AFRICAN DEVELOPMENT BANK
ADB/BD/WP/2018/290/Approval

AFRICAN DEVELOPMENT FUND
ADF/BD/WP/2018/207/Approval
3 December 2018
Prepared by: RDGW/PERN/COBF/PGCL
Original: French

BOARD APPROVAL
Lapse-of-time Procedure

14 December 2018

FOR CONSIDERATION

MEMORANDUM

TO : THE BOARDS OF DIRECTORS

FROM : Vincent O. NMEHIELLE
Secretary General

SUBJECT : BURKINA FASO – "DESERT TO POWER" INITIATIVE - YELEEN RURAL ELECTRIFICATION PROJECT *

ADF GRANT OF UA 3 MILLION
GCF GRANT OF EUR 12.9 MILLION
GCF LOAN OF EUR 8.6 MILLION

Please find attached the **Loan and Grants Proposals**, and the draft **Resolutions** related to the above-mentioned Project, which are submitted for **your consideration on a Lapse-of-time basis**,

In case of no objection by 5:00 pm on 14 December 2018, the Proposals will be considered as approved and the Resolutions adopted.

Attach:

Cc: The President

***Questions on this document should be referred to:**			
Mrs. M.-L. AKIN OLUGBADE	**Director General**	**RDGW**	**Extension 7778**
Mr. O. NAKOULIMA	**Director**	**PERN**	**Extension 4035**
Mr. G. PENN	**Acting General Counsel**	**PGCL**	**Extension 3220**
Mr. E. NEGASH	**Division Manager**	**PERN.1**	**Extension 3931**
Mr. P. YEMBILINE	**Country Manager**	**COBF**	**Extension 6101**
Ms. A. M. MECCA	**Division Manager**	**PGCL.1**	**Extension 3309**
Mr. A. MOUSSA	**Renewable Energies Expert**	**PERN.1**	**Extension 7335**
Ms. A. BAH OBRE	**Team Leader**	**PERN.1**	**Extension 4543**

SCCD: F.S.

AFRICAN DEVELOPMENT BANK GROUP

PROJECT : "DESERT TO POWER" INITIATIVE - YELEEN RURAL ELECTRIFICATION PROJECT

COUNTRY : BURKINA FASO

PROJECT APPRAISAL REPORT

Date : September 2018

Appraisal Team	Team Leader	Adiaratou BAH OBRE, Principal Investment Officer	PERN1
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AFRICAN DEVELOPMENT BANK GROUP

BURKINA FASO

DESERT TO POWER" INITIATIVE - YELEEN RURAL ELECTRIFICATION PROJECT

RDGW/PERN/COBF/PGCL DEPARTMENTS

December 2018

Translated Document

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CURRENCY EQUIVALENTS

September 2018

UA 1	=	788.985	XOF
UA 1	=	1.2028	EUR
UA 1	=	1.40139	USD
EUR 1	=	1.16511	USD
EUR 1	=	655.957	XOF

FISCAL YEAR

1 January – 31 December

WEIGHTS AND MEASURES

1 kilometre (km)	=	1,000 m
1 km²	=	1 000 000 m²
1 hectare (ha)	=	10,000 m²
1 ton	=	1,000 kg
1 kilojoule (kJ)	=	1,000 Joule (J)
1 kilovolt (kV)	=	1,000 Volt (V)
1 kilovolt-Ampere (kVA)	=	1,000 Volt – Ampere (VA)
1 kilowatt (kW)	=	1,000 Watt
1 megawatt (MW)	=	1 000 000 W = 1 000 kW
1 Gigawatt (GW)	=	1 000 000 W = 1 000 kW
1 kilowatt-hour (kWh)	=	1,000 Watt/hour = 3,600,000 Joules (J)
1 megawatt-hour (MWh)	=	1,000,000 Wh = 1,000 kWh
1 gigawatt-hour (GWh)	=	1,000,000 kWh = 1,000 MWh
1 ton of oil equivalent (TOE)	=	41,868 Joules = 11,630 kWh
1 million ton of oil equivalent (MTOE)	=	1 000 000 TOE

ACRONYMS AND ABBREVIATIONS

ABER	Burkina Faso Rural Electrification Agency
ADF	African Development Fund
AFD	French Development Agency
AfDB	African Development Bank
AGF	*African Guarantee Fund*
ANERE	Support to the National Renewable Energy and Energy Efficiency Agency
ARP	Abbreviated Resettlement Plan
ARSE	Electricity Sector Regulatory Agency
BD	Bidding documents
CSD-MCE	Sector Framework for Dialogue on Mines, Quarries and Energy
CSP	Country Strategy Paper
DG-CMEF	General Directorate for the Control of Procurement and Financial Commitments
EBID	ECOWAS Bank for Investment and Development
EIB	European Investment Bank
ENPV	Economic Net Present Value
ERR	Economic rate of return
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
EU-AfIF	European Union - Africa Investment Facility
FIRR	Financial internal rate of return
GCF	Green Climate Fund
GDP	Gross domestic product
HV	High voltage
IEC	Information, education and communication
INSD	National Institute for Statistics and Population Studies
IPP	Independent Power Producer
IsDB	Islamic Development Bank
LV	Low Voltage
MCE	Control of Energy Consumption
ME	Ministry of Energy (for Burkina Faso)
MINEFID	Ministry of the Economy, Finance and Development (of Burkina Faso)
MV	Medium voltage
MW	Megawatt
MWp	Megawatt peak
NGO	Non-governmental organisation
NPV	Net present value
PMU	Project Management Unit
PNDES	Economic and Social Development Plan
PPP	Public-Private Partnership
RDGW	West Africa Regional Department (of the AfDB)
RMC	Regional Member Country
SME/SMI	Small- and medium-sized enterprises / small- and medium-sized industries
SONABEL	National Electricity Corporation of Burkina Faso
SONABHY	National Oil Corporation of Burkina Faso
TFP	Technical and financial partners
TOE	Tone of oil equivalent
UA	Unit of Account
UNDP	United Nations Development Programme
USD	United States Dollar
WADB	West African Development Bank
WAEMU	West African Economic and Monetary Union
WB	World Bank

PROJECT INFORMATION SHEET

BORROWER : Burkina Faso
DONEE : Burkina Faso

EXECUTING AGENCY: Ministry of Energy

EXECUTING AGENCY: Burkina Faso Rural Electrification Agency

Financing Plan

Sources	Amounts (EUR Million)	Amount (UA Million)	Instrument
ADF	3.61	3.00	Grant
GCF	12.90	10.72	Grant
GCF	8.60	7.15	Loan
EU	6.30	5.24	Grant
Private partners	42.13	35.03	Equity and commercial loans
GOVERNMENT/ABER	1.22	1.01	Counterpart funds
TOTAL	74.76	62.15	

Key Financial Information on the GCF Loan

Loan currency	Euro (EUR)
Interest type	Not applicable
Interest rate margin	Not applicable
Service commission	0.75% per year of the disbursed loan amount not yet reimbursed
Commitment fee	0.50% of the undisbursed loan amount, payable on each reimbursement date, 60 days following signature of the loan agreement
Other Expenses	None
Maturity	40 years
Grace period	10 years
FIRR, FNPV (base-case scenario):	FIRR 6.6%; FNPV: XOF 4.6 billion
ERR, ENPV (base-case scenario):	EIRR: 23.7%; ENPV: XOF 37 billion
Profitability in relation to private developers	Return on equity: 16.2 % Equity ENPV: XOF 6.1 billion

Time Frame – Main Milestones (expected)

Concept Note approval	July 2018
Project approval	December 2018
ADF grant effectiveness	January 2019
GCF grant effectiveness	January 2019
GCF loan effectiveness	March 2019
Completion	December 2022
Closing date/last disbursement (ADF/GCF)	December 2023
Last reimbursement of GCF loan	December 2059

PROJECT SUMMARY

Project Overview: The Yeleen[1] Rural Electrification Project is an investment operation for off-grid rural electrification using decentralised photovoltaic solar systems. The project targets approximately 100 localities nationwide. The objective of the project is to increase the electricity access rate in Burkina Faso and more specifically in rural areas by connecting 150,000 households, comprising 50,000 households to mini-green (solar) grids and 100,000 households through the installation of stand-alone solar kits (systems). The project will provide electricity access to approximately 945,000 inhabitants or nearly 5% of the country's total population. The estimated total project cost is EUR 74.76 million. Donors participating in its funding are the Bank, the Green Climate Fund (GCF) and European Union through its Africa Investment Facility (EU-AfIF) for a total EUR 31.41 million (42% of total cost). The rest of the financing will be provided by the Government and ABER as well as private developers (equity and commercial loans) through a public-private partnership for power generation and distribution. The project will be executed over 48 months (2019-2022).

Needs Assessment: At the end of 2017, the electrification rates in Burkina Faso, at the national, urban and rural level, were 20.62%, 65.84% and 3.24% respectively, while the national electricity coverage rate[2] was 35.58%. In a bid to improve access to quality energy services, the Government embarked on several energy sector reforms, including the adoption in 2016 of the Energy Sector Policy Letter (ESPL) and the Policy for "Transformation of the Industrial and Artisanal Sectors". The Government set the following objectives for 2027: (i) a national electrification rate of 80% (45% in 2020); (ii) an urban electrification rate of 90% (75% in 2020); and (iii) a rural electrification rate of 30% (19% in 2020).

Bank's Value-added: The Bank raised EUR 21.5 million from GCF climate resources (comprising a grant of EUR 12.90 million and a loan of EUR 8.6 million). These were approved on 19 October 2018 by the GCF Board of Directors and will have an impact on the project's average electricity production cost. The Bank also provided Burkina Faso with a SEFA grant (USD 0.98 million) to fund the support programme for mini-renewable power grids, with a view to improving the environment for private sector participation in the deployment of mini-grids and helping to increase investment in renewable energy and access to electricity. Lastly, in 2018, the Bank approved the Energy Sector Reform Support Programme (PARSE), which will contribute to the establishment of a legal and institutional framework conducive to the development of energy projects by private developers, including in this case.

Knowledge Management: A baseline monitoring/evaluation situation for the project will be established by the executing agency to enable the Bank and other stakeholders draw lessons from its implementation. The executing agency will conduct an inventory and update the baseline data that will be used as performance or alert indicators in the quarterly progress reports. The main sources of project information, which will be used by both the country and the Bank, will include monitoring/evaluation reports, supervision mission reports, reports of the Technical Adviser for project implementation (consulting engineer) and project financial audit reports. The lessons and experiences from these various reports will help to strengthen and improve the design of the Bank's future similar operations in its regional member countries, including identical projects under the "Desert to Power" initiative.

1 Yeleen means "light" in the local Bambara (Dioula) language.
2 Proportion of the population living in electrified villages relative to the total population of the country

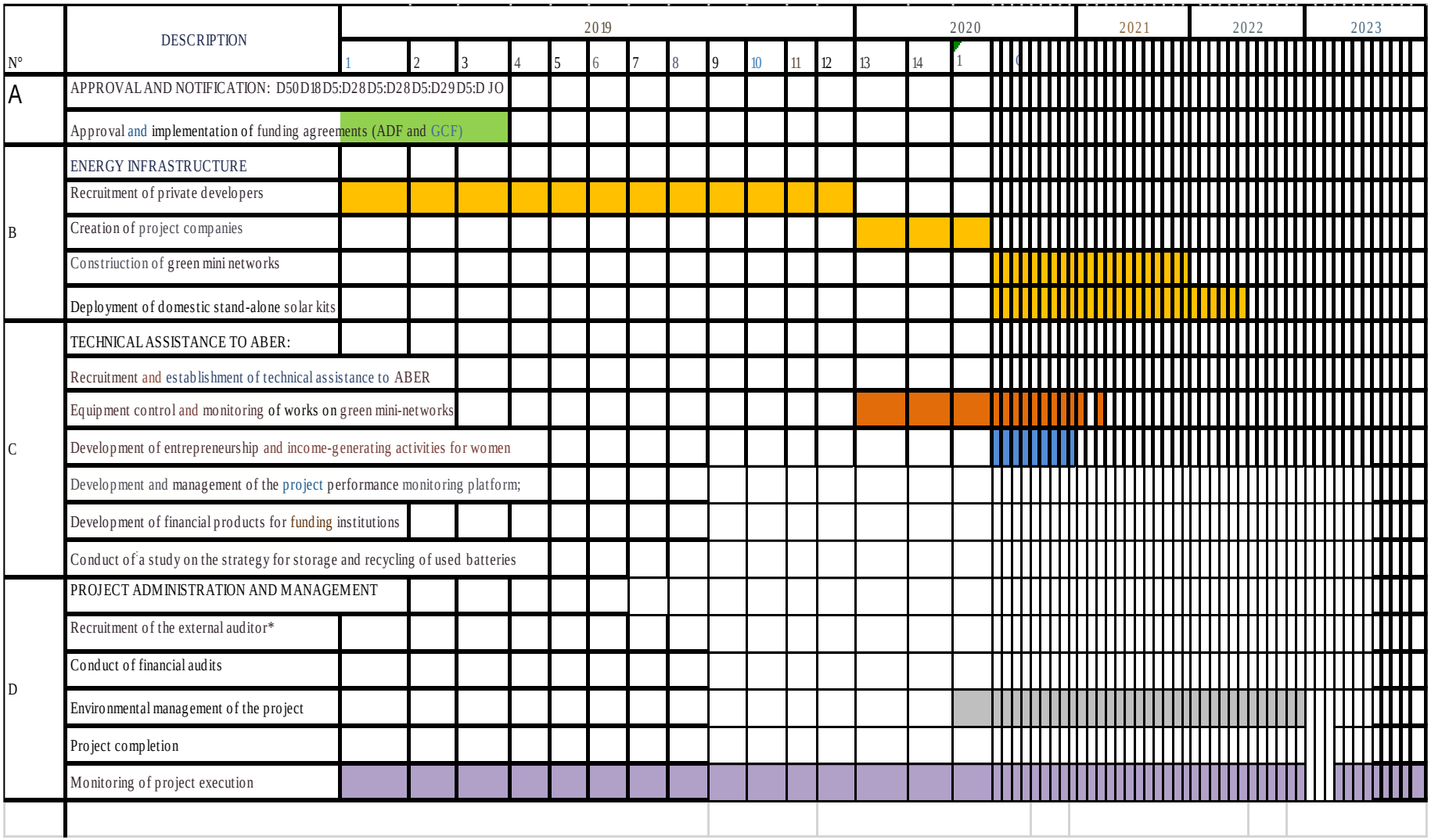
RESULTS-BASED LOGICAL FRAMEWORK

Country and Project Name: Burkina Faso - "Desert to Power" Initiative - Yeleen Rural Electrification Project
Project Objective: Increase sustainable access to electricity to improve the living conditions of rural communities

	RESULTS CHAIN	PERFORMANCE INDICATORS			Means of Verification	RISKS AND MITIGATION MEASURES
		Indicators (including ISCs)	Baseline Situation (2017)	Targets		
IMPACT	Improved quality of life of the Burkina Faso population through access to electricity	1. National electrification rate 2. Rural electrification rate	20.62% 3.24%	45% (2020) 80% (2027) 19% (2020) 30% (2027)	Ministry of Energy (ME)	
OUTCOMES	1. Greenhouse gas emissions are avoided 3. Improved national energy mix 4. Jobs created	1. Quantities of CO_{2eq} emissions avoided per year thanks to the project 3.1. National installed capacity of electricity generated from solar energy is increased 3.1 Number of permanent jobs created during the operational phase 3.2 Number of temporary jobs created during the construction phase	- 34.2 MWp - -	- 37,500 tCO_{2eq} per year (from 2022) 365 MWp in 2020 (including 22 MWp through the project) 100 (including 15% for women) 500 (including 10% for women)	Ministry of Energy ABER	**Risk 1:** Difficulties that electricity concessionaires may encounter in collecting electricity bills from customers in rural areas. **Mitigation measures:** Use of prepaid metres and the possibility of paying invoices via cellular phone operators. **Risk 2:** The difficulty for ABER to effectively monitor various project activities that will be carried out across different regions of the country. **Mitigation measures:** (i) Technical assistance to ABER to support it in implementing the project through high-level specialised firms to be recruited, including a Technical Advisor to ensure the control and installation of energy equipment on its behalf; and (ii) capacity building for ABER in accordance with its new status.
OUTPUTS	1. Project companies created 2. Green mini-grids constructed 3. Households connected to the power grid 4. Households provided with stand-alone solar kits 5. Capacity-building conducted for ABER 6. Strategy for storage and recycling of used batteries is available 7. Reports prepared and submitted	1. Number of project companies created 2. Number of green (solar) mini-grids installed 3. Number of households connected to the power grid 4. Number of households provided with stand-alone solar kits 5. Number of various forms of technical assistance provided to ABER for project implementation 6. Study on the strategy for storage and recycling of used batteries is conducted and is available 7. 1 Number of project progress reports 7.2 Number of engineering consultancy reports 7.3 Number of project financial audits 7.4 Number of reports on implementation of the ESMP and Abbreviated Resettlement Plan (ARP)	- - - - - - - - -	01 or more 100 50,000 100,000 04 01 48 15 05 48	Reports: engineering consultancy report, project progress report, supervision mission report, financial audit reports, market audit reports, etc.	**Risk 3:** Non-compliance with the overall project implementation timeframe **Mitigation measures:** (i) Selection of private developers through a rigorous and competitive international bid invitation taking into account their specific experiences in similar projects; (ii) ongoing recruitment (outside the project) of a consultancy firm, with SEFA grant resources (administered by the Bank), to assist ABER in identifying sites (localities) and preparing bidding documents for the recruitment of private developers

KEY ACTIVITIES	Components	Resource/Application
	1. Power infrastructure: (i) Construction of green (solar) mini-grids; (ii) installation of individual connections with prepaid metres; and (iii) installation of stand-alone solar kits for homes **2. Technical assistance to ABER:** (i) Technical assistance for project implementation (technical, financial, legal, tax, insurance, etc.); (ii) technical assistance for the development of entrepreneurship and income-generating activities for women through the productive use of energy; (iii) technical assistance for the management of the project's performance monitoring platform; (iv) technical assistance (by AGF) for the development of financial products for financing institutions (microfinance); and (v) conduct of a study on the storage and recycling strategy for used batteries. **3. Project management:** (i) Recruitment of private developers/partners who will be responsible for the design, financing, construction, operation and maintenance of electrical installations under a PPP framework (electricity concession contracts); (ii) environmental and social management of the project; (iii) external audit of project financial statements; (iv) operation of the Project Management Unit (PMU); and (v) monitoring and evaluation of project socioeconomic impacts	**Resources (UA 62.15 million)** ADF: UA 3.00 million GCF: UA 17.87 million EU: UA 5.24 million Private partners: UA 35.03 million Government/ABER: UA 1.01 million **Application (UA 62.15 million)** Component 1: UA 58.90 million Component 2: UA 1.78 million Component 3: UA 1.47 million

INDICATIVE PROJECT IMPLEMENTATION SCHEDULE



REPORT AND RECOMMENDATIONS OF MANAGEMENT TO THE BOARDS OF DIRECTORS ON A PROPOSAL FOR AN ADF LOAN, A GCF GRANT, A GCF LOAN AND AN EU-AfIF GRANT TO BURKINA FASO TO FINANCE THE YELEEN RURAL ELECTRIFICATION PROJECT

Management hereby submits this report and its recommendations for a proposal for an ADF grant of UA 3 million, a GCF grant of EUR 12.9 million, a GCF loan of EUR 8.6 million, and an EU-AFIF (PAGoDA) grant of EUR 6.3 million to Burkina Faso to finance the Yeleen Rural Electrification Project under the "Desert to Power" initiative.

I. STRATEGIC THRUST AND RATIONALE

1.1. *Project Linkages to Country Strategy and Objectives*

1.1.1. The National Economic and Social Development Plan (PNDES) 2016-2020 is the development reference framework for Burkina Faso. Its overall objective is the structural transformation of the national economy to ensure robust and inclusive growth based on three strategic pillars: (i) reform institutions and modernize the administration; (ii) develop human capital; and (iii) boost promising sectors to drive the economy and create jobs. The Government's new vision for the energy sector is reflected in the policy for "industrial and artisanal transformation" adopted in December 2017. This vision is essentially anchored on: (i) diversifying the energy mix by increasing the share of renewable energies in power generation, with a particular focus on solar energy; (ii) strengthening the conventional energy production base; (iii) promoting energy efficiency; and (iv) strengthening regional cooperation by developing interconnections. To achieve the targeted objectives, there are plans to increase energy sector investments through the active participation of private stakeholders under public-private partnerships (PPPs). The Yeleen Rural Electrification Project is consistent with strategic Pillar III of the PNDES and the Government's energy sector vision on diversification of the energy mix through the development of solar energy. It will help to create an enabling environment for private investment in the energy sector and boost other sectors of the economy by improving access to energy in rural areas.

1.1.2. Burkina Faso has one of the lowest electricity access rates in Africa with about 20% at the national level, compared to an average of 40% in Africa, including 32% in sub-Saharan Africa. At end-2017, the electrification rates at the national, urban and rural level, were 20.62%, 65.84% and 3.24% respectively, and the national electricity coverage rate was 35.58%. To improve access to quality energy services, guarantee energy efficiency and boost the competitiveness of the economy, the Government embarked on several energy sector reforms, including the 2016 adoption of the Energy Sector Policy Letter (ESPL) and the "Industrial and Artisanal Transformation" Sector Policy. Hence, the goal is to make energy accessible and available by democratising it through an energy mix that increases the share of renewable energy in current output, promotes energy efficiency and strengthens conventional energy production facilities. The Government set the following objectives for 2027: (i) a national electrification rate of 80% (45% in 2020); (ii) an urban electrification rate of 90% (75% in 2020); and (iii) a rural electrification rate of 30% (19% in 2020). Therefore, the Yeleen Rural Electrification Project will help the country to move towards achieving its objectives in terms of access to electricity.

1.1.3. The project is consistent with the Bank's strategic objectives in Burkina Faso as set out in CSP 2017-2021, approved in September 2017 and structured around two pillars: (i) promotion of access to electricity; and (ii) development of agriculture for inclusive growth. The Bank's selection of the energy sector out of the priority focus areas in Burkina Faso is justified

by the fact that electricity access in Burkina Faso appears to be a real obstacle to the transformation of the economy.

1.2. *Rationale for Bank's Involvement*

1.2.1. The first rationale for the Bank's intervention is the project's consistency with CSP 2017-2021 for Burkina Faso. It is included in the indicative operations programme under the CSP. It will not only contribute to the achievement of CSP Pillar I objectives relating to the promotion of access to electricity but also to other objectives expected under CSP Pillar II pertaining to the development of the agricultural sector to ensure inclusive growth.

1.2.2. The Yeleen Rural Electrification Project implemented through the deployment of decentralised solar systems is one of the responses to the limited electricity access experienced by the vast majority of the Burkina Faso population, particularly those living in peri-urban and rural areas (rural dwellers account for 70% of the country's total population). The project will provide electricity access to 150,000 rural households, or approximately 945,000 inhabitants or nearly 5% of the total population of the country[3]. By providing electricity access to low-income households in rural areas, the project will help to make the country's development more inclusive and in line with the Bank's Ten-Year Strategy 2013-2022, adopted in 2012, with the twin objectives of increased inclusion and transition to green growth in Regional Member Countries (RMCs). The project is also aligned on the operational pillar of this strategy devoted to the development of sustainable infrastructure capable of improving energy security.

1.2.3. The project is aligned on the Bank's High 5s defined in 2015, the aim of which is to strengthen and accelerate the implementation and development impacts of the Bank's Ten-Year Strategy. More specifically, it will contribute to the achievement of the following three High 5s: (i) Light up and Power Africa; (ii) Industrialise Africa (power supply to boost the creation of small- and medium-sized industries in rural areas); and (iii) Improve quality of life for the people of Africa. Furthermore, the project contributes to the implementation of the Bank's Energy Sector Policy, approved in 2012, which has a dual objective: (a) support the efforts of Regional Member Countries (RMCs) to provide their population and productive sectors with access to modern, reliable and affordable energy infrastructure and services; and (b) assist RMCs to develop an energy sector that is socially, economically and environmentally sustainable. This project also contributes to the achievement of the objectives of the Bank Group's Strategy for the New Deal on Energy in Africa (2016-2025), approved in 2016, whose main objective is to achieve universal access to energy by 2025 and whose Flagship Programme No. 7 is to promote bottom-of-the-pyramid access initiatives.

1.2.4. Finally, the Bank's intervention is justified because this project is part of the "Desert to Power" Programme initiated in 2017 by the Bank (Lead Partner) and other development partners. It seeks to transform the Sahel region by developing and operating an electricity production capacity of 10 GW through photovoltaic (PV) solar systems by 2025 via public, private, grid and off-grid projects. The Sahel countries have one of the best solar potentials in the world (solar irradiation exceeds 5.5 kWh/m^2 in the 11 countries - Sudan, Chad, Niger, Mali, Mauritania, Eritrea, Djibouti, Senegal, Nigeria, Ethiopia and Burkina Faso), but the implementation of solar projects is still slow. The Programme's approaches include off-grid electricity access solutions through the deployment of solar home systems and mini-grids as in this project. Hence, the Bank's intervention will help to raise resources from the European Union's Africa Investment Facility (AfIF/EU) (grants) and the Green Climate Fund (grant and concessional loan) to finance the project.

[3] The total population of Burkina Faso was estimated at 19.2 million in 2017 (Source: AfDB)

1.2.5. Furthermore, the project is consistent with the Bank's previous operations in the energy sector. It will amplify the effects of rural and peri-urban electrification operations financed by the Bank through: (i) Electrical Infrastructure and Rural Electrification Consolidation Project (PRIELER), approved in 2010 and completed in 2016 (159 localities electrified by connection to the electricity grid and 20,000 households connected); (ii) the Project for the Electrification of the Peri-Urban Areas of Ouagadougou and Bobo-Dioulasso (PEPU), approved in 2016 and in the implementation phase (connection to the electricity grid for at least 17,500 households by end-2020). The Yeleen Rural Electrification Project is also complementary with a project financed by the Bank, through a subsidy (a grant) extended to the country in January 2018 with resources of the Sustainable Energy Fund for Africa (SEFA)[4] as part of the complementary financing of a support programme for mini renewable energy networks. The programme seeks to improve the environment for private sector participation in the deployment of stand-alone mini green networks in Burkina Faso. The objective of this programme is to boost investments in renewable energy and increase electricity access in Burkina Faso. The project is also consistent with the Energy Sector Reform Support Programme (PARSE), approved in 2018, whose main objective is to create the conditions for inclusive access to energy, through the establishment of a regulatory and management framework for the sector that attracts private investors and increases energy investments in rural areas. PARSE will help to establish a legal and institutional framework conducive to the implementation of energy projects with the involvement of private stakeholders as in the present case.

1.3. *Aid Coordination*

1.3.1. Several bilateral and multilateral development partners are involved in the energy sector in Burkina Faso. Apart from the Bank Group, the main ones are the AFD, World Bank, EIB, IsDB, BOAD, the EU and India. The table below summarises the volume of investments in the sector over the past five years.

	Subsector	**Scope**		
		GDP	**Exports**	**Labour**
	Electricity	N.A.	0%	N.A.
	Stakeholders – Annual Public Expenditure (average) 2010-2015			
UA 445 million (100%)	**Government**	**Donors**	- AfDB	15%
	UA 80 million (18%)	UA 365 million (82%)	- World Bank	23%
			- AFD	19%
			- EIB	12%
			- European Union	6%
			- Eximbank India	5%
			- IsDB	2%
			- Other	1%
	Aid Coordination Level			
	Existence of thematic working groups			Yes
	Existence of a global sector programme			Yes
	AfDB role in aid coordination			Member

1.3.2. The Bank is Burkina Faso's largest partner in the area of infrastructure and the fourth largest technical and financial partner (TFP) in terms of project aid disbursement in 2017 after the World Bank, the European Union and the United States (*Millennium Challenge Account* Burkina Faso (MCA-BF). The Bank chaired the troika of TFPs from 2013 to 2014 with the United Nations system and Canada. From 2014 to 2015, it served as the lead agency within the Infrastructure Sector Dialogue Framework and as the lead agency in the water and sanitation sector from June 2015 to October 2016. It coordinated TFPs operating in the area of youth employment and vocational training between 2014 and 2016. Currently, the Bank is a member of several sector dialogue frameworks including economic governance, agro-sylvo pastoral

[4] *Sustainable Energy Fund for Africa (SEFA)*

production, industrial and artisanal processing, transport, communication and housing infrastructure. In line with the concerns of all stakeholders, TFP interventions in the energy sector are mainly aimed at increasing energy supply (construction/reinforcement of production plants or development of regional interconnections), diversifying the national energy mix and ensuring community access to electricity.

1.3.3. The "Industrial and Artisanal Processing" Sector Dialogue Framework brings together the four (04) ministries in charge of industry, mining, energy and the arts. It oversees the implementation of policies of the component sectors. A technical working group has been set up in the energy sub-sector. The Bank participates in the activities of the Industrial and Artisanal Processing Sector Dialogue Framework. To ensure the coherence and complementarity of operations, this project's preparation and appraisal missions held meetings with the TFPs of the sector represented in Ouagadougou (AFD, World Bank and European Union).

II. PROJECT DESCRIPTION

2.1. Project Description and Components

2.1.1. The project's development objective is to increase the electricity access rate in Burkina Faso and more specifically in rural areas. The project seeks to electrify about 100 localities by deploying photovoltaic (PV) solar systems to supply electricity to 150,000 households comprising: (i) 50,000 households through connection to mini-grids powered by mini solar power plants. The total installed capacity of the 100 mini-power plants supplying energy to the 100 mini grids is estimated at 22.6 MW, with a service period of approximately 16 hours/day thanks to the battery storage system; (ii) 100,000 households through the installation of stand-alone and autonomous solar kits; and (iii) support for the development of economic activities in rural areas through the installation of mini-grids and provision of the necessary support for the development and sustainability of very small- and medium-sized enterprises (SMEs). It will contribute to the development of the agricultural sector to promote inclusive growth and employability in rural areas.

2.1.2. The project will be developed under a public-private partnership (PPP) for the design, financing, construction, operation and maintenance of solar and electrical installations. Thus, the 100 beneficiary localities could be grouped into concessions that will be operated by one or more private developers to be recruited through international competitive bidding. Each concession will be developed by a project company under Burkina Faso law, to be created by the private developer. The Project Company will be responsible for the development, financing, construction, operation and maintenance of the facilities of the concession for which it has been incorporated, over 15 to 20 years. ABER and the local authorities will invest in the capital of the project companies.

2.1.3. Similarly, the Burkina Faso Fund for Economic and Social Development (FBDES) and the Burkinabe private sector may also acquire (minority) stakes in the capital of each project company. Other than the private developer, the total shareholdings of other members in the capital of the project company will be in the minority. The rest of the funding for the project will be provided by private developers (project companies) through equity and commercial loans to be contracted on international, regional, national or local capital markets, and/or from development finance institutions.

2.1.4. The project has three components: (A) Energy infrastructure; (B) Technical assistance; and (C) Project management. The details and estimated costs of these components are shown in the table below.

Table 2.1 Project Components				
No.	**Component Name**	**Cost Estimate (EUR million)**	**Cost Estimate (UA million)**	**Description of Components**
A	Energy infrastructure	70.85	58.90	(i) Construction of 100 mini-grids to electrify 50,000 households; (ii) deployment of 100,000 domestic stand-alone solar kits to electrify 100,000 households
B	Technical assistance	2.14	1.78	Technical assistance to ABER for: (i) project implementation (technical, financial, legal, tax, insurance, etc.)); (ii) the development of entrepreneurship and income-generating activities for women through the productive use of energy; (iii) the establishment and management of the project's performance monitoring platform; (iv) a study of the strategy for storing and recycling used batteries; and (v) technical assistance by AGF, for the development of financial products for funding or microfinance institutions
C	Project management	1.77	1.47	(i) Operation of the Project Implementation Unit; (ii) external audit of project financial statements; (iii) project environmental and social management; (iv) monitoring/evaluation of project socioeconomic impacts.
Total Project Cost		**74.76**	**62.15**	

2.2. Technical Solution Adopted and Alternatives Explored

2.2.1. The technical solution adopted is to provide access to electricity in rural areas by building isolated "solar" mini-grids (off grid) or installing stand-alone domestic solar kits. The alternative technical solutions (options) explored and reasons for their rejection are summed up in the table below.

Table 2.2 Alternatives Explored and Reasons for Rejection		
Alternative Solution	**Brief Description**	**Reasons for Rejection**
Electrification through mini-thermal power plants (diesel)	Build mini-grids and install mini-thermal plants to generate electricity	- High operating costs and expenses -The need to ensure a continuous supply of fuel and spare parts for power plants (filters, etc.) - Polluting solution due to greenhouse gas emissions from diesel units
Electrification through connection to the power grid	Construction of medium voltage (33 kV) power lines to connect villages	- High costs due to the remoteness of localities from the power grid

2.3. Project Type

2.3.1. The Yeleen Rural Electrification Project is an investment operation involving the construction of mini-grids powered by solar systems and the deployment of stand-alone domestic solar kits. It will be implemented under a public-private partnership (PPP) supported by the Bank, the GCF and the European Union. The Bank's financing instrument is an ADF grant that will be awarded to Burkina Faso.

2.4. Project Cost and Financing Mechanisms

2.4.1. The total project cost, net of taxes and customs duties, is estimated at EUR 74.47 million (UA 61.91 million), of which 83% is in foreign exchange and 17% in local currency. It was estimated based on updated unit prices of similar projects in other countries and includes a 5% provision for physical and technical contingencies, and 5% for price escalation. Detailed project costs by component, source of financing and expenditure category are presented in the tables below. The conversion rates used are indicated on page (i).

Table 2.3: Estimated Project Cost by Component

Components	EUR Million			UA Million			% Foreign Exchange
	F.E.	Local Currency	Total	F.E.	Local Currency	Total	
A - Energy infrastructure	54.20	9.56	63.77	45.06	7.06	53.01	85%
B - Technical assistance	1.35	0.58	1.93	1.12	0.48	1.60	70%
C - Project management	-	1.59	1.59	-	1.32	1.32	-
Total Base Cost	**55.55**	**11.74**	**67.28**	**46.18**	**9.76**	**55.94**	**83%**
Provision for physical contingencies	3.18	0.56	3.74	2.64	0.47	3.11	85%
Price escalation	3.18	0.56	3.74	2.64	0.47	3.11	85%
Total Project Cost	**61.90**	**12.86**	**74.76**	**51.47**	**10.69**	**62.15**	**83%**

2.4.2. The project will be jointly financed by the ADF (grant), GCF (grant and loan), EU-AfIF[5] (grant), private partners to be recruited (equity and commercial loans) and the Government/ABER (counterpart funding). The GCF resources were raised by the Bank, which will also be responsible for their management (administration). These were approved on 19 October 2018 by the GCF Board of Directors. Similarly, EU-AfIF grant resources will be managed by the Bank under the PAGoDA agreement.[6] The main financial information on the GCF loan is provided on page (iii).

Table 2.4: Sources of Financing

Components	EUR Million			UA Million			
	F.E.	Local Currency	Total	F.E.	Local Currency	Total	% Total
ADF	2.89	0.72	3.61	2.40	0.60	3.00	5%
GCF	18.28	3.23	21.50	15.19	2.68	17.87	29%
EU	5.36	0.95	6.30	4.45	0.79	5.24	8%
Private partners	35.39	6.75	42.13	29.42	5.61	35.03	56%
Government/ABER	-	1.22	1.22	-	1.01	1.01	2%
Total Project Cost	**61.90**	**12.86**	**74.76**	**51.47**	**10.69**	**62.15**	**100%**

5 Africa Investment Facility/European Union (AfIF/EU)

6 Pillar Assessed Grant or Delegation Agreement (PAGoDA). For PAGODA grants in general, the Bank will act as Administrator of projects financed by the European Union's Africa Investment Facility under Pillar Assessed Grant or Delegation Agreement (PAGoDA)

2.4.3. The project cost by expenditure category is presented as follows:

Table 2.5: Project Cost by Expenditure Category							
Expenditure categories	**EUR Million**			**UA Million**			
	F.E.	**Local Currency**	**Total**	**F.E.**	**Local Currency**	**Total**	**% Total**
Goods	54.20	9.56	63.77	45.06	7.95	53.01	85%
Services	1.35	0.58	1.93	1.12	0.48	1.60	29%
Operation	-	1.59	1.59	-	1.32	1.32	8%
Total Base Cost	**55.55**	**11.74**	**67.28**	**46.18**	**9.76**	**55.94**	**83%**
Provision for physical contingencies	3.18	0.56	3.74	2.64	0.47	3.11	85%
Price escalation	3.18	0.56	3.74	2.64	0.47	3.11	85%
Total Project Cost	**61.90**	**12.86**	**74.76**	**51.47**	**10.69**	**62.15**	**100%**

2.4.4. The provisional project expenditure schedule by component is as follows:

Table 2.6: Expenditure Schedule by Component (in EUR million)						
Components	**2,019**	**2020**	**2021**	**2022**	**2023**	**Total**
A. Energy infrastructure	14.17	35.43	17.71	3.54	-	70.85
B. Technical assistance	0.54	0.75	0.32	0.43	0.10	2.14
C. Project management	0.18	0.44	0.44	0.44	0.27	1.77
Total Project Cost	**14.89**	**36.62**	**18.47**	**4.41**	**0.37**	**74.76**
% total	**20%**	**49%**	**25%**	**6%**	**-**	**100%**

2.4.5. The ADF grant resources will be used to finance most of the activities related to technical assistance to ABER for project implementation and partially for energy infrastructure (mini-solar networks; ABER minority equity investments in the capital of the project companies to be created); and project management (financial audits). GCF resources will be used entirely for the mini-grids. The same applies to EU-AfIF resources, although part of these resources will be used to carry out the study on the storage and recycling strategy for used batteries. Government/ABER counterpart funds will be used mainly for project management expenses. The distribution of resources (ADF, GCF and EU-AfIF) by expenditure category is provided in Technical Annexes B2.

2.5. Project Area and Beneficiaries

2.5.1. The project covers the entire territory of Burkina Faso and seeks to improve electricity access for rural communities. It involves electrifying about 100 localities with solar photovoltaic systems to supply electricity to 150,000 households, or about 945,000 people. In total, direct project beneficiaries will be nearly one million rural dwellers. Rural communities will benefit from the indirect spin-offs of the project, in particular by improving the quality of basic public social services in these areas (education, training, health, hygiene and sanitation, drinking water) through the provision of modern and more reliable energy to ensure their proper functioning. The selection of beneficiary communities is based on the following criteria: (i) the size of the localities (2,000 to 5,000 inhabitants or more); (ii) the distance from the SONABEL electricity grid; and (iii) the existence of potential for productive energy use (agricultural processing, solar pumping, etc.). Given the project implementation plan (villages electrified through management concessions), the selection of localities also takes into account their spatial concentration within a given area. The list of locations is being prepared and will be finalised by end-2018.

2.5.2. Project beneficiaries also include small enterprises, businesses, private institutions, administrative and municipal services, workshops and other small industrial units that will have access to more reliable electricity. Furthermore, the introduction of electricity in these districts

will facilitate the emergence of new job-creating activities in agri-food processing (grain mills) and the conservation of market gardening products (cold rooms), new information and communication technologies, carpentry, maintenance and services. Moreover, national development programmes in education, health, communication, administration, drinking water and sanitation will become more effective in the project area due to the availability and use of electricity, especially in rural areas that have no access to modern and adequate energy services.

2.5.3. ABER is also a direct project beneficiary through the extension of its activities. It will also see its operational capacity strengthened, thanks to the establishment of a platform for monitoring project performance. The same applies to local private stakeholders who will be able to partner with private developers during the project implementation phase (subcontracting of energy equipment assembly activities) and for managing electricity concessions.

2.6. Participatory Approach to Project Identification, Design and Implementation

2.6.1. A participatory approach was adopted for the project design. The various institutional stakeholders were consulted both during technical studies and formulation of the Environmental and Social Management Framework (ESMF) and the Resettlement Policy Framework (RPF). For the ESMF and RPF, the main concerns raised and considered include the need to: (i) strengthen stakeholder capacity; and (ii) learn from similar projects recently implemented, particularly in terms of monitoring the development and implementation of specific ESMPs.

2.6.2. This participatory approach, which included the Ministry of Energy, ABER, local authorities as well as representatives of beneficiaries and civil society in target rural areas, and donors, will also be adopted for the selection of sites and the implementation of specific ESMPs. The ESMF includes requirements and guidance for developers as part of the development and implementation of ESMP, namely: (i) consultations and information of regional and local authorities, community organisations, local communities and, where applicable, the affected persons; (ii) recording and consideration of opinions, concerns and expectations on the project, including negative impacts. According to CGES and CPR, the Project Implementation Unit (PIU) is responsible for: (a) ensuring stakeholder participation; (b) managing the complaints mechanism; and (c) ensuring that private developers develop an adequate stakeholder engagement plan and maintain the same level of engagement required by national regulations and Bank requirements. In addition to the ESMP reports that will be validated by BUNEE and made public by ABER, it was agreed that the annual ESMP implementation reports would also be published on the ABER website. Finally, plans have been made for budgetary provisions to cover the consultation and community awareness-raising component (service provided by developers). The social expert to be recruited to support ABER will ensure the implementation of the participatory approach at all stages of project implementation.

2.7. Bank Group Experience and Lessons Reflected in Project Design

2.7.1. As of 30 September 2018, the Bank Group's active portfolio in Burkina Faso comprised 16 projects worth a total UA 475.462 million in commitments. It consists of 12 national projects (including three private sector projects) representing UA 216.458 million, or 45.53%, and four regional projects representing UA 259.003 million, or 54.47%. The breakdown of the public portfolio is as follows: Transport 54%, Energy 18%, Agriculture and Environment 14%, Water and Sanitation 8%, Governance 6%.

2.7.2. The performance of the Bank's national public portfolio was deemed satisfactory during the last review of 30 March 2016, with a score of 3.6 (on a scale of 1 to 4). According to the "Portfolio Flashlight" report of October 2018, 75% of operations performed satisfactorily (compared to an average of 61% for the West Region). The portfolio includes only one problematic project: the Shea Butter Value Chain Support Project. It does not include any aged

projects. As of 30 September 2018, the cumulative disbursement rate of the entire portfolio was 39.15%, with an average age of 2.83 years. Efforts should be made to reduce the average project start-up time estimated at 15.56 months, which is two and a half times the standard timeframe set by the Bank (PD No. 02/2015 of 4 November 2015). No national project financed by the Bank in the energy sector in Burkina Faso is behind schedule.

2.7.3. Since the beginning of its operations in Burkina Faso in 1970, the Bank has financed seven operations in the energy sector, the first of which was approved in February 1984 and concerned the Kompienga hydropower plant (14 MW). A completion report for this project was prepared in 1991 and a performance evaluation report prepared in 1992. The second operation, approved in 2002, focused on a rural electrification study that formed the basis for the formulation of the third Bank-funded operation in the Burkina Faso energy sector, namely the Electricity Infrastructure Strengthening and Rural Electrification Project (PRIELER), approved by the Bank in 2010 and completed in 2016. PRIELER, whose implementation was deemed satisfactory by the Bank and the Government of Burkina Faso, has led to the electrification of 159 localities throughout the country by connecting them to the national grid, in addition to connecting 20,000 households, 272 schools and 290 health and social promotion centres. The same applies to the Energy Sector Budget Support Programme (ESPS), approved in 2015, which helped to improve the financial balance of the sector, replenish SONABEL's fuel reserve stock (20 days) and ensure the regular supply of fuel to its thermal power plants. Completion reports were prepared for PRIELER and PASE in 2017. The last three operations approved by the Bank and currently being implemented are: (i) the Project for the Electrification of the Semi-Urban Areas of Ouagadougou and Bobo-Dioulasso (PEPU), approved in September 2016; (ii) the Nigeria - Niger - Benin - Burkina Faso Multinational Electricity Interconnection Project, approved in December 2017; and (iii) the Energy Sector Reform Support Programme (PARSE), approved in July 2018.

2.7.4. In general, energy projects in Burkina Faso do not experience implementation delays. However, the main lessons from executing infrastructure projects in Burkina Faso and similar countries have been factored into the design of this project. Thus, the project took into account the lesson pertaining to the need for an investment operation to ensure good quality data at entry. For this reason, the Bank provided support, through a SEFA grant, to recruit a consultancy firm to develop an enabling environment for green mini networks, prepare documents for the recruitment of private developers and conduct capacity-building workshops. In addition, the project design also provided for technical assistance to ABER as part of this project’s implementation (recruitment of a consulting engineer for technical assistance, works control and supervision).

2.8. Key Performance Indicators

2.8.1. Project performance will be measured through the results-based logical framework indicators. The output indicators are: (i) number of companies created, including those by women; (ii) number of green (solar) mini-grids, including solar capacity (powers) installed (for women, headed by women) and the distance of distribution grids; (iii) number of electricity connections made; (iv) number of individual (domestic) solar kits installed for women-headed households; and (v) number of financial audits conducted. The impact indicators are: (a) number of electricity concession contracts awarded; (b) quantity of CO2eq not released per year because of the project; (c) the national installed solar power generation capacity; (d) number of permanent jobs created during the operating phase; and (e) number of temporary jobs available during the construction phase.

2.8.2. The project's impact indicators are the national and rural electricity access rates recorded in national reports: SONABEL, Ministry of Energy, Ministry of Economy, Finance and Development (MINEFID), and the PNDES periodic reviews (performance matrix).

2.8.3. Through the Project Implementation Unit (PIU), the executing agency will monitor progress towards achieving project outcomes. Data on project performance indicators will be provided in: (i) periodic progress reports prepared by the consulting engineer responsible for works monitoring and supervision; (ii) quarterly project progress reports of the implementation unit; (iii) ABER activity reports; (iv) reports of the Bank's supervision missions; and (v) project completion reports (from the Borrower and the Bank). The indicator analysis should facilitate progress measurement and adjustments to achieve target values, if necessary.

III. PROJECT FEASIBILITY

3.1. Economic and Financial Performance

Table 3.1
Project's Key Economic and Financial Data

Baseline Scenario	FIRR	6.6%	FNPV XOF 4.6 billion
	ERR	23.7%	ENPV XOF 37 billion
Cost efficiency compared to private developers	Rate of return on equity: 16.2 %		NPV Equity Capital: XOF 6.1 billion

3.1.1. ***Project economic and financial performance***: this has been analysed based on the respective internal financial rate of return (IRRF) in relation to financial flows and the internal economic rate of return (IERR) as described in Technical Annex 7. For this state-led project, the IRRF and IERR reflect the expected returns for an infrastructure project with large economic benefits, some of which are not listed in the IERR. However, due to the involvement of private stakeholders in the project design, financing, construction, operation and maintenance, with an equity injection into project companies, attention should be paid to the rate of return on equity (Equity IRR) for these investors. The 16.2% rate is deemed necessary to mobilise such private participation.

3.1.2. ***Sensitivity of project financial and economic performance:*** This was analysed in relation to the variation of the capped tariff, which has an impact on both the financial and economic rates of return. The outcomes detailed in Annex B7 show that by imposing a tariff of EUR 0.12/kWh (XOF 68/kWh), the project will generate an acceptable FIRR of 6.6%, for a state-led project, while enabling private developers to obtain a 16.2% return on equity on the invested equity capital. In compliance with the decree applicable to the second segment of the electricity sub-sector in Burkina Faso, the average rate corresponds to USD 0.24/kWh (XOF 136/kWh). This value is the weighted average of electricity sales, taking into account certain

assumptions about consumption and the productive use/domestic use ratio. The XOF 136/kWh rate, if authorised, would enable the project to have a FIRR of 31% and a return on equity of 63%, which would be too high considering the very concessional nature of the financing mobilised under the project. Therefore, there is a safety margin between the tariff that ensures profitability under normal conditions and the maximum permissible tariff without recourse to State subsidies.

3.1.3. ***Productive energy:*** the agricultural sector, which employs 80% of the population, is affected by the problems concerning the sustainability of seasonal crops, preservation and processing to add value. Farmers often work for only 04 months of the year. It is imperative to deploy energy to support production and processing in rural areas, to ease people out of poverty. Solutions for preserving and processing market gardening products include popularising solar pumps for irrigation (drip irrigation), solar cold rooms for product conservation and establishing solar-powered processing units.

3.2. Environmental and Social Impact

3.2.1. ***Categorisation and environmental and social safeguards instruments***: The project was listed under Category 2 on 18 July 2018, based on the identified low-to-medium negative environmental and social impacts. As the sites are not yet known, an Environmental and Social Management Framework (ESMF) was developed in 2018 with the Bank's support to guide the preparation of specific Environmental and Social Management Plans (ESMPs) after the selection of developers. A Resettlement Policy Framework (RPF) has also been prepared. Although it is not a Bank safeguard tool, it will facilitate the implementation of the Abbreviated Resettlement Plan (ARP) as necessary, when selecting sites for mini-solar power plants. The ESMF and the RPF were validated and published at the national level (link to the ESMF; link to the RPF) and by the Bank on its website on 14 September 2018.

3.2.2. ***Key environmental and social impacts:*** The expected negative impacts to date include: (i) possible economic displacements on the mini-solar power station sites (maximum 0.5 hectares per site); (ii) various types of pollution generated (atmospheric emissions, waste/gravel, noise, etc.) during civil engineering works at mini-solar power plants and mini-grid sites (less than one hectare per site); (iii) health and safety risks for workers and the local population during installation works, operation and maintenance; (v) cumulative environmental risks/impacts from poor management/elimination of used/obsolete batteries**.** More detailed assessments and mitigation measures will be proposed in the ESMPs and, where appropriate, specific RAPs will be disclosed at the local level and validated by BUNEE and ABER before work begins on the sites concerned. The submission of the ESMP/RAPs to the Bank prior to the start of construction will be among the project's "other conditions". The main positive environmental and social impacts are: (i) cleaner alternatives to wood fuel (fuelwood and coal) and oil lamps, which are the main sources of energy and lighting; (ii) job creation and new income-generating activities; (iii) improved quality of life for the beneficiary population, thanks to energy availability and related benefits; (iv) reduced pressure on natural resources owing to the availability of alternative energy.

3.2.3. ***The cost of the measures provided for in the ESMF*** is estimated at USD 1,100,000, including: (i) USD 350,000 for ABER (E&S technical assistance) and BUNEE capacity building (mainly logistical support); (ii) USD 150,000 for E&S measures to be taken by developers; (iii) USD 200,000 for the study on used battery storage and recycling strategy; (iv) provision of USD 400,000 for possible compensation and consultation, communication and awareness of the local population concerned by the developers.

3.2.4. ***ESMP implementation monitoring:*** ABER has an environmental and social expert working under the supervision of the Technical Director since 2014. He/she will be charged with: (i) monitoring the implementation and validation by BUNEE of specific ESMPs and, where applicable, RAPs; (ii) monitoring the implementation of E&S requirements. The expert currently monitors six ongoing ABER projects. Plans have been made to build capacity with a view to ensuring the successful implementation of the Yeleen Rural Electrification Project through: (a) technical assistance; and (b) recruitment of an expert in charge of social issues. To facilitate the validation of the ESMPs and monitoring by BUNEE, logistical support (a vehicle) will be provided. BUNEE's participation in the project will be the subject of an agreement between the Ministry of Environment and the Ministry of Energy.

3.2.5. ***Climate Change***: the project is classified under Category 3 according to the Bank's Climate Marker System because it is not vulnerable to climate risks. The selection criteria included in the ESMF confirm that no mini-power plants will be built on high-risk sites. In terms of mitigation, the project will help to avoid the emission of approximately 39,000 tonnes of CO2eq per year, or 974,000 tonnes over the expected 25-year lifespan of the installations.

3.2.6. ***Gender:*** The project is classified in Category 3 according to the AfDB's Gender Marker System (GMS). Women are particularly disadvantaged with regard to access to electricity because they are the majority of the poor in rural areas. Therefore, the poverty rate in female-headed households is 11% higher than that of men. Biomass is the main source of energy for the majority of the rural population in the ECOWAS region (57% of the total energy consumed), which sparks a health crisis with high levels of mortality due to pneumonia, chronic obstructive pulmonary disease and lung cancer. Firewood is sometimes collected more than five kilometres from residential areas: this has a negative impact on the health of women and girls, who often have to carry heavy loads of firewood on their heads.

3.2.7. In terms of impact, access to electricity should enable both men and women to engage in income-generating activities and reduce exposure to biomass. In education, girls' school attendance is expected to increase due to the reduction in their workload. Therefore, the project will integrate women at all levels of the programme (about 50% of the 945,000 project beneficiaries) through the following activities: (i) the connection of mini-grids and provision of solar kits for women-headed households on the same footing as men-headed households; (ii) the promotion of women's entrepreneurship in the field of renewable energy; (iii) a diagnostic study on business opportunities for women entrepreneurs in the field of renewable energy; (iv) technical assistance and capacity building for women in renewable energy, ABER's support in gender mainstreaming in renewable energy and support from financial institutions in financing gender-sensitive energy programmes. Gender-related complementary activities amount to USD 75,000 (see Technical Annex).

3.2.8. ***Social:*** The plan is to provide access to electricity to 150,000 rural households, representing nearly 945,000 inhabitants. The project will also benefit small- and medium-sized enterprises, small businesses, administrative and municipal services and all basic social services (education, training, health, hygiene and sanitation, drinking water). Social infrastructure (schools, training centres, health centres, etc.) located in the beneficiary localities will be connected to the mini-grid and will thus have access to more reliable electricity for various uses (domestic, industrial, commercial, pumping, cultural, security, etc.). The quality of social services will be improved in the project area through the provision of electricity. The project will promote leisure and family entertainment for greater well-being. With the availability of lighting in homes and on the streets, it will enhance the safety of people and property. Furthermore, the introduction of electricity in rural areas will facilitate the emergence of new job-creating activities in various fields. These include food processing, new information and communication technologies, carpentry, maintenance, sewing, embroidery, handicrafts, small

businesses and services. The project will have significant socio-economic benefits in the areas covered. It is estimated that 500 temporary jobs will be created during the construction period of the project's mini-grid and installation of individual solar home kits (2 to 3 years). For the operations phase (about 20 years), it is assumed that 100 permanent jobs will be required to manage the electricity concessions.

3.2.9. ***Involuntary Resettlement***: the selection criteria outlined in the Resettlement Policy Framework (RPC) preclude significant people and physical displacements. Where necessary, mini-solar power plant sites will cause economic displacement, particularly in terms of agricultural land. In such cases, the developer will prepare a RAP in compliance with the Bank's requirements. The submission of RAPs and proof of indemnification/compensation of affected persons is a condition before work can begin on the site concerned.

IV. PROJECT IMPLEMENTATION

4.1. Implementation Arrangements

4.1.1. ***Institutional arrangements:*** the Ministry of Energy will be the project-executing agency. The project will be linked to the "Energy" Budget Programme, with the project coordinator as the person in charge. All the PMU's technical, administrative, financial and legal staff will be provided by ABER or, if necessary, by the Ministry of Energy or recruited, with the exception of the internal auditor, who will be appointed by the Ministry of Finance. The staff will include a project manager, three (03) electrical engineers, a computer engineer, a procurement expert, a lawyer, an administrative and financial manager, an internal auditor, a monitoring/evaluation expert, an environmentalist, a secretary, an administrative officer, a liaison officer and a driver. This staff will be fully dedicated to project activities. The assignment of this staff to other ABER activities should not block project operations. A Technical Advisor (firm) will support the PIU to implement the project (technical, financial, legal, fiscal, insurance, control and supervision of the deployment of mini-solar networks and individual solar kits for domestic use). The technical advisor shall certify the quality and quantity of work carried out by private developers (project companies).

4.1.2. The executing agency will ensure that staff are retained to implement the project. The staff have the skills, and some of them boast knowledge of the rules and procedures of bilateral and multilateral partners such as the World Bank, AFD, the European Union, IsDB and the Bank. Project staff will be paid allowances as provided under national regulations.

4.1.3. In accordance with the General Regulations for Development Projects or Programmes in Burkina Faso, ministerial decrees will be issued after the signing of the project financing agreements with the Bank, including the joint decree of the Ministry of Energy (ME) and MINEFID on the creation, purpose, classification, administration and operation of the project. The project will be monitored and evaluated by the Project Review Committee of the Energy Budget Programme. Submission to the Bank of the final decrees is a condition precedent to first disbursement of ADF, GCF and EU-AFIF resources.

4.1.4. Under the supervision of the Head of the "Energy" Budget Programme, the Project Officer will ensure the execution and regular monitoring of all project activities, including the management of the various contracts awarded as part of project execution. It will have the technical and management resources necessary to provide all the services required for the technical as well as the administrative and financial management of the project. The Project Review Committee, a guiding and steering organ, will meet at least once every six months to: (i) review and adopt the project implementation plan; (ii) review and adopt the various project evaluation reports; (iii) review and adopt various periodic activity and financial reports; (iv) review and adopt annual activity programmes, budgets and procurement plans; (v) ensure the

implementation of the recommendations taken during its sittings, monitoring and evaluation missions, project and programme meetings and reviews, portfolio reviews and individual audits; (vi) evaluate the performance of the Project Coordinator in accordance with its Letter of Engagement; (vii) make recommendations to the Project Coordinator and various partners involved in the project; (viii) approve project financial statements; (ix) approve the project asset inventory report; and (x) review and adopt any documents submitted for its consideration.

4.1.5. ***Procurement arrangements:*** the project's procurement activities are essentially limited to the selection of firms for consultancy assignments and private operators who will be mandated through a public-private partnership mechanism (a concession in this case) to develop and manage mini-solar power plants. All such procurements shall be in accordance with the Procurement Policy for Operations Financed by the Bank Group ("AfDB Procurement Policy"), October 2015 edition, using the Bank's Procurement Methods and Procedures (MPA) as detailed in Annex B.5 and specified in the Procurement Plan.

4.1.6. In view of its specificity, as well as reasons set out in the Technical Annex, the selection of private developers will be made through a two-stage bid invitation preceded by a pre-qualification. In the absence of a standard Bank bidding dossier adapted to the context of a public-private partnership (PPP), the executing agency will develop a fit-for purpose bidding dossier acceptable to the Bank with the support of qualified technical assistance that has international expertise in running similar operations.

4.1.7. **Procurement Risk and Capacity Assessment (PRCA):** To take account of project specificities, the Bank assessed the risks at the following levels: (i) national; (ii) sector-specific; (iii) project; and (ii) executing agency. The outcomes of these assessments concluded that the procurement risk was "substantial" and determined the appropriate risk mitigation measures included in the PRCA action plan discussed in Paragraph B.5.9 of Appendix B5. The necessary funds for carrying out these measures will be provided under the project**.**

4.1.8. ***Eligibility waiver***: The Bank's resources to finance project activities are provided by the African Development Fund (ADF), the Green Climate Fund (GCF) and the European Union Africa Investment Facility (EU-AfIF). The last two funds mentioned are Bank-administered resources that comply with the ADB window eligibility rules (which limit the rule of origin solely to Bank Group member countries), while ADF resources are subject to the ADF window eligibility rules (which do not set any restrictions on the rule of origin). Since some procurements are jointly financed by the ADF and the GCF/or EU-AfIF, any practical incompatibility should be avoided as the eligibility rules are not the same for these sources of financing. In this regard, a waiver will be requested from the Bank's Board of Directors to ensure that all procurements co-financed with the ADF by the ADF and/or EU-AfIF under this operation are open to all countries, including non-members of the Bank Group.

4.1.9. ***Disbursement arrangements:*** ADF, GCF and EU-AfIF resources will be disbursed in accordance with Bank rules and procedures. Disbursements will be made through three (3) methods: (i) the reimbursement method; (ii) the direct payment method; and (ii) the reimbursement guarantee method. The reimbursement method will only be used when there is need to reimburse ABER for eligible expenditure that it pre-financed with the approval of the Fund/the Bank. The direct payment method will be used for expenditure on supplies, works and consultancy services. The reimbursement guarantee method will only be used to finance imports of significant amounts of goods.

4.1.10. ***External audit arrangements:*** an independent auditor will be recruited for a nonrenewable period of three (3) years to audit project accounts yearly. The audit costs will be financed from the ADF project resources. The terms of reference of the audit will be approved

in advance by the Bank. The auditor shall be recruited latest six (6) months following project launch. The auditor's annual reports shall be sent to the Bank latest six (6) months following the end of each financial year.

4.2. *Monitoring*

4.2.1. *All activities planned will be regularly monitored and ev*aluated throughout the project implementation phase based on the baseline situation established by the Ministry of Energy and ABER:

(i) The PIU will regularly monitor the implementation of all project activities (procurement, contract management, coordination between the ABER Technical Advisor in charge of supervising the deployment of mini-grids and individual solar kits for domestic developers, coordination with all relevant public structures and services, the population and other stakeholders, approval of work progress reports, acceptance and commissioning of facilities, etc.) and will make recommendations, as necessary, to the Project Review Committee to ensure that the project is completed on schedule.

(ii) The PIU will submit quarterly progress reports to the Bank within 30 days of the relevant period. These reports will provide details of the physical status of the project, the financial execution including approved commitments and disbursements by component and source of financing, the main problems or constraints identified that may affect the timely implementation of the project and the solutions proposed solutions. It will also highlight the log frame outcomes gradually achieved based on the project indicator trends. The reports of Bank supervision missions, Government's monitoring missions, the consulting engineer in charge of works control and supervision, and the various audits will be useful in ensuring the proper execution of the project or identifying constraints or delays, and taking appropriate action for the project to be implemented within the agreed timeframes and achieve its overall objectives.

(iii) The Bank will monitor the project through activities summarised in the table below. These will be carried out based on the project implementation schedule presented on page (vi). The project will be subject to at least two Bank supervision missions per year. It will also be closely monitored by the Bank's Country Office in Burkina Faso (COBF).

(iv) At the end of the project, the PIU will prepare and submit a project completion report to the Bank. In turn, the Bank will produce its own project completion report and a project performance evaluation report to assess impacts.

Period	Stages	Monitoring Activities /Feedback Loop
December 2018 – March 2019	Funding approvals, signature of the financing agreements and effectiveness of the GCF loan agreement	Approval and notification Signing of the financing agreements and effectiveness of the GCF loan agreement
January 2019 – December 2019	Provision of technical assistance to ABER for project implementation	Firm recruitment process Signing of contracts Services provided
January 2019 – December 2019	Recruitment of private developers in charge of mini-grids and individual domestic solar kits	Developer selection process Signing of PPP contracts for concessions Creation of project companies (concessions) Equipment supply and assembly Works control and supervision

October 2019 – October 2020	Deployment of individual domestic solar kits	Equipment supply and assembly Works control and supervision
January 2020 - December 2022	Construction of mini-grid networks	Equipment supply and assembly Works control and supervision Project supervision (Donors)
January 2023 – December 2023	Project completion and financial closure	ABER Project Completion Report Bank Project Completion Report Audit of project financial closure

4.3. Governance

4.3.1. Act No. 014-2017 on the general regulation of the energy sector in Burkina Faso, adopted in April 2017, represents a significant step forward in the reform of the energy sector in the country. This law incorporates major innovations. It provides a comprehensive framework for management and regulation of the entire energy sector, enshrines the liberalisation of the electricity sub-sector and defines the role of private operators in electricity production and distribution. It also includes provisions for the promotion of renewable energy and energy efficiency. Furthermore, this law extends the regulator's powers over the entire energy sector. Some 30 implementing texts must be approved by the Government to make the law fully applicable. Several texts were adopted in 2017 and 2018 and others are expected in 2019. These should provide a better framework for reviewing electricity tariff conditions, conditions for third party access to transmission networks, conditions for electricity distribution in the country, the possibility for self-producers to sell their surpluses and the framework for producing and distributing renewable energy.

4.3.2. Created in 2007, the Electricity Sub-Sector Regulatory Authority (ARSE) became the Energy Sector Regulatory Authority with Act No. 014-2017. Its powers and organisation were clarified by a decree issued in October 2017. Its new responsibilities include proposing applicable tariffs in the power sector, settling disputes between the various stakeholders and ensuring the financial balance of the sector as a whole. At the institutional level, several structures have been created in the sector, including the General Directorate for Renewable Energy (DGER), the General Directorate for Energy Efficiency (DGEE) and the General Directorate for Conventional Energy (DGEC). A National Renewable Energy and Energy Efficiency Agency (ANEREE) was also created with mission to promote the development of renewable energy and energy efficiency in Burkina Faso.

4.3.3. Pursuant to Act No. 14-2017, decrees were promulgated in October 2018 to approve the status of the Burkina Rural Electrification Agency (ABER) and establish it as a public administrative establishment (EPA). ABER's mission is to promote access to electricity in rural communities and to improve the living conditions and well-being of the population. The Electricity Development Fund (FDE), which had the same mission, was dissolved accordingly and its liabilities and assets transferred to ABER.

4.4. Sustainability

4.4.1. The sustainability of infrastructure to be built under the project is contingent on the resources that will be generated by the sale of electricity by the private concession holders (managers) who will be responsible for operating and maintaining the power installations (mini-grids and individual solar domestic kits). The model is mainly based on rural electrification, which does not, in principle, require government subsidies other than the concessional financing provided for the construction of mini-grids as part of this project.

4.4.2. Another aspect of the project's sustainability is the consideration of the ability of rural households to pay their electricity bills. The tariffs for solar kit subscriptions have been fixed in such a way as to provide access to households through subscription to a solar kit service,

pending their connection to the mini-grid as the grid expands during the operationalization (operations) phase of concessions. This scalable, one-stop energy service offer is one of the key elements of the project's sustainability, which also allows all solar components, including batteries, to be managed and recycled in a centralised and sustainable manner.

4.5. Risk Management

4.5.1. The following are the potential project risks:

Risks	**Mitigation Measures**
Difficulties that electricity operators may encounter in recovering electricity bills from customers in rural areas	- Use of pre-paid meters - Possibility of paying bills through mobile phone operators
Difficulties of the Project Executing Agency (ABER) in effectively monitoring various project activities implemented in different regions of the country.	- Technical assistance to ABER to support it in implementing the project through high-level specialised firms to be recruited, including a Technical Advisor to ensure the control and installation of power equipment on its behalf - Capacity building of ABER in accordance with its new status
Failure to meet the overall project execution deadline.	- Selection of private developers through a rigorous and competitive international bid invitation, taking into account their specific experiences in similar projects - Ongoing recruitment of a consulting firm (outside the project) on the resources of a SEFA grant (administered by the Bank) to assist ABER in identifying sites (localities) and preparing bidding documents for the recruitment of private developers.

4.6. Knowledge Building

4.6.1. The project provides for knowledge-building activities through the training of ABER staff in various areas of project management, planning and performance management of electricity concession projects.

4.6.2. Quarterly and annual project progress reports as well as financial audit reports will be sources of information on the project. The same applies to the reports of Bank supervision missions and Government monitoring missions. All of these documents, together with the project completion reports, will provide a basis for learning and sharing lessons about the project's implementation. The Bank's publication of the project completion report and the project performance evaluation report will help to share the knowledge gained through project implementation with Bank staff and the public. The lessons learned will strengthen the design of similar future Bank operations in its regional member countries, including those under the Desert to Power Initiative.

V. LEGAL FRAMEWORK

5.1. Legal Instrument

5.1.1. The project's legal framework will be: (i) an ADF Grant Protocol of Agreement between the ADF and Burkina Faso for UA 3 million; (ii) an ADF Grant Protocol of Agreement between the Bank (as an accredited GCF entity) and Burkina Faso for EUR 12.90 million; and (iii) a GCF Loan Agreement between the Bank (as an accredited GCF entity) and Burkina Faso for EUR 8.60 million[7].

[7] An EU-AfIF agreement (PAGODA) between the Bank (in its capacity as Administrator of the EU-Africa Infrastructure Fund (AfIF) and Burkina Faso will be signed following the approval of the EUR 6.3 million grant by EU-AfIF. The grant agreement shall contain the same conditions and commitments detailed in Section V of this report. A delegation agreement between the European Union and the Bank defining the activities assigned to the Bank with a view to implementing the project will also be signed and become effective on signature.

5.2. Conditions Associated with the Intervention of the Bank and the Fund

A) Conditions precedent to effectiveness The ADF and GCF Grant Protocols of Agreement shall become effective on the date of their signature in accordance with Section 10.01 (Effectiveness) of the General Terms and Conditions Applicable to Grant Protocols of Agreement the African Development Fund. The effectiveness of the GCF Loan Agreement shall be subject to the Borrower fulfilling, to the Bank's satisfaction, the conditions set out in Section 12.01 of the General Conditions Applicable to Loan Agreements and Guarantee Agreements of the Bank.

B) Condition precedent to first disbursement

5.2.2. In addition to effectiveness, the first disbursement of each grant (ADF and GCF) and the GCF loan shall be subject to the Borrower/Donee fulfilling the following condition to the satisfaction of the Fund/Bank:

(a) Provide evidence of signature, in accordance with the General Regulations for Development Projects or Programmes in Burkina Faso, of ministerial decrees or documents relating to: (a) the creation, purpose, classification, administration and functioning of the project; (b) the creation, composition and powers of the project review committee; and (c) the appointment of the project coordinator (paragraph 4.1.3).

5.2.3. **Conditions precedent to disbursements for works not involving resettlement**

Subject to the provisions of Section 5.2.1 (Effectiveness) and Section 5.2.2 (Conditions precedent to first disbursement) of this report, the obligation of the Fund/Bank to disburse grant/loan resources for works involving resettlement shall be contingent on the Donee/Borrower fulfilling the following additional condition to the Fund's/Bank's satisfaction:

(a) For each project work area, submit an Environmental and Social Management Plan (ESMP) prepared in accordance with the Environmental and Social Management Framework (ESMP) and the Fund's Safeguards Policies, and deemed satisfactory to the Fund in form and substance.

5.2.4. **Conditions precedent to disbursements for works involving resettlement.** Subject to the provisions of Section 5.2.1 (Effectiveness) and Section 5.2.2 (Conditions precedent to first disbursement) of this report, the obligation of the Fund/Bank to disburse Donor/Loan resources for works involving resettlement shall be subject to the Donee/Borrower fulfilling the following additional conditions, to the Fund's/Bank's satisfaction:

(a) Submit to the Fund an Environmental and Social Management Plan (ESMP) and an Abbreviated Resettlement Plan (ARP), including a schedule of works and compensation prepared in accordance with the Environmental and Social Management Framework (ESMF) Framework, the Resettlement Policy Framework (RPC) and the Fund's safeguards policies satisfactory in substance and form, providing details on: (i) each project work area; and (ii) the compensation timeframe for all project-affected persons ("PAPs") in each area; and

(b) Provide satisfactory evidence that all project-affected persons ("PAPs") in the works zone have been compensated in accordance with the Abbreviated Resettlement Plan (ARP) and/or the works and compensation schedule as agreed, as well as the Fund's Safeguard Policies, before the commencement of

such works and, in any event, before the resettlement and/or expropriation of land and/or related property from the PAPs; or

(c) In lieu of paragraph (a)(b) above, provide satisfactory evidence that the resources allocated to the compensation of PAPs have been deposited in a dedicated account in a bank acceptable to the Fund [or deposited with a trusted third party acceptable to the Fund], where the Donee can prove to the satisfaction of the Fund that the compensation of the PAPs, pursuant to paragraph (a)(b) above, could not be fully or partially realised, for the following reasons:

(i) The identification of PAPs by the Donee/Borrower is not feasible or possible;

(ii) There are ongoing disputes involving PAPs and/or affecting the compensation process; or

(iii) Any other reason beyond the control of the Donee/Borrower, as discussed and agreed with the Fund.

C) Other Condition.

5.2.5. Furthermore, the Donee/Borrower shall comply with the following condition to the satisfaction of the Fund:

(a) Provide the Fund/Bank with a list of technical staff assigned to the project three (03) months after first disbursement.

D) Commitments regarding Environmental and Social Safeguards

5.2.6. The Donee/Borrower shall undertake and ensure that the Executing Body, the Executing Agency, each of their contractors, subcontractors and agents shall do the same to:

(i) Implement the project in accordance with the ESMP, RAP and/or the works and compensation schedule, the Fund's Safeguards Policies and applicable national legislation in a manner satisfactory to the Fund/Bank, in form and substance;

(ii) Prepare and submit to the Fund/Bank quarterly ESMP and RAP implementation reports, including identified weaknesses and remedial measures taken to address them;

(iii) Refrain from any action that would prevent or hinder the implementation of the ESMP and RAP, including any modification, suspension, waiver and/or cancellation of any provision of the ESMP or RAP, in whole or in part, without the prior written consent of the Fund/Bank; and

(iv) Start work in the areas affected by the project implementation only if all PAPs in the affected area are compensated in accordance with the RAP and/or the works and compensation schedule.

E) Other Commitment

5.2.7. The Donee/Borrower shall undertake to:

(i) Provide the Fund/Bank with any document reasonably relevant for monitoring project implementation.

5.3. Compliance with Bank Policies

5.3.1. The project complies with all applicable Bank policies.

VI. RECOMMENDATIONS

Management is hereby recommending that:

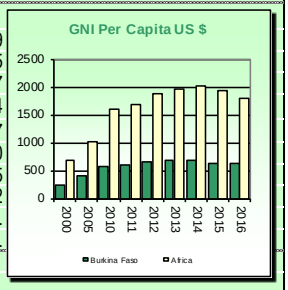
(ii) The Board of Directors of the Bank decide that the procurement of goods, works and services financed from grant resources and the GCF loan shall be open to all countries, including countries that are not members of the Bank; and

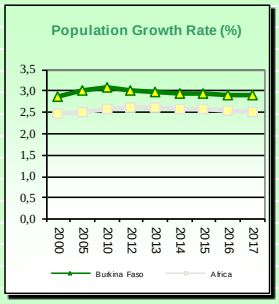
(iii) The Boards of Directors of the Bank and the Fund approve, as the case may be: (a) an ADF grant of UA 3.00 million; (b) a GCF grant of EUR 12.90 million; and (c) a GCF loan of EUR 8.60 million for this Project and on the terms and conditions set out in this report.

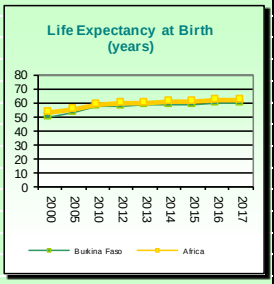
An addendum to this report on EU-AfIF financing amounting to EUR 6.3 million will be presented to the Bank's Board of Directors for approval following EU-AfIF Board's commitment.

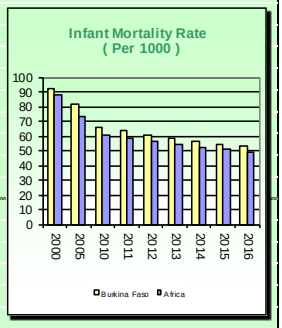
Appendix I: Comparative Socio-economic Indicators for Burkina Faso

	Year	Burkina Faso	Africa	Develo-ping Countries	Develo-ped Countries
Basic Indicators					
Area ('000 Km²)	2017	274	30 067	80 386	53 939
Total Population (millions)	2017	19,2	1 184,5	5 945,0	1 401,5
Urban Population (% of Total)	2017	31,1	39,7	47,0	80,7
Population Density (per Km²)	2017	70,1	40,3	78,5	25,4
GNI per Capita (US $)	2016	620	2 045	4 226	38 317
Labor Force Participation *- Total (%)	2017	83,4	66,3	67,7	72,0
Labor Force Participation **- Female (%)	2017	76,5	56,5	53,0	64,5
Sex Ratio (per 100 female)	2017	98,7	0,801	0,506	0,792
Human Develop. Index (Rank among 187 countries)	2015	185	...	...	...
Popul. Living Below $ 1.90 a Day (% of Population)	2014	43,7	39,6	17,0	...
Demographic Indicators					
Population Growth Rate - Total (%)	2017	2,9	2,6	1,3	0,6
Population Growth Rate - Urban (%)	2017	5,6	3,6	2,6	0,8
Population < 15 years (%)	2017	45,1	41,0	28,3	17,3
Population 15-24 years (%)	2017	20,0	3,5	6,2	16,0
Population >= 65 years (%)	2017	2,4	80,1	54,6	50,5
Dependency Ratio (%)	2017	90,6	100,1	102,8	97,4
Female Population 15-49 years (% of total population)	2017	23,2	24,0	25,8	23,0
Life Expectancy at Birth - Total (years)	2017	59,7	61,2	68,9	79,1
Life Expectancy at Birth - Female (years)	2017	61,0	62,6	70,8	82,1
Crude Birth Rate (per 1,000)	2017	38,6	34,8	21,0	11,6
Crude Death Rate (per 1,000)	2017	8,9	9,3	7,7	8,8
Infant Mortality Rate (per 1,000)	2016	52,7	52,2	35,2	5,8
Child Mortality Rate (per 1,000)	2016	84,6	75,5	47,3	6,8
Total Fertility Rate (per woman)	2017	5,3	4,6	2,6	1,7
Maternal Mortality Rate (per 100,000)	2015	371,0	411,3	230,0	22,0
Women Using Contraception (%)	2017	24,3	35,3	62,1	...
Health & Nutrition Indicators					
Physicians (per 100,000 people)	2012	4,7	46,9	118,1	308,0
Nurses and midwives (per 100,000 people)	2012	63,0	133,4	202,9	857,4
Births attended by Trained Health Personnel (%)	2010	65,9	50,6	67,7	...
Access to Safe Water (% of Population)	2015	82,3	71,6	89,1	99,0
Access to Sanitation (% of Population)	2015	19,7	51,3	57	69
Percent. of Adults (aged 15-49) Living with HIV/AIDS	2016	0,8	39,4	60,8	96,3
Incidence of Tuberculosis (per 100,000)	2016	51,0	3,8	1,2	...
Child Immunization Against Tuberculosis (%)	2016	98,0	245,9	149,0	22,0
Child Immunization Against Measles (%)	2016	88,0	84,1	90,0	...
Underweight Children (% of children under 5 years)	2010	26,2	76,0	82,7	93,9
Prevalence of stunding	2010	35,1	20,8	17,0	0,9
Prevalence of undernourishment (% of pop.)	2015	20,2	2 621	2 335	3 416
Public Expenditure on Health (as % of GDP)	2014	2,6	2,7	3,1	7,3
Education Indicators					
Gross Enrolment Ratio (%)					
Primary School - Total	2016	91,1	106,4	109,4	101,3
Primary School - Female	2016	90,1	102,6	107,6	101,1
Secondary School - Total	2016	35,8	54,6	69,0	100,2
Secondary School - Female	2016	34,9	51,4	67,7	99,9
Primary School Female Teaching Staff (% of Total)	2016	45,8	45,1	58,1	81,6
Adult literacy Rate - Total (%)	2014	34,6	61,8	80,4	99,2
Adult literacy Rate - Male (%)	2014	44,4	70,7	85,9	99,3
Adult literacy Rate - Female (%)	2014	26,2	53,4	75,2	99,0
Percentage of GDP Spent on Education	2015	4,2	5,3	4,3	5,5
Environmental Indicators					
Land Use (Arable Land as % of Total Land Area)	2015	21,9	8,6	11,9	9,4
Agricultural Land (as % of land area)	2015	44,2	43,2	43,4	30,0
Forest (As % of Land Area)	2015	19,6	23,3	28,0	34,5
Per Capita CO2 Emissions (metric tons)	2014	0,2	1,1	3,0	11,6









Sources : AfDB Statistics Department Databases; World Bank: World Development Indicators; UNAIDS; UNSD; WHO, UNICEF, UNDP; Country Reports. *last update : May 2018*

*Note : n.a. : Not Applicable ; ... : Data Not Available. * Labor force participation rate, total (% of total population ages 15+)*

*** Labor force participation rate, female (% of female population ages 15+)*

Appendix II: Table on Bank Portfolio in Burkina Faso (September 2018)

SECTOR	PROJECT NAME	TASK MANAG	CODE SA	Number Loan /Grant	Approval Date	Date Signature	Effectiveness Date	Fulfil. Cond. Disburs.	Date 1st Disburs.	Disburs. Deadline	Amount in UA Loan /Grant	Disburs. Rate %	Total Disburs.
Governance	ECONOMIC TRANSFORMATION SUPPORT - PATEC	EKPO Alain	P-BF-KF0-009	2100155028217	9/17/2014	10/9/2014	10/9/2014	6/9/2015	8/18/2015	4/30/2020	10 000 000	45,54	4 554 000
	ENERGY SECTOR REFORM SUPPORT - PARSE - LOA	EKPO Alain	P-BF-KZ0-001	2100150039794	7/18/2018	8/28/2018				6/30/2020	15 000 000	0,00	0
Transport	INTERNAL ACCESS ROADS - LOAN	YOUGBARE Barnab	P-BF-DB0-017	2100150030394	11/13/2013	1/9/2014	9/17/2014	9/17/2014	7/24/2015	12/31/2019	31218 000	35,02	10 932 544
	INTERNAL ACCESS ROADS - GRANT	YOUGBARE Barnab	P-BF-DB0-017	2100155026370	11/13/2013	1/9/2014	1/9/2014	1/9/2014	2/4/2016	12/31/2019	15 220 000	33,51	5 100 222
Water - Sanitation	OUAGA SUBURB SANITATION - SPAQPO - GRANT	N'ZOMBIE Zounoub	P-BF-EB0-001	2100155025919	10/9/2013	11/29/2013	11/29/2013	12/15/2014	3/23/2015	5/31/2019	33 020 000	73,93	24 411686
	NARE DAM REHABILITATION STUDY-GRANT	N'ZOMBIE Zounoub	P-BF-EAZ-001	5600155004501	4/11/2016	9/9/2016	9/9/2016	11/21/2016	12/20/2016	12/29/2019	699 721	4,55	31837
Energy	SEMI-URBAN ELECTRIFICATION OUAGA-BOBO - LOA	KITANDALA Raymo	P-BF-FA0-007	2100150035993	9/21/2016	10/18/2016	4/24/2017	9/4/2017	12/1/2017	12/31/2020	20 600 000	33,70	6 942 200
	SEMI-URBAN ELECTRIFICATION OUAGA-BOBO - GR	KITANDALA Raymo	P-BF-FA0-007	2100155033166	9/21/2016	10/18/2016	10/18/2016	9/4/2017	11/27/2017	12/31/2020	6 630 000	21,53	1427 439
Agric / Environ	BAGRE GROWTH POLE SUPPORT - LOAN	BABAH M. Aly	P-BF-AA0-021	2100150033093	4/29/2015	5/28/2015	12/1/2015	12/1/2015	9/9/2016	4/30/2021	15 000 000	69,75	10 462 500
	BAGRE GROWTH POLE SUPPORT - GRANT	BABAH M. Aly	P-BF-AA0-021	2100155029766	4/29/2015	5/28/2015	12/1/2015	12/1/2015	2/15/2016	4/30/2021	6 000 000	32,00	1920 000
	CLASSIFIED FORESTS MANAGEMENT PGFC / REDD	GARBA Laouali	P-BF-AAD-00	5565155000651	11/28/2013	1/9/2014	1/9/2014	7/11/2014	10/22/2014	12/31/2019	8 202 275	40,16	3 294 034
	CASHEW NUT SUPPORT COMOE BASIN - LOAN	GARBA Laouali	P-BF-AAD-00	5565130000451	2/16/2017	3/24/2017	8/23/2017	9/18/2017	2/16/2018	12/31/2022	2 852 965	2,79	79 598
	CASHEW NUT SUPPORT COMOE BASIN - GRANT	GARBA Laouali	P-BF-AAD-00	2100155034216	2/16/2017	3/24/2017	3/24/2017	9/18/2017	12/4/2017	12/31/2021	1000 000	26,37	263 700
NATIONAL PUBLIC PORTFOLIO											**165 442 961**	**41,96**	**69 419 759**
Private Sector	SHEA VALUE CHAINS SUPPORT - GRANT	OUEDRAOGO Alfred	P-BF-AAG-00	5700155002552	7/12/2016	9/9/2016	2/27/2017	2/27/2017	2/16/2018	6/30/2019	708 498	28,26	200 222
	AFRICA SME PROGRAMME FIDELIS	DIGUIMBAYE Rosel	P-BF-HB0-00	2000130013930	6/19/2014	7/30/2015	7/30/2015	8/21/2015	9/3/2015	7/30/2017	2 087 473	100,00	2 087 473
	AFRICA SME PROGRAMME FIDELIS	DIGUIMBAYE Rosel	P-BF-HB0-00	5060140000253	10/11/2017	6/29/2018					626 262	0,00	0
	LINE OF CREDIT TO CORIS BANK INTERNATIONAL	DIOP Sidi Gallo	P-BF-HA0-00	2000130016582	11/23/2016	7/14/2017	7/14/2017	8/10/2017	8/23/2017	7/14/2019	31729 597	100,00	31729 597
	LINE OF CREDIT TO CORIS BANK INTERNATIONAL	DIOP Sidi Gallo	P-BF-HA0-00	5060140000201	10/11/2017	5/16/2018					15 864 798	0,00	0
NATIONAL PRIVATE PORTFOLIO											**51 016 628**	**66,68**	**34 017 292**
Regional Agric / Environ.	RESILIENCE STRENGTHENING P2RS - LOAN	BABAH M. Aly	P-Z1-AAZ-019	2100150032046	10/15/2014	1/9/2015	9/1/2015	10/16/2015	3/16/2016	6/30/2020	12 725 000	37,45	4 765 513
	RESILIENCE STRENGTHENING P2RS - GRANT	BABAH M. Aly	P-Z1-AAZ-019	2100155028526	10/15/2014	1/9/2015	1/13/2015	6/8/2015	11/3/2015	6/30/2020	12 725 000	46,61	5 931123
Regional Energy	NIGERIA-NIGER-BENIN-BURKINA INTERCONNECTIO	KITANDALA Raymo	P-Z1-FA0-146	2100150038699	12/15/2017	3/14/2018	7/23/2018			12/31/2022	34 680 000	0,00	0
	NIGERIA-NIGER-BENIN-BURKINA INTERCONNECTIO	KITANDALA Raymo	P-Z1-FA0-146	2100155036219	12/15/2017	3/14/2018	3/14/2018			12/31/2022	15 320 000	0,00	0
Regional Transport	REHABILITATION AND FACILITATION CORRIDOR LO	DIOP Mai'mounatou	P-Z1-DB0-097	2100150027044	6/27/2012	7/19/2012	6/21/2013	8/30/2013	12/2/2014	12/31/2018	21530 000	69,23	14 905 219
	REHABILITATION AND FACILITATION CORRIDOR LO	DIOP Mai'mounatou	P-Z1-DB0-097	2100155023018	6/27/2012	7/19/2012	7/19/2012	8/30/2013	6/24/2014	12/31/2018	84 600 000	67,02	56 698 920
	REHABILITATION AND FACILITATION CORRIDOR LO	DIOP Maimounatou	P-Z1-DB0-097	5580155000051	2/23/2015	5/29/2015	5/29/2015	5/29/2015	12/2/2015	12/31/2018	976 937	37,59	367 231
	RN 4 GOUNGHIN-FADA REINFORCEMENT - LOAN	YOUGBARE Barnab	P-Z1-DB0-182	2000200001856	11/24/2017	12/18/2017	1/23/2018	6/22/2018		12/31/2022	35 086 254	0,00	0
	RN 4 GOUNGHIN-FADA REINFORCEMENT - GRANT	YOUGBARE Barnab	P-Z1-DB0-182	2100155036022	11/24/2017	12/18/2017	12/18/2017	6/22/2018		12/31/2022	25 360 000	0,00	0
	RN 4 GOUNGHIN-FADA REINFORCEMENT - LOAN	YOUGBARE Barnab	P-Z1-DB0-182	2100150038495	11/24/2017	12/18/2017	1/23/2018	6/22/2018		12/31/2022	16 000 000	0,33	52 800
REGIONAL PUBLIC PORTFOLIO											**259 003 191**	**31,94**	**82 720 805**
OVERALL PORTFOLIO											**475 462 780**	**39,15**	**186 157 855**

Appendix III: Key Related Projects in Burkina Faso Financed by the Bank and Other Development Partners over the Past Decade

Project Name	Implementation Period	Source of Financing	Total Project Cost (in XOF billion)
Electricity Subsector Support Project (PASEL)	2014 - 2021	World Bank (IDA) and Government	87.58
Grid Reinforcement and Rural Electrification Project (PRIELER)	2010 - 2016	AfDB, State, SONABEL, FDE, Subscribers	26.05
Bolgatanga (Ghana)-Ouagadougou (Burkina Faso) Electrical Grid Interconnection Project	2013 - 2017	Government, SONABEL, AFD, EIB, IDA	36.10
Project to Promote Jatropha Curcas as a Sustainable Source of Bio-fuel in Burkina Faso	2015 - 2018	Government, GEF, UNDP	4.44
Rural Electrification Project TEAM-9	2012 - 2016	EXIM Bank India	13.54
Decentralised Rural Electrification Project in Ziro and Gourma Provinces (ERD-ZIGO)	2014 - 2018	Government, EU	7.08
Project for Decentralised Rural Electrification through Decentralised Solar Power System (PERD/SPV)	2015 - 2019	Government, IsDB	6.70
Energy Sector Budget Support Programme (ESPS)	2015-2017	AfDB	16.63
Electrification Project for Semi-Urban Areas of Ouagadougou and Bobo-Dioulasso (PEPU)	2016 - 2020	Government, AfDB, SONABEL	31.42
Project for the Extension and Strengthening of Electricity Networks in Burkina Faso (PERREL)	2017-2021	Government, SONABEL, OFID	28.86
Zagtouli Photovoltaic Solar Production Project (33MWp)	2016 - 2017	Government, EU, AFD	31.16
Energy Sector Reform Support Programme	2018-2020	AfDB	11.71
Multinational Power Interconnection Project Nigeria - Niger - Benin - Burkina Faso	2018-2022	AfDB, AFD, World Bank, EBID; EU	170.65
Total			**471.92**

Appendix IV: Map of the Project Area

This map has been included by the staff of the African Development Bank (AfDB) Group exclusively for the use of readers of the report to which it is attached. The names used and the boundaries shown on this map do not imply any judgement by the Bank Group and its members concerning the legal status of a territory or any approval or acceptance of its boundaries.

AFRICAN DEVELOPMENT FUND

BOARD OF DIRECTORS

Resolution N° F/[●]/2018/[●]

Adopted by the Board of Directors on a lapse-of-time basis, on [●] 2018

Grant to Burkina Faso to finance part of the costs of the "Desert to Power" Initiative – Yeleen Rural Electrification Project

THE BOARD OF DIRECTORS,

HAVING REGARD to: (i) Articles 1, 2, 11, 12, 14, 15, 16, 26 and 30 of the Agreement Establishing the African Development Fund (the "Fund" or "ADF"); (ii) the Report on the Fourteenth General Replenishment of the Resources of the Fund ("ADF-14"); (iii) the applicable ADF-14 Country Resource Allocation; and (iv) the appraisal report contained in document ADB/BD/WP/2018/290/Approval - ADF/BD/WP/2018/207/Approval (the "Appraisal Report");

NOTING the availability of sufficient resources to enable the Fund to commit the amount of the grant;

DECIDES as follows:

1. To award to Burkina Faso (the "Recipient"), from the resources of the Fund, a grant of an amount not exceeding the equivalent of Three Million Units of Account (UA 3,000,000) (the "Grant") to finance part of the costs of the "Desert to Power" Initiative - Yeleen Rural Electrification Project;

2. To authorize the President to conclude a protocol of agreement between the Fund and the Recipient (the "Protocol of Agreement") on the terms and conditions specified in the General Conditions Applicable to Protocols of Agreement for Grants of the African Development Fund and the Appraisal Report;

3. The President may cancel the Grant if the Protocol of Agreement is not signed within ninety (90) days from the date of approval of the Grant by this Board; and

4. This Resolution shall become effective on the date above-mentioned.

AFRICAN DEVELOPMENT BANK

BOARD OF DIRECTORS

Resolution N° B/[●]/2018/[●]

Adopted by the Board of Directors on a lapse-of-time basis, on [●] 2018

Loan to Burkina Faso from the Resources Approved by the Green Climate Fund to finance part of the costs of the "Desert to Power" Initiative - Yeleen Rural Electrification Project

THE BOARD OF DIRECTORS,

HAVING REGARD to: (i) Articles 1, 2, 10, 12, 13, 17, 32 and 37 of the Agreement Establishing the African Development Bank (the "Bank"); (ii) the Accreditation Master Agreement between the Bank and the Green Climate Fund ("GCF") dated 8 November 2017 (the "AMA"); and (iii) the appraisal report contained in document ADB/BD/WP/2018/290/Approval - ADF/BD/WP/2018/207/Approval (the "Appraisal Report");

RECALLING:

(i) That GCF was established under the United Nations Framework Convention on Climate Change (the "Convention") as part of the Convention's financial mechanism, to: (a) support the efforts of developing countries to respond to the challenge of climate change; (b) assist developing countries limit or reduce their greenhouse gas (GHG) emissions and adapt to climate change; and (c) promote a paradigm shift to low-emission and climate-resilient development, taking into account the needs of nations that are particularly vulnerable to climate change impacts; and

(ii) That pursuant to the AMA, the Bank was designated as an Accredited Entity of GCF;

HAVING CONSIDERED that on 18 October 2018, the GCF Board approved a funding proposal for a loan of an amount not exceeding Eight Million, Six Hundred Thousand Euros (EUR 8,600,000) from GCF resources to Burkina Faso, to finance part of the costs of the "Desert to Power" Initiative -Yeleen Rural Electrification Project (the "Project");

HEREBY DECIDE as follows:

1. To award to Burkina Faso (the "Borrower"), from the resources approved by GCF, a loan of an amount not exceeding Eight Million, Six Hundred Thousand Euros (EUR 8,600,000) (the "Loan") to finance part of the costs of the Project;

2. That procurement of goods, works and services that are financed by the proceeds of the Loan shall be open to all countries including those that are not member states of the Bank;

3. To authorize the President to conclude a funded activity agreement between the Bank and GCF (the "FAA") and a loan agreement between the Bank and the Borrower (the "Loan Agreement") on the terms and conditions specified in the General Conditions Applicable to the African Development Fund Loan Agreements and Guarantee Agreements (Sovereign Entities), the AMA, the Appraisal Report and, in particular, the terms and conditions specified herein below:

(i) the duration of the Loan shall be forty (40) years including a grace period of ten (10) years (the "Grace Period") commencing on the date of signature of the Loan Agreement. During the Grace period, service charge and commitment charge shall be payable;

(ii) The Loan shall be amortized over a period of thirty (30) years after the expiration of the Grace Period, at the rate of two per cent (2%) per annum from the eleventh (11^{th}) to the twentieth (20^{th}) year inclusive and at the rate of four per cent (4%) per annum thereafter, in equal and consecutive semi-annual instalments payable on 15 March and 15 September of each year (each a "Payment Date"), and the first of such instalments shall be payable on the Payment Date immediately following the expiration of the Grace Period;

(iii) A service charge at the rate of zero point twenty-five per cent (0.25%) per annum on the disbursed and outstanding balance of the Loan shall be payable semi-annually on a Payment Date; and

(iv) A commitment charge at the rate of zero point five per cent (0.5%) per annum on the undisbursed portion of the Loan shall begin to accrue one hundred and twenty (120) days after the date of signature of the Loan Agreement and shall be payable on a Payment Date;

4. The President may cancel the Loan if the FAA and the Loan Agreement are not signed within three hundred and sixty-five (365) days from the date of approval of the Loan by this Board; and

5. This Resolution shall become effective on the date above-mentioned.

AFRICAN DEVELOPMENT BANK

BOARD OF DIRECTORS

Resolution N° B/[●]/2018/[●]

Adopted by the Board of Directors on a lapse-of-time basis, on [●] 2018

Grant to Burkina Faso from the Resources Approved by the Green Climate Fund to finance part of the costs of the "Desert to Power" Initiative - Yeleen Rural Electrification Project

THE BOARD OF DIRECTORS,

HAVING REGARD to: (i) Articles 1, 2, 10, 12, 13, 17, 32 and 37 of the Agreement Establishing the African Development Bank (the "Bank"); (ii) the Accreditation Master Agreement between the Bank and the Green Climate Fund ("GCF") dated 8 November 2017 (the "AMA"); and (iii) the appraisal report contained in document ADB/BD/WP/2018/290/Approval - ADF/BD/WP/2018/207/Approval (the "Appraisal Report");

RECALLING:

(i) That GCF was established under the United Nations Framework Convention on Climate Change (the "Convention") as part of the Convention's financial mechanism, to (a) support the efforts of developing countries to respond to the challenge of climate change; (b) assist developing countries limit or reduce their greenhouse gas (GHG) emissions and adapt to climate change; and (c) promote a paradigm shift to low-emission and climate-resilient development, taking into account the needs of nations that are particularly vulnerable to climate change impacts; and

(ii) That pursuant to the AMA, the Bank was designated as an Accredited Entity of GCF;

HAVING CONSIDERED that on 18 October 2018, the GCF Board approved a funding proposal for a grant of an amount not exceeding Twelve Million, Nine Hundred Thousand Euros (EUR 12,900,000), from GCF resources to Burkina Faso to finance part of the costs of the "Desert to Power" Initiative - Yeleen Rural Electrification Project (the "Project");

HEREBY DECIDES as follows:

1. To award to Burkina Faso (the "Recipient"), from the resources approved by GCF, a grant of an amount not exceeding Twelve Million, Nine Hundred Thousand Euros (EUR 12,900,000) (the "Grant") to finance part of the costs of the Project;

2. That procurement of goods, works and services that are financed by the proceeds of the Grant shall be open to all countries including those that are not member states of the Bank;

3. To authorize the President to conclude a funded activity agreement between the Bank and GCF (the "FAA") and a grant agreement between the Bank and the Recipient (the "Grant Agreement"), on the terms and conditions specified in the General Conditions Applicable to Protocols of Agreement for Grants of the African Development Fund, the AMA and the Appraisal Report;

4. The President may cancel the Grant if the FAA and the Grant Agreement are not signed within three hundred and sixty-five (365) days from the date of approval of the Grant by this Board; and

5. This Resolution shall become effective on the date above-mentioned.