 January – 31 December	

WEIGHTS AND MEASURES

• m	metre	1 m	• Kgoe	Kilogram of oil equivalent	
• cm	centimetre	0.01 m	• V	Volt	1 V
• mm	millimetre	0.001 m	• kV	Kilovolt	1000 V
• km	kilometre	1.000 m	• kVa	Kilovolt-ampere	1000 VA
• m ²	square metre	1 m ²	• W	Watt	1 W
• cm ²	square centimetre	0.01 m ²	• kW	Kilowatt	1000 watts
• mm ²	square millimetre	0.001 m ²	• GW	Gigawatt	1000 MW
• km ²	square kilometre	1 000 000 m ²	• MW	Megawatt	1000 kW
• ha	hectare	10 000 m ²	• kWh	Kilowatt-hour	1000 Wh
• kg	kilogram	1000 g	• MWh	Megawatt-hour	1000 kWh
• t	ton	1 000 kg	• GWh	Gigawatt-hour	1 000 000 kWh

ACRONYMS AND ABBREVIATIONS

ADF	=	African Development Fund
BD	=	Bidding Documents
CSP	=	Country Strategy Paper
EDG	=	<i>Electricité de Guinée</i> (Guinea Electricity Company)
ERR	=	Economic Rate of Return
ESIA	=	Environmental and Social Impact Assessment
ESMP	=	Environmental and Social Management Plan
ESPL	=	Energy Sector Policy Letter
FRR	=	Financial Rate of Return
GDP	=	Gross Domestic Product
GNF	=	Guinean Franc
HV	=	High Voltage
IEC	=	Information, Education and Communication
IMF	=	International Monetary Fund
IsDB	=	Islamic Development Bank
LV	=	Low Voltage
MDGs	=	Millennium Development Goals
MV	=	Medium Voltage
NPV	=	Net Present Value
OMVG	=	Gambia River Basin Development Organization
PAESE	=	Electricity Sector Efficiency Improvement Project
PER	=	Rural Electrification Project
PREREC	=	Conakry Electricity Network Rehabilitation and Extension Project
PRSP	=	Poverty Reduction Strategy Paper
SME	=	Small- and Medium-size Enterprise
SMI	=	Small- and Medium-size Industry
TFP	=	Technical and Financial Partner
UA	=	Unit of Account

PROJECT INFORMATION SHEET: P-GN-F00-004

Client Information Sheet	
Donee	Republic of Guinea
Executing Agency	Ministry of Mines, Energy and Water Resources

FINANCING PLAN		
Source of Financing	Amount in UA Million	Instrument
ADF	14.960	Grant
Government	0.093	Counterpart contribution
Total Cost	15.053	

KEY ADF FINANCIAL INFORMATION	
Grant Currency	Unit of Account (UA)
Interest Type	Not applicable
Interest Rate Margin	Not applicable
Commitment Charge	Not applicable
Service Charge	Not applicable
Interest Type	Not applicable
FIRR, NPV (baseline scenario)	14.2 %; NPV: GNF 48 billion
EIRR (baseline scenario)	24.2 %; NPV: GNF148 billion

TIMEFRAME – MAIN MILESTONES	
Identification Mission	May 2010
Preparation Mission	May 2010
Appraisal Mission	August 2010
Concept Note Approval	August 2010
Approval of Project Appraisal Report	December 2010
Signature and Fulfilment of Conditions Precedent to First Disbursement	June 2011
Project Completion	December 2014
Last Disbursement	December 2015

EXECUTIVE SUMMARY

1. Project Overview

The identification of this Rural Electrification Project (PER) drew inspiration from the electrification master plan study conducted in 2006 with Bank financing. The project will cover 31 localities along the national interconnected grid. The localities are located in the Basse and Moyenne Guinée Regions, both of which have significant economic potential and are crossed by asphalted roads. The project will also include the conduct of two studies essential for preparing future energy sector operations in Guinea by the Bank and other donors. In addition, it will help raise the rural electrification rate from 3% in 2009 to 15% in 2015 and reduce the rate of energy loss on the distribution network from 48% in 2009 to 20% in 2015. The overall project cost, net of taxes, submitted for ADF funding will amount to UA 15.053 million. It will be implemented over the 2011-2014 period.

The direct project beneficiaries will be households, the EDG, small artisans and traders, the local administration, SMEs/SMIs in the targeted localities and workers who will be recruited during its implementation. The project area has a population of about one million, 52% of whom are women.

The project will contribute to improving the living and working conditions of the people, and will provide opportunities for the creation and development of income-generating activities. The planned Information, Education and Communication (IEC) campaigns will also enable the beneficiaries to contribute to energy conservation.

2. Needs Assessment

In 2009, Guinea's electrification rate was 12% at the national level and 3% in rural areas. The current limited network as well as low investment in network rehabilitation and maintenance, partly explain the very low coverage of the country's energy needs. Therefore, the Government has set itself the objective of raising the country's electrification rate from 12% in 2009 to 36% by end-2015. This project falls within this context and seeks to rehabilitate and strengthen the existing network to reduce technical losses, improve the quality of service provided and connect about 60 000 new subscribers in 31 localities to the network. Guinea's objective is to reduce poverty through sustained economic growth driven by the private sector. Project implementation will help ease constraints on the economic and social development of the localities concerned, associated with lack of electricity or the poor quality of service provided.

3. Bank Value Added

The preparation of the rural electrification master plan study - on which the project design was based - was funded and monitored by the Bank, which validated the interim and final study reports. Monitoring of the study and the Bank's long experience in implementing similar projects were critical in project design, implementation planning and strengthening of the Unit that will be responsible for its implementation. Furthermore, the participatory approach adopted during study/project preparation and appraisal missions helped to win the strong support of the population to the project. In fact, the beneficiary communities see the project largely as one that will not only substantially improve the quality of service provided, but will also and above all lead to the connection of new localities to the network. This development would transform the social and economic dynamics of the localities. The participatory approach will be pursued during project implementation, especially through IEC campaigns.

4. Knowledge Management

The executing agency will establish a benchmark for indicators at project start-up to help monitor its implementation and impact, and draw relevant lessons. The Implementation Unit's quarterly reports and the Consulting Engineer's reports will provide information on indicator trends and serve as a warning system. The Steering Committee that will be set up will work with these data and ensure that the project objectives are achieved. The Bank will also use the data generated for its project supervision and monitoring/evaluation missions.

RESULTS-BASED LOGICAL FRAMEWORK

- **Project Name** : **Rural Electrification Project**
- **Start-up Date** : **January 2011**
- **Completion Date** : **May 2015**
- **Design Team** : **N. NDOUNDO - P. DJAIGBE - J. FRANSSSEN – M.E. AKITANI – M. HASSAN**

HIERARCHY OF OBJECTIVES	EXPECTED OUTPUTS	SCOPE	PERFORMANCE INDICATORS (verification methods and sources)	INDICATIVE TARGET TIMEFRAMES (basic data and deadlines)	ASSUMPTIONS/RISKS
<p><u>Project Goal</u> Help increase access by the population to electricity</p>	<p><u>Impact</u></p> <ol style="list-style-type: none"> 1. Increase in the rural electrification rate 2. Increase in the overall electrification rate 	<p><u>Beneficiaries</u> The entire country The country's economy</p>	<p><u>Impact Indicators</u></p> <ol style="list-style-type: none"> 1. Rural electrification rate 2. Overall electrification rate <p><u>Sources</u> : Annual progress reports of the EDG and the Ministry in Charge of Electricity</p>	<p><u>Anticipated Long-term Progress</u></p> <ol style="list-style-type: none"> 1. Increase in the rural electrification rate from 3% in 2009 to 15% in 2015 2. Increase in the overall electrification rate from 12% in 2009 to 36% in 2015 <p><u>Sources</u>: Government's Sector Policy Letter, progress report of the National Energy Directorate</p>	<p><u>Assumptions</u> <u>Risk</u> - <i>Political crisis</i> <u>Mitigative measure</u> - Ongoing electoral process to normalize political life</p>
<p><u>Project Objective</u> Improve electricity supply quality and access in 31 localities</p>	<p><u>Impact</u></p> <ol style="list-style-type: none"> 1. Reduction in network loss rate 2. Increase in the number of subscribers 	<p><u>Beneficiaries</u></p> <ul style="list-style-type: none"> - Population of the project area - Small-scale industrial businesses and cottage industry - EDG 	<p><u>Output Indicators</u></p> <ol style="list-style-type: none"> 1. Loss rates in 15 localities already electrified 2. Number of new households connected to the network <p><u>Sources</u>: Project Implementation Report, EDG Progress Report, Annual Progress Report of the Chamber of Commerce</p>	<p><u>Anticipated Medium-term Progress</u></p> <ol style="list-style-type: none"> 1. Decrease in the loss rate from 48% in 2010 to 20% at end- 2014 in the 15 localities currently electrified 2. Sixty thousand new households subscribed at end- 2014 <p><u>Sources</u>: Project Implementation Report, EDG Progress Report</p>	<p><u>Risks</u></p> <ul style="list-style-type: none"> - Inadequate development of EDG production capacity - Inadequate maintenance of facilities <p><u>Mitigative measures</u></p> <ul style="list-style-type: none"> - Ongoing measures to enhance the production pool (Manéah: 106 MW (2013) and OMVG : 120 MW (2015)) - Revenue generated by the project will enable the EDG to have additional resources to ensure the adequate maintenance of facilities

Activities and Resources	Outputs	Beneficiaries	Output Indicators	Targeted Indicator Value	Assumption/Risks
<p>Activities</p> <ul style="list-style-type: none"> - Build electric power infrastructure - Strengthen the Project Implementation Unit - IEC - Monitor ESMP implementation <p>Financial Resources ADF: UA 14.960 million GVT.: UA 0.093 million ----- Total: UA 15.053 million</p>	<ul style="list-style-type: none"> - HV/MV generation station built - MV transmission lines built - MV/LV transmission lines built - LV transmission lines built - MV/LV stations built - Localities electrified - Project Unit strengthened and operational - Localities sensitized (security, energy conservation, HIV/AIDS, etc.) - ESMP Implementation Report 	<p>Population of the project area, EDG, businesses, SMEs/SMIs, consultants</p>	<ul style="list-style-type: none"> - Number of HV/MV stations - Length of MV lines - Length of MV/LV lines - Length of LV lines - Number of MV/LV stations - Number of localities electrified - Number of additional professionals integrated into the Project Unit - Number of localities - Number of reports <p><u>Sources:</u> Progress reports, project mid-term review and completion reports</p>	<ul style="list-style-type: none"> - One 110/30 kV station - 125 km of 30 kV lines - 113 km of 30/0.4 kV lines - 178 km of LV (0.4 kV) lines - One hundred and sixty-nine 50, 100, 160 kVA overhead stations and 250 kVA ground stations - 16 localities electrified - 6 national professionals designated - 31 localities - 1 report per quarter <p>Implementation schedule: 2011 to 2014</p>	<p><u>Assumption/Risks</u></p> <p><u>Risk</u></p> <ul style="list-style-type: none"> - Process of compensating people affected by the project slowed down because of delay in providing counterpart contribution <p><u>Mitigative measures</u></p> <ul style="list-style-type: none"> - ESMP implementation - The Government must compensate all persons affected or open an account into which resources for compensation are deposited prior to grant disbursement

REPORT AND RECOMMENDATION OF BANK GROUP MANAGEMENT TO THE BOARD OF DIRECTORS CONCERNING A PROPOSAL FOR THE AWARD OF AN ADF GRANT TO THE REPUBLIC OF GUINEA

Management hereby submits this report and recommendation concerning a proposal for the award of a UA 14.960 million grant to the Republic of Guinea to finance the Rural Electrification Project.

1 STRATEGIC THRUSTS AND RATIONALE

1.1 Project Linkages with Guinea's Strategy and Objectives

1.1.1 Guinea's Interim Poverty Reduction Strategy Paper (PRSP) for the 2010-2011 period under preparation and the 2007-2010 PRSP focus on three pillars, the third of which concerns the enhancement of access to quality social services (education, drinking water, housing, sanitation, electricity, etc.). To achieve the Millennium Development Goals (MDGs), Guinea has also set itself the goal of attaining an overall electrification rate of 36% by 2015. This project will enhance the quality of service provided by reducing outage frequency and the technical loss rate in 15 localities, and connecting 16 new localities to the network. Thus, it will help to improve access by the population to quality modern energy services.

1.1.2 The Interim Country Strategy Paper (CSP) for the 2010-2011 period under preparation has two pillars, namely: (i) strengthening basic infrastructure and growth sectors; and (ii) improving basic social services. These two CSP pillars are in line with the Guinean Government's priorities. The reinforcement and rehabilitation of the existing network and its extension to new localities will help to achieve the objectives of these two specific CSP pillars.

1.2 Rationale for Bank's Involvement

1.2.1 The rural electrification rate of about 3% is due to the low level of equipment in Guinea's rural areas as well as poor maintenance of existing energy infrastructure. To improve electricity supply quality and attain the targeted electrification rate in 2015, the Government, with the support of key donors in the sector, is making vigorous efforts to rehabilitate the network and extend it to new localities. This Rural Electrification Project (REP) is part of such efforts. It will enhance the quality of the existing grid and extend the distribution network to new rural localities.

1.2.2 The project proposed for ADF financing is in synergy with projects being implemented with funding from other donors such as the ECOWAS Investment and Development Bank (EIDB) and the World Bank (in 2008, the EIDB provided USD 20 million for the rehabilitation and extension of networks in some of the country's regional capitals; in 2002, the World Bank contributed USD 4.1 million to financing decentralized rural electrification).

Through this operation, the Bank will also support the conduct of two important studies to prepare future operations in the electricity sub-sector in Guinea. These are: (i) the Environmental and Social Impact Assessment of the Souapiti hydroelectric site (the related technical feasibility study is already available), with a view to sourcing the necessary financing to install an additional 500 MW generation capacity; and (ii) the Conakry Electric Grid Development Plan Study, the purpose of which is to pursue the rehabilitation of this main grid and enhance the efficiency of the electricity sub-sector. These studies will help to mobilize the necessary resources and facilitate dialogue between the Government and sector donors.

1.3 Aid Coordination

1.3.1 Owing to the political crisis experienced by the country in recent years, the activities of the key development partners have been maintained at a relatively modest level. However, the World Bank and the IMF have prepared and submitted to other donors for opinion a proposal of think-tanks and focus groups as a prelude to ongoing political normalization following the holding of multiparty elections. This initiative, which will be discussed between the key donors, will provide anchorage for establishing a framework for consultation and role sharing in coordinating the country's development aid. The Bank will participate actively in developing and establishing a formal mechanism for donor coordination in the country.

Table 1.1 Contribution of the Energy Sector				
Sector	Contribution in 2009			
	GDP	Exports	Workforce	
Energy	[%]	[%]	[%]	
	0.63%	2.58%	NA	
Stakeholders- Annual Public Spending (in GNF billion)				
Year	Total	Government	Donors (WB, IsDB, EIDB, ADB, China)	
			Amount	Percentage
2007	17.21	1.51	15.70	91%
2008	65.72	16.12	49.60	75%
2009	11.88	10.67	1.21	10%
Level of Aid Coordination in Guinea				
Existence of thematic working groups			Ongoing initiative	
Existence of an overall sector programme			Yes	
Role of the ADB in aid coordination			Thematic group member	

1.3.2 In recent years, donor operations in the electricity sub-sector have focused on MV/LV distribution network rehabilitation and extension to reduce the technical losses noted on distribution networks and enhance access by the population to electricity.

1.3.3 This project is fully in line with the objectives of these previous operations in the sub-sector funded by other donors, notably the World Bank, the IsDB, the EIDB and the AFD with which consultations for synergy were held during the preparation and appraisal missions. Annex III provides details of donors' contribution in the electricity sub-sector.

2 PROJECT DESCRIPTION

2.1 Project Description and Components

2.1.1 The project seeks to contribute to increasing the population's access to electricity. The project's specific objective is to improve the quality of electricity supply and access in 31 localities. This objective will be achieved by:

- Reducing technical losses and improving the quality of service provided, notably by strengthening MV/LV networks; and
- Supplying electricity to new localities by building power generation stations and extending distribution networks.

Table 2.1
below presents the project components and costs:

Table 2.1			
Project Components and Costs (in UA Million)			
No.	Component Name	Component Cost	Component Description
A	Construction of electrical infrastructure	12.781	<ul style="list-style-type: none"> • Construction of a simplified 110/30 kV generating station in Souguéta • Construction of 125 km of 30 kV lines • Construction of 113 km of 30/0.4 kV lines • Construction of 178 km of low voltage (0.4 kV) lines • Installation of one hundred and sixty-nine 50, 100, 160 kVA overhead stations and construction of four 250 kVA ground stations • Procurement of 26873 electromechanical meters
B	Environmental and social impact mitigative measures	0.093	<ul style="list-style-type: none"> • Environmental and social impact management
C	Studies, works control and monitoring	1.925	<ul style="list-style-type: none"> • Conakry Grid Development Plan Study • ESIA of Souapiti hydroelectric site • Works control and supervision • ESMP monitoring and supervision
B	Project administration and management	0.254	<ul style="list-style-type: none"> • Administrative and accounting procedures manual • Accounting software • Transport equipment (1 double-cabin off-road vehicle) • Information - Education - Communication (IEC) • Vehicle operation • Office supplies • Operation of Project Unit (allowances) • Auditing of project accounts
Total Project Cost		15.053	

2.2 Technical Solutions Adopted and Alternatives Explored

2.2.1 The localities to be electrified are along the 110 kV/30 kV interconnected national grid and tarred roads, and their connection to the grid only requires the construction of 0.5 km of a 110kV line and a 110kV/30kV simplified station at Souguéra, from which the 30kV grid will be extended over 40 km for the electrification of the concerned localities. This option is relatively simple to implement and has the advantage of preventing the use of isolated generators that are expensive to run and emit large quantities of greenhouse gases.

2.2.2 The alternative technical solutions explored and rejected, and reasons for their rejection are summarized below:

Table 2.2:		
Alternative Technical Solutions Explored		
Alternative Solutions	Brief Description	Reasons for Rejection
Interconnection from the Mamou 110 kV/30 kV station	Build 80 km of a 30 kV line to the 16 new localities to be electrified	<ul style="list-style-type: none"> - High cost of constructing 80 km of 30 kV line - Significant negative environmental impact - High rate of energy loss in view of the length of the line (80 km instead of 40 km)
Installation of isolated thermal power plants in the project area	Procure and install small thermal power generating units to supply the localities	<ul style="list-style-type: none"> - High cost of building the plants - Very high cost of generating a kWh of electricity - Significant greenhouse gas emission

2.3 Project Type

2.3.1 The proposed financing instrument is a “project grant” from ADF resources because Guinea is exclusively eligible for grants. All project components will be financed with ADF resources, except for environmental and social impact mitigative measures which will be financed with counterpart resources.

2.4 Project Cost and Financing Arrangement

2.4.1 Overall project cost will amount to approximately UA 15.053 million, net of taxes and customs duty, of which UA 13.003 million in foreign exchange and UA 2.050 million in local currency. The cost includes a 2% provision for physical contingencies and a 6% provision for price escalation.

2.4.2 The project cost by component is shown in the table below:

Component	Foreign Exchange	Local Currency	Total	% Foreign Exchange
A. Construction of electrical infrastructure	11.503	1.278	12.781	90%
B. Environmental and social impact mitigative measures	0.000	0.093	0.093	0%
				70%
C. Studies, works supervision and monitoring	1.348	0.577	1.925	
D. Project administration and management	0.152	0.102	0.254	60%
Total Project Cost	13.003	2.050	15.053	86%
Percentage (%)	86%	14%	100%	

NB: The exchange rates used are shown on Page (i) of the report.

2.4.3 The project will be financed by the Guinean Government and the ADF to the tune of 0.6% and 99.4%, respectively. The ADF grant will finance the overall cost, net of taxes and customs duty, of project works, administration and management. Government financing only covers environmental and social impact mitigative measures. This financing arrangement was retained because the country is facing budgetary difficulties that impede the effective disbursement of the counterpart contribution. Indeed, this is one of the main constraints identified by the portfolio review conducted by the Bank in June 2009. With the global financial crisis and collapse of commodity prices, notably the price of aluminium to which Guinean bauxite is pegged, the country witnessed a worsening of its deficit that, coupled with the depletion of its monetary reserves, led to an accumulation of internal and external debt arrears. Yet, the country’s budgetary position and debt level are some of the criteria used by the Bank to guide its policy on expenditures eligible for financing with ADF grant. The PRSP and the Energy Sector Development Policy Letter (ESDPL) prepared by Guinea reflect Government’s will to implement its overall development policy with the support of development partners. The country engaged in dialogue with these partners with a view to reaching the HIPCI completion point in 2010. The completion point has not been reached because of the prevailing political crisis. In the past three years, the Government has made significant efforts to finance investments from the national budget. Investments rose from GNF 1.51 billion in 2007 to GNF 10.67 billion in 2009, as shown in Table 1.1 above. Furthermore, given the country’s vulnerability as accepted by most development partners, Guinea is considered a Fragile State.

2.4.4 The Government's counterpart contribution amounting to UA 0.093 million, or GNF 846.74 million, is intended for financing project environmental and social impact mitigative measures. Details of items financed by counterpart resources are found in the technical annexes. The project financing plan is shown in Table 2.4 below:

Source of Financing	Foreign Exchange	Local Currency	Total	% Total
ADF	13.003	1.957	14.960	99.4%
GOVERNMENT	0.000	0.093	0.093	0.6%
TOTAL	13.003	2.050	15.053	100%
Percentage (%)	86%	14%	100%	

2.4.5 The project cost by expenditure category is as follows:

Expenditure Category	Foreign Exchange	Local Currency	Total	% Foreign Exchange
Goods	2.999	0.351	3.350	90%
Works (supply and installation)	8.536	0.949	9.485	90%
Services	1.400	0.612	2.012	70%
Others	0.068	0.138	0.206	33%
Total Project Cost	13.003	2.050	15.053	86%
Percentage (%)	86%	14%	100%	

2.4.6 The expenditure schedule by component is shown in the table below:

Component	2 011	2 012	2 013	2014	Total	%
A. Construction of electrical infrastructure	0.000	2.557	5.112	5.112	12.781	85%
B. Environmental and social impact mitigative measures	0.093	0.000	0.000	0.000	0.093	1%
C. Studies, works supervision and monitoring	0.385	0.482	0.577	0.481	1.925	13%
D. Project administration and management	0.051	0.089	0.089	0.025	0.254	2%
Total Base Cost	0.529	3.128	5.778	5.618	15.053	100%
Percentage (%)	4%	21%	38%	37%	100%	

2.4.7 The project cost by expenditure category and by source of financing is shown in the table below:

F				
Project Cost by Expenditure Category and by Source of Financing (in UA million)				
Expenditure Category/Source of Financing	ADF	GVT	Total	%
Goods	3.350	0.000	3.350	22%
Works (supply and installation)	9.485	0.000	9.485	63%
Services	2.012	0.000	2.012	13%
Others	0.113	0.093	0.206	1%
Total Project Cost	14.960	0.093	15.053	100%
Percentage (%)	99.4%	0.6%	100%	

2.4.8 Table 2.8 shows expenditure amounts covered by ADF resources by expenditure category.

Table 2.8				
ADF Grant by Expenditure Category (in UA million)				
Expenditure Category	Foreign Exchange	Local Currency	Total	%
Goods	2.999	0.351	3.350	23%
Works (supply and installation)	8.536	0.949	9.485	63%
Services	1,400	0.612	2.012	13%
Others	0.068	0.045	0.113	1%
Total Project Amount	13.003	1.957	14.960	100%
Percentage (%)	87%	13%	100%	

2.5 Project Target Area and Beneficiaries

2.5.1 The project will be implemented in 31 localities situated in Basse and Moyenne Guinée. These localities are endowed with enormous economic potential, notably agricultural, water and mineral resources. The population in the project area is estimated at one million, about 52% of whom are women. The introduction of electricity in these new localities will help to develop activities hitherto impossible to carry out. It will also enhance the impact of public programmes in the social sectors, namely education, health, information, security and leisure. The direct beneficiaries will be households for domestic needs, farmers, small artisans and traders for goods and services production activities. The project will improve the living and working conditions of the people, boost the development of small-scale businesses and market garden crop preservation and processing, and generally improve the business environment of micro-enterprises and SMEs/SMIs in the target area.

2.6 Participatory Approach

2.6.1 The main localities which will be covered by the project were consulted, using a constructive participatory approach at two levels: (i) local administrative and technical authorities; and (ii) representatives of the population organized into groups or associations (women's cooperatives, NGOs, youth groups, artisan groups, etc.). During project preparation and appraisal, informative meetings were organized to present the project, its positive and negative impact - notably

risk of damage to private property (mainly trees to be felled), the results of the environmental and social impact assessment, and the mitigative measures planned. The meetings also helped to record the opinions and concerns of the population that were subsequently taken into account during preparation of the ESMP. The concerns focus on the risk of expropriation and the desire to have access to electricity at low cost. In any event, there will be no project-related expropriation because the line layout and station location will steer clear of houses. The billing study being considered by the Government highlights a low-rate bracket, which takes into account the need to supply electricity to disadvantaged population segments at affordable cost. The participatory approach will be pursued during project implementation through Information, Education and Communication (IEC) sessions on various themes, especially security and energy conservation.

2.7 Bank Group Experience and Lessons Reflected in Project Design

2.7.1 The only ADF-funded operation in the electricity sub-sector (Conakry Electric Grid Rehabilitation and Extension Project – PREREC, the grant agreement of which was signed in May 2009) dates back to October 2008. The conditions precedent to first disbursement were fulfilled in August 2010. One of the four bid invitations was re-launched due to lack of qualified bidders. Three bid invitations resulted in the signing of contracts. The long period taken to fulfil conditions precedent to first disbursement of the grant and to award contracts is directly linked to the country’s socio-political situation, the choice of a works procurement method without prequalification and the fact that staff of the PREREC Implementation Unit have yet to master Bank procedures for the procurement of goods and services. During the project preparation and appraisal missions, the Unit was assessed. The project will seek to build the Unit’s capacity. In addition, its management cadres will be trained in Bank procedures for the procurement of goods and services during the launching of the PER. Lastly, the Project Unit will be strengthened with a consulting engineer who will process all bidding documents.

2.7.2 The number of conditions precedent to first disbursement is limited to the bare minimum to facilitate rapid project implementation. To avoid re-launching the procurement process for want of qualified bidders, plans have been made for the prequalification of contractors for works.

2.8 Key Performance Indicators

2.8.1 The key project performance indicators outlined in the results-based logical framework are: the technical loss rate, the number of localities electrified, the number of households and SMEs/SMIs connected, the number of HV/MV and MV/LV stations built, the length of MV/LV networks built and the number of studies conducted. These indicators will be provided in the project quarterly progress reports and the completion report. The mid-term review report will enable the Bank and the Guinean party to take subsequent corrective measures in light of project outputs.

2.8.2 Project indicators will be outlined in periodic project progress reports, EDG progress reports and project mid-term review and completion reports. The analysis of indicator trends will enable decision-makers to assess whether or not the project objectives have been achieved.

3. PROJECT FEASIBILITY

3.1 Financial and Economic Performance

Baseline scenario	FIRR: 14.2 %	NPV: GNF 48 billion
	EIRR: 24.2 %	Economic NPV: GNF 148 billion

3.1.1 **Financial performance:** the financial internal rate of return (FIRR) and the net present value were calculated based on project works construction and operating costs. Project income emanates from the sale of additional energy to new subscribers. Project costs are investment costs, excluding provision for price escalation, annual works operating and maintenance costs and the cost of generating the energy supplied.

3.1.2 **Economic performance:** the economic costs used in calculating the economic internal rate of return and the economic net present value are investment costs net of taxes and provision for price escalation, adjusted by appropriate conversion factors for equipment, works, services and workforce. Maintenance costs and other operating expenses were adjusted in similar manner. The project's economic benefits taken into account are the increased reduction of the technical and commercial loss rate in the ten localities where the networks will be completely rebuilt or reinforced, and energy consumption by new subscribers.

3.1.3 **The sensitivity of project financial and economic performances** was analyzed based on: (i) a 10% increase in investment costs; (ii) a 10% increase in operating costs; and (iii) a 10% decrease in average energy selling price. The analysis shows that although the project's rate of return and net present value are sensitive to variation in the different factors, particularly a decrease in the selling price, they remain at acceptable levels, thus confirming the project's viability. In fact, the economic rates of return are higher than the weighted average cost of capital and the opportunity cost of capital in all the cases considered (details in Annex 7).

3.2 Environmental and Social Impact

3.2.1 **Environment:** the project is classified under Environmental and Social Category II. No house expropriation or population displacement is envisaged. There will be only minor damage to modified ecosystems (deteriorated savannah and trees to be felled) and to pieces of farmland to erect pylons. The EDG prepared an Environmental and Social Management Plan in August 2010. The summary of the plan, which was posted on the ADB website (www.afdb.org), also appears in Annex B 8.

3.2.2 The project's negative impact will concern essentially compensable damage to: (i) the physical environment (erection of pylons/poles, temporary access roads to work sites, laying of cables, etc.); (ii) the natural environment following the laying of MV/LV power transmission lines; and (iii) the human environment during the laying of lines through farmland or transportation of equipment to sites, and accidental dropping of conductors (security risks). The nearly forty kilometres of a 30kV medium voltage line will be built near the 100kV high voltage line corridor (parallel to RN 1) to reduce its environmental impact. The line right-of-way will cover 120 ha (about twenty hectares of farmland or orchards and 100 hectares of mostly savannah woodland). The most difficult impact to control will be visual and aesthetic, due to the presence of MV/LV lines.

3.2.3 The positive impact will stem from the operation of electric transmission lines which will help to: (i) minimize energy loss on the network and enhance its operating safety; and (ii) reduce greenhouse gas (GHG) emissions and noise currently produced by small generators used by households and small businesses in the project area. Other socio-economic impacts are developed in the following paragraphs.

3.2.4 **Climate change:** the country, which signed the Kyoto Convention on Climate Change, will include technical energy conservation measures in the project aimed at reducing the GHG emission level (see Annex 8). These include: (i) rehabilitation of equipment to reduce losses on the network; (ii) promotion by the Government of three million low-energy (15-18 W instead of 60-100W) bulbs and sensitization to the use of Class “A” electronic and other equipment; (iii) installation of electric meters instead of fixed billing; (iv) reduction in the number of highly polluting thermal plants, etc.; thus, nearly 30% of energy could be conserved by households; and (v) reduction of fire risks associated with the use of kerosene or firewood for home lighting.

3.2.5 **Gender issues:** in the two regions covered by the project, women account for approximately 52% of the estimated one million population and nearly 60% of the workforce¹. Women work mostly in agricultural production and suffer enormous losses of produce and income due to the lack or instability of electricity supply essential for operating refrigerating equipment for market garden crop preservation and mechanized irrigation of off-season crops. Currently, activities related to livestock production (preservation of meat and processed dairy products), market garden crops (processing of tomatoes and other vegetables) and fruit crops (manufacture of fruit juice and marmalade, banana and groundnut processing, manufacture of palm oil, etc.) suffer enormous losses because of lack of a cold chain, which is dependent on reliable power supply.

3.2.6 Other cottage-based activities carried out by women and young people can be developed, thanks to the provision of electricity - required for drinking water supply (operating wells), lighting (security and socio-cultural activities) or running work tools (grain, cassava, corn and rice mills, sewing and embroidery machines), hairdressing, soap making, dyeing, literacy education, operation of health and cultural centres (video, games, media, recharging of mobile phones, etc.), to mention but a few.

3.2.7 Home comfort and hygiene, which are activities specifically carried out by women, also require adequate lighting and energy for equipment operation. Women will also benefit from more accessible radio and television educational broadcasts for rural areas.

3.2.8 **Social issues:** social benefits will be felt in the areas of education and health, and in social and recreational centres. The information and sensitization campaigns planned throughout project implementation will help to address various topics, including safety in the face of the risk of electrocution, protection against sexually transmitted diseases and energy conservation. ESMP monitoring by a private consultant will help to ensure that the social concerns of the population outlined in the Plan are effectively taken into consideration.

3.2.9 Part (13%) of project financing will be spent in local currency to pay local labour recruited under the project and to procure goods and services from SMEs/SMIs, including those created under the Sustainable Social Development Project funded by the Bank. Some 48% of the SMEs/SMIs belong to women. Households will also benefit from these resources by selling foodstuff around various project sites. At the end of works, the need for network operation and payment of electricity bills will warrant the creation of permanent jobs by the EDG. This will have a significant social impact, notably the reduction of youth unemployment – a positive effect indeed. The population will be temporarily affected by some nuisance during project implementation, particularly in connection with the temporary closure of roads and other driveways.

¹ Source: 1996 Census

4. PROJECT IMPLEMENTATION

4.1 Implementation Arrangements

4.1.1 The Ministry of Energy and Water Resources will be the Project Owner and Project Supervisor. The project will be implemented in the area ceded to *Electricité de Guinée* (EDG). Hence, the responsibility of supervising the project will be delegated to EDG. The Government will transfer ADF resources intended to finance the project to EDG. Project activities will be coordinated by the PREREC Implementation Unit (PREREC is being implemented with ADF resources). The Unit, set up within EDG, will be strengthened with two Guinean electrical engineers (a power-plant engineer and a network engineer), an environmentalist, an officer in charge of administration and finance, an accountant, a procurement specialist, an executive assistant and a driver. The Unit will also be supported by a consulting firm. An environmental consultant will be recruited to supervise project works and monitor the Environmental and Social Management Plan (ESMP).

4.1.2 The Project Manager will, under the supervision of the EDG Department of Planning and Infrastructure (DPE), ensure the implementation and regular monitoring of project activities as well as management of various contracts. S/he will also ensure coordination between consultants and all public structures and services involved in the project. S/he will be granted the necessary technical and management resources to provide the services required for the technical and financial management of the project.

4.1.3 Furthermore, a Project Steering Committee (PSC) will be set up to ensure the proper orientation and attainment of project objectives. The PSC will comprise representatives of the Ministry of Finance, Ministry of Energy, Ministry of Environment, Ministry of Planning and International Cooperation, Ministry of Regional and Local Authorities, the National Directorate of Energy and the National Rural Electrification Agency, a representative of the General Manager of the Major Projects Administration and Control Agency (ACGP) and a representative of EDG General Manager. The Project Implementation Unit Coordinator will provide secretarial services to the PSC.

4.1.4 **Procurement arrangements:** all procurement of goods, works and consultancy services will be conducted in accordance with Bank *Rules of Procedure for Procurement of Goods and Works or Rules of Procedure for the Use of Consultants*, as applicable, using standard Bank bidding documents.

4.1.5 *Electricité de Guinée* (EDG) will be the project executing agency. Its Department of Planning and Infrastructure will be charged with project implementation and coordination, and procurement of goods, works and consultancy services.

4.1.6 The “turnkey” contract for supply and installation of electrical equipment will be awarded through international competitive bidding after bidder prequalification. Procurement of single-phase and three-phase electromechanical meters will be conducted through international competitive bidding, while procurement of two vehicles and accounting software will be conducted through direct shopping. Consultancy services will be procured through shortlisting. Consulting firms responsible for studies and/or supervision as well as sensitization (IEC campaigns) will be selected using the quality and cost-based method (QCBM). The auditing firm will be selected based on the least cost method (LCM).

4.1.7 Financial management and disbursements: due to institutional instability and low public administration capacity, the Guinean public finance system will not be used in project administrative, financial and accounting management. The Project Implementation Unit, which will be reinforced, among other things, with an administrative and financial officer and an accountant, will be charged with the project administrative, financial and accounting management. It will be provided with adequate management tools (procedures manual, accounting software and training). Project accounts will be kept in separate books, which will clearly show all ADF-funded operations. Project accounts will be kept by the accountant and the administrative and financial officer, under the supervision of the Project Manager. The books and accounts will be incorporated into an appropriate computerized account management system for preparing financial statements consistent with international standards set up from project start-up. The Unit's financial management staff will be trained in software use. The annual financial statements and operation of the internal control system will be audited annually by an external private and independent auditor who will submit his/her report within six months following the end of the financial year audited. The Unit will prepare interim financial statements that will be included in project quarterly progress reports. Furthermore, the EDG Department of Internal Audit and Inspection will audit the project administrative, financial and accounting management. In addition, the scope of the first project supervision mission will include financial management, to help assess the intensity of supervision in the domain, based on the fiduciary risks identified and analyzed.

4.1.8 Disbursements will be made in accordance with relevant Bank procedures. Disbursements for the supply and construction of power transmission lines, procurement of services of the consulting engineer and auditors as well as logistic equipment will be made through the direct payment method (or any other Bank method, where necessary) to various contractors. Furthermore, in accordance with Bank guidelines, the Donee will open a special account in a bank deemed acceptable to the ADF into which resources intended for procurement of office supplies, vehicle operation and running of the Project Implementation Unit will be deposited. The main assessment criterion will be the letter of comfort issued by that bank.

4.1.9 This administrative and financial management mechanism will reduce the overall fiduciary risk and ensure the efficient, transparent, effective and judicious use of resources. A financial management action plan has been prepared and presented in Technical Annex B.4.

4.2 Project Monitoring

4.2.1 The main project stages are presented in Table 4.1 below:

Period	Stages	Monitoring Activities/Feedback Loop	Responsibility
November 2010 - May 2011	Grant approval and effectiveness	Grant approval	Board of Directors
		General Information Notice	Donee/ADB
		Signing of Grant Protocol of Agreement	Donee/ADB
		Project launching mission	ADB
		Fulfilment of conditions precedent to first disbursement	Donee
December 2010 – Aug. 2011	Recruitment of consulting engineer	Preparation of the bidding dossier	Project Unit
		Bid invitation and award of contract	
September 2011- December 2014	Services of the consulting engineer	Support to the Project Implementation Unit for the preparation of bidding documents, bid opening and analysis, and works supervision and monitoring	Consulting Engineer

January 2011 – May 2012	Recruitment of contractors for works	Preparation of bidding documents	PIU/Consulting Engineer
		Bid invitation and award of contracts	PIU
June 2012 – November 2014	Physical execution of the project	Execution of works and supply contracts	Selected contractors
		Preparation of periodic project progress reports	PIU/Consulting Engineer
		Supervision missions	ADB
		Project environmental and social monitoring	Private Consultant
		Project mid-term review	ADB
December 2010 – March 2015	Auditing of project accounts	Recruitment of the auditor	PIU
		Preparation of manual of administrative and accounting procedures and conduct of annual audits	Auditing firm
September 2014 - December 2014	Project completion	Donee's Project Completion Report	Donee
		Preparation of the Bank's Project Completion Report	ADB

4.3 Governance

4.3.1 The country's overall political context and the absence of in-depth sector reforms adapted to electricity sub-sector management have impeded appropriate response to the growing demand for electricity in Guinea. The Bank recognizes the need to provide assistance in designing and implementing structural reforms, particularly the need to strengthen sector governance by improving EDG management. Some constraints can be overcome by implementing the electricity sub-sector development strategy (defined in the Energy Sector Development Policy Letter) through a technical audit of the EDG and the adoption of a rate system that guarantees gradual financial balance of the sub-sector. The detailed analysis of the sector is presented in Appendix A.2 of the project technical annexes.

4.3.2 The executing agency will keep separate project accounts. Consequently, expenditure by component, category and source of financing will be easily identified.

4.4 Billing Policy

4.4.1 Electricity selling prices are fixed by the State through the Ministry of Finance and the Ministry of Energy. Price trends are yet to reflect the cost of production of a kWh of electricity. The current prices were fixed on 14 July 2008 and the average kWh selling price was GNF 764 (or USD 12.7/kWh) in 2009. An Electricity Billing Study was conducted in 2009. The study recommendations aimed at ensuring balanced pricing are being examined by the authorities, with a view to defining economically and socially acceptable conditions for their implementation.

4.4.2 It is worth noting that the billing policy includes a low rate that takes into account the need to protect the most vulnerable population segments. The increase in the number of subscribers and the price hike recommended by the Billing Study should help achieve the electricity sub-sector's financial balance in the medium term.

4.5 Sustainability

The renewal of some lines and construction of new networks will save the EDG having to initiate huge expenditures to maintain project works in the early years. Overall, 2.5% of the amount of investments will be enough to maintain the facilities built each year. Regarding this project, about GNF 3 billion (USD 0.32 million) will be required yearly. This amount will be largely covered by

the annual revenue expected from the operation of project facilities, which will range from GNF 26.6 billion in 2016 to GNF 161.9 billion in 2035. Thus, the expected application of new tariffs and improvement of network technical performance by the project are likely to increase EDG's revenue, enabling it to ensure better maintenance of its infrastructure. The management situation is presented in paragraph 1.2.10 of Annex A.2 and the financial situation of the last four years in Table A.2.2 of the technical annexes.

4.6 Risk Management

4.6.1 The main risks identified are: (i) the political crisis in Guinea; (ii) inadequate development of EDG's power generation capacity; (iii) inadequate maintenance of installations; and (iv) the process of compensating persons affected by the project slowed down owing to delay in the provision of counterpart contribution.

4.6.2 The risks are mitigated by: (i) the ongoing electoral process aimed at normalizing political life; (ii) the programme to build EDG's power generation capacity supported by the Bank, particularly the construction of the Kaléta hydroelectric dam (120 MW) by 2015 and the Manéah thermal power plant (106 MW) to be built by China by 2013; (iii) revenue generated by the project will provide additional resources to the EDG to enable it to ensure the proper maintenance of installations; and (iv) the implementation of the ESMP and payment by the Government of compensation to all affected persons or opening of an account into which the compensation funds will be deposited prior to grant disbursement.

4.7 Knowledge Building

4.7.1 During the project launching mission, Bank experts will train members of the Project Coordination Unit on Bank procurement and disbursement procedures. The procurement of accounting software and preparation of a manual of administrative and financial procedures will also necessitate the training of members of the Project Unit. The two electrical engineers assigned to the Project Unit will be trained through the worker and mate system run by the Consulting Firm that will be recruited to monitor and supervise works.

4.7.2 Such knowledge will be disseminated within EDG through the number of persons trained and use of the knowledge acquired in other projects financed by the country's TFPs.

4.7.3 The reports of the two studies and outputs of electrification works will enable the Bank to acquire valuable knowledge on the sector that it could use in implementing the country strategy, in addition to sharing it with other donors.

5. LEGAL FRAMEWORK

5.1 Legal Instrument: an ADF grant will be awarded to the Republic of Guinea to finance this project.

5.2 Conditions Associated with Bank's Intervention

A. Conditions Precedent to Grant Effectiveness

5.2.1 Effectiveness of the Grant Protocol of Agreement shall be subject to its signature by the ADF and the Donee.

B. Conditions Precedent to First Disbursement of the Grant

5.2.2 In addition to effectiveness of the Grant Protocol of Agreement, the first disbursement of the Grant shall be subject to fulfilment of the following conditions by the Donee, to the Fund's satisfaction:

- (i) Provide to the Fund's satisfaction, evidence of (a) paying – in accordance with Fund rules and policies – all amounts provided for compensation in the “Expropriation, Compensation and Resettlement Plan” (ECRP), or (b) opening and operating by the Donee, an escrow account in a financial institution that will act as Trustee and shall have been approved beforehand by the Fund, into which the said amounts (or part of the amounts that would not have been actually paid out) will remain blocked exclusively for the payment of all the compensation indicated in the ECRP to all rightful claimants, up to the final settlement;
- (ii) Provide evidence of opening a special account in a bank acceptable to the ADF, into which ADF resources for procurement of office supplies, vehicle operation and running of the Project Unit will be deposited;
- (iii) Provide evidence of setting up the Steering Committee comprising representatives of the Ministry of Finance, Ministry of Energy, Ministry of Environment, Ministry of Planning and International Cooperation, Ministry of Regional and Local Authorities, the National Directorate of Energy and the National Rural Electrification Agency, a representative of the General Manager of the Major Projects Administration and Control Agency (ACGP) and a representative of the EDG General Manager.
- (iv) Provide to the Fund evidence of transfer by the Donee of the grant to the EDG, free of charge, through an agreement whose terms shall have been approved beforehand by the Fund;
- (v) Submit, for the Fund's no objection opinion, the CVs of staff to be assigned to the Project Implementation Unit.

C. Other Conditions

- Before end 2014, revise the billing structure to ensure the financial balance of the electricity sub-sector in the medium and long term.

5.3 Compliance with Bank Policies

5.3.1 The rural electrification project is in line with all applicable Bank policies.

6. RECOMMENDATION

6.1 Bank Management recommends that the Board of Directors approve the proposal to award a UA 14.960 million ADF Grant to the Republic of Guinea to finance the Rural Electrification Project, subject to conditions set forth in this report.

GUINEA
RURAL ELECTRIFICATION PROJECT

Annex I

Country Comparative Socio-economic Indicators

Guinea - Development Indicators				
Social Indicators	Guinea		Africa	Developing countries
	1990	2009 *		
Area ('000 Km ²)	246		30 323	80 976
Total Population (millions)	6,1	10,1	1 008,4	5 628,5
Population growth (annual %)	3,6	2,4	2,3	1,3
Life expectancy at birth, total (years)	48,3	58,4	55,7	66,9
Mortality rate, infant (per 1,000 live births)	138,1	95,1	80,0	49,9
Physicians per 100,000 People	12,8	5,5	42,9	78,0
Births attended by skilled health staff (% of total)	...	38,0	50,5	63,4
Immunization, measles (% of children ages 12-23 months)	25,0	94,0	74,0	81,7
School enrollment, primary (% gross)	37,1	89,9	100,2	106,8
Ratio of girls to boys in primary education (%)	47,3	85,3	90,9	100,0
Illiteracy rate, adult total (% of people ages 15 and above)	...	29,5	...	...
Access to Safe Water (% of Population)	45,0	70,0	64,0	84,0
Access to Sanitation (% of Population)	13,0	19,0	38,5	54,6
Human Develop. (HDI) Rank (Over 182 Countries)	...	170,0	n.a	n.a
Human Poverty Index (% of Population)	...	50,9	3,4	...
Guinea				
Economy	2000	2007	2008	2009
GNI per capita, Atlas method (current US\$)	400	390	...	...
GDP (current Million US\$)	2 995	4 152	4 520	4 418
GDP growth (annual %)	-1,9	1,8	4,9	0,6
Per capita GDP growth (annual %)	-3,8	-0,4	2,6	-1,7
Gross Domestic Investment (% of GDP)	13,6	19,9	21,9	18,0
Inflation (annual %)	6,9	22,9	18,4	4,8
Budget surplus/deficit (% of GDP)	-3,4	0,5	-1,2	-1,5
Trade, External Debt & Financial Flows	2000	2007	2008	2009
Export Growth, volume (%)	5,0	3,9	10,2	-1,5
Import Growth, volume (%)	-3,1	22,2	-3,3	-10,2
Terms of Trade (% change from previous year)	-5,1	11,8	6,8	-12,6
Trade Balance (mn US\$)	99	29	288	193
Trade balance (% of GDP)	3,3	0,7	6,4	4,4
Current Account (mn US\$)	-162	-412	-314	-411
Current Account (% of GDP)	-5,4	-9,9	-6,9	-9,3
Debt Service (% of Exports)	14,2	8,3	9,5	7,9
External Debt (% of GDP)	108,9	78,1	66,3	65,0
Net Total Inflows (mn US\$)	329,3	232,2	224,2	...
Net Total Official Development Assistance (mn US\$)	152,9	228,1	319,0	...
Foreign Direct Investment Inflows (mn US\$)	9,9	385,9	1 349,6	...
External reserves (in month of imports)	1,6	...	...	...
Private Sector Development & Infrastructure	2000	2007	2008	2009
Time required to start a business (days)	...	41	41	41
Investor Protection Index (0-10)	...	2,7	2,7	2,7
Main Telephone Lines (per 1000 people)	2,9	2,3	2,1	...
Mobile Cellular Subscribers (per 1000 people)	5,0	208,0	390,6	...
Internet users (000)	1,0	7,8	9,2	...
Roads, paved (% of total roads)	16,5	...	...	...
Railways, goods transported (million ton-km)	...	...	...	...

Source: ADB Statistics Department, based on various national and international sources

* Most recent year

Last Update: May 2010

GUINEA
RURAL ELECTRIFICATION PROJECT

Annex II

Table of ADB Portfolio in the Country

Summary of Ongoing Bank Portfolio in Guinea (as at 20 May 2010)

Project Name	Approval Date	Signature Date	Effectiveness Date	Closing Date	Net Amount Approved (UA million)	Amount Disbursed (UA million)	Disbur. Rate %
Agricultural Sector							
Artisanal Fishing & Fish-farming Project	7-Jun-00	18-Aug-00	25-Nov-00	31-Dec-09	5.0	4.7	93.4%
Haute Guinée Rural Dev. Support Project	15-Jun-00	18-Aug-00	26-Jun-01	30-Apr-10	10.0	9.1	91.0%
Haute Guinée Rural Water Supply Project	4-Sep-02	9-Sep-02	27-Jun-03	31-Dec-10	15.0	11.8	78.5%
Rural Roads Project/PNIR	2-Oct-02	16-Jan-03	22-Mar-04	30-Jun-10	8.1	2.3	28.1%
Nerica Rice Dissemination Project	26-Sep-03	13-Feb-04	20-Mar-05	31-Dec-10	3.0	1.3	44.4%
					41.1	29.4	70.8%
Infrastructure Sector							
Tombo-Gbessia Road Rehabilitation Project	13-Jul-05	22-Jul-05	22-Jul-05	31-Dec-10	8.3	0	0
Tombo-Gbessia Road Project Suppl. Grant	29-Avr-09	13-May-09	13-May-09	31-Dec-12	5.2		0
Electricity Dev. Project	29-Avr-09	13-May-09	13-May-09	31-Dec-13	12.0		0
					25.4	0.0	0
Social Sector							
Support to Women's Economic Activities	27-Nov-97	22-Jan-98	29-Mar-99	30-Jun-09	3.0	2.6	86.7%
Sustainable Social Dev. Project in Hte & My. Guinée	5-Dec-01	7-Dec-01	28-May-02	30-Jun-10	21.8	17.2	79.0%
Educ. Dev. Support Project	7-Jun-05	22-Jul-05	22-Jul-05	31-Dec-11	14.0	6.1	43.3%
					38.8	25.9	66.7%
Multisector							
Debt and Investment Management – PADIPOC	26-Jul-06	15-Sep-06	15-Sep-06	31-Dec-10	2.5	0.5	19.5%
					2.5	0.5	19.5%
TOTAL					108.3	55.8	51.6%
TOTAL (excluding infrastructure projects still to be implemented)					82.8	55.8	67.4%

**GUINEA
RURAL ELECTRIFICATION PROJECT**

Annex III

**Major Related Projects Financed by the Bank and Guinea's Other
Development Partners**

No.	PROJECT	Donor	Financing Period	Amount	Financing Instrument	Project Area
1.	Conakry Electricity Grid Rehabilitation and Extension	IsDB	4 June 2008 to 31 Dec. 2010	7 million Islamic Dinar	Loan	Matoto District (Commune) (Conakry)
2.	Conakry Electricity Grid Rehabilitation and Extension	ADB	13 May 2008 to 31 Dec. 2013	UA 12 million	Grant	Ratoma District (Commune) (Conakry)
3.	Energy Sector Efficiency Improvement	IDA	7 Sep. 2006 to 31 Dec. 2009. Extension to 31 Dec. 2011 requested	USD 7.2 million	Grant	Kaloun District (Commune) (Conakry)
4.	Energy Sector Efficiency Improvement	GEF	Negotiated on 6 June 2007. Pending signature	USD 4.5 million	Grant	Kaloun District (Commune) (Conakry)
5.	Decentralized Rural Electrification	IDA GEF	2003 – 2008 Extended to Dec. 2011	USD 5 million USD 2 million	Loan Grant	All rural communities in Guinea
6.	Regional Capital Network Rehabilitation and Extension	EIDB and Government	27 August 2007 to 26 August 2009. Under extension	USD 20 million USD 2 million	Loan Grant	N'Zérékoré, Kankan, Faranah and Labé towns.

**GUINEA
RURAL ELECTRIFICATION PROJECT**

Annex IV

• **Electricity Supply and Demand Projection**

DEMAND TREND ON THE INTER-CONNECTED GRID																		
Year	POWER IN MW															Total Available Capacity (H+D)	Potential Demand	Gap
	Hydro-electric Plants							Diesel Plants										
	Samou	Garafiri	Kaléta	Sambangalou	Fomi	Kikon	Installed Capacity	Available Capacity (H)	Manéah	T3	T5	Installed Capacity	Available Capacity (D)					
2010	33,0	75				2,7	110,7	80,4		44,0	32,0	76,0	47,5	127,9	194,5	-66,6		
2011	33,0	75				2,7	110,7	82,9		44,0	32,0	76,0	57	139,9	200,3	-60,4		
2012	33,0	75				2,7	110,7	82,9		44,0	32,0	76,0	66,5	149,4	206,3	-56,9		
2013	33,0	75				2,7	110,7	82,9	36,0	44,0	32,0	112,0	102,5	185,4	212,5	-27,1		
2014	33,0	75				2,7	110,7	82,9	108,0	44,0	32,0	184,0	154,3	237,2	218,9	18,3		
2015	33,0	75	96			2,7	206,7	178,9	144,0	44,0	32,0	220,0	177,4	356,3	284,6	71,7		
2016	33,0	75	96	48		2,7	206,7	226,9	144,0	44,0	32,0	220,0	166,4	393,3	355,7	37,5		
2017	33,0	75	96	48	60	2,7	206,7	286,9	144,0	44,0	32,0	220,0	166,4	453,3	391,3	62,0		
2018	33,0	75	96	48	60	2,7	206,7	286,9	144,0	44,0	32,0	220,0	166,4	453,3	410,9	42,4		
2019	33,0	75	96	48	60	2,7	206,7	286,9	144,0	44,0	32,0	220,0	166,4	453,3	423,2	30,1		
2020	33,0	75	96	48	60	2,7	206,7	286,9	144,0	11,0	32,0	187,0	155,4	442,3	431,7	10,6		
2021	33,0	75	96	48	60	2,7	206,7	286,9	144,0	11,0	32,0	187,0	155,4	442,3	440,3	2,0		
2022	33,0	75	96	48	60	2,7	206,7	286,9	144,0	0,0	32,0	176,0	155,4	442,3	440,3	2,0		

**GUINEA
RURAL ELECTRIFICATION PROJECT**

Annex V

Map of Project Area

