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IDA/R2018-0207/1

June 12, 2018

Closing Date: Friday, June 29, 2018 at 6 p.m.

FROM: Vice President and Corporate Secretary

Cote d'Ivoire - CI-Energies Guarantee Project

Project Appraisal Document

Attached is the Project Appraisal Document regarding a proposed IDA guarantee to Cote d'Ivoire for a CI-Energies Guarantee Project (IDA/R2018-0207), which is being processed on an absence-of-objection basis.

Distribution:
Executive Directors and Alternates
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Vice Presidents, Bank, IFC and MIGA
Directors and Department Heads, Bank, IFC and MIGA

Document of

The World Bank

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Report No: 126751-CI

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED GUARANTEE

IN THE AMOUNT OF EUR 240 MILLION

IN SUPPORT OF THE

REPUBLIC OF CÔTE D'IVOIRE

FOR THE

CI-ENERGIES GUARANTEE PROJECT

June 8, 2018

Energy and Extractives Global Practice
Africa Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective April 30, 2018)

Currency Unit	= EUR
EUR 1.17	= US$1
CFAF 559	= US$1

FISCAL YEAR
July 1 – June 30

ABBREVIATIONS AND ACRONYMS

AfDB	African Development Bank
ANARE	*Autorité Nationale de Régulation du Secteur d'Electricité* (National Regulation Authority of the Electricity Sector)
BOAD	*Banque Ouest Africaine de Développement* (West African Development Bank)
CAPEX	Capital Expenditure
CCGT	Combined Cycle Gas Turbine
CEB	*Communauté Electrique du Bénin* (Electric Community of Benin)
CFAF	West African CFA franc
CIE	*Compagnie Ivoirienne d'Electricité* (Ivorian Electricity Company)
CI-ENERGIES	*Société des Energies de Côte d'Ivoire* (Energy Society of Côte d'Ivoire)
CIPREL	*Compagnie Ivoirienne de production d'électricité* (Ivorian Company of Electricity Generation)
CPF	Country Partnership Framework
DPF	Development Policy Financing
DSCR	Debt Service Coverage Ratio
EBITDA	Earnings before Interest, Tax, Depreciation, and Amortization
EIRR	Economic Internal Rate of Return
ESMS	Environmental and Social Management System
ETAP	Electricity Transmission and Access Project
EU	European Union
FY	Fiscal Year
GDP	Gross Domestic Product
GoCDI	Government of Côte d'Ivoire
GRS	Grievance Redress Service
GTMP	Generation and Transmission Master Plan
GWh	Gigawatt Hour
HFO	Heavy Fuel Oil
IFC	International Finance Corporation
IFI	International Financial Institution
IMF	International Monetary Fund
IOP	Internal Operation Plan
IPF	Investment Project Financing

IPP	Independent Power Producer
KPLC	Kenya Power and Lighting Company
kWh	Kilowatt Hour
MFD	Maximizing Finance for Development
mmcfd	Million Cubic Feet Per Day
MW	Megawatt
MWh	Megawatt Hour
NDC	Nationally Determined Contribution
NDP	National Development Plan
NPV	Net Present Value
OHS	Occupational Health and Safety
PDO	Project Development Objective
PEPT	*Programme d'électricité pour tous* (Electricity for All Program)
PPP	Public-private Partnership
PS	Performance Standard
SOE	State-owned Enterprise
VAT	Value-added Tax
VRA	Volta River Authority
WAEMU	West African Economic and Monetary Union
WAPDA	Water and Power Development Authority
WAPP	West African Power Pool

Regional Vice President: Makhtar Diop
Country Director: Pierre Laporte
Senior Global Practice Director: Riccardo Puliti
Practice Manager: Charles Cormier, Richard B. MacGeorge
Task Team Leaders: Manuel Luengo, Patrice Caporossi

BASIC INFORMATION

Is this a regionally tagged project?	Country (ies)	Lending Instrument
No	Côte d'Ivoire	Investment Project Financing

[ ] Situations of Urgent Need or Assistance/or Capacity Constraints

[ ] Financial Intermediaries

[ ] Series of Projects

Approval Date	Closing Date	Guarantee Expiry Date	Environmental Assessment Category
6/29/2018	09/30/2022	09/30/2030	C

Bank/IFC Collaboration
Yes

Proposed Development Objective(s)

The proposed development objective is to refinance the short-term liabilities of CI-ENERGIES to improve the electricity sectors' financial performance and its ability to attract investments to support the shift towards cleaner energy.

Components

Component Name	Cost (Euro Million)
CI-ENERGIES IDA Guarantee	240

Organizations

Borrower:
Government of Côte d'Ivoire
Adama Coulibaly
Director of Cabinet Ministry of Finance
(225) 48 35 40 40
adcoulibaly@hotmail.com

Implementing Agency:
CI-ENERGIES
Amidou Traoré
Managing Director

22520206201
atore@cienergies.ci

[ ] Counterpart Funding	[ ] IBRD	[ ] IDA Credit [X] IDA Guarantee [ ] Crisis Response Window [ ] Regional Projects Window	[ ] IDA Grant [ ] Crisis Response Window [ ] Regional Projects Window	[ ] Trust Funds	[X] Parallel Financing

Total Project Cost:	Total Financing:	Financing Gap:
EUR 400 million	Of Which Bank Financing (IBRD/IDA): EUR 240 million	

Financing (in EUR Million)

Financing Source	Amount (million)
International Development Association (IDA) covered commercial financing	**EUR 240**
Uncovered Commercial Financing	**EUR 160**
Total	**EUR 400**

INSTITUTIONAL DATA

Practice Area (Lead)

Energy and Extractives

Contributing Practice Areas

Gender Tag

Does the project plan to undertake any of the following?

a. Analysis to identify Project-relevant gaps between males and females, especially in light of country gaps identified through SCD and CPF
No.

b. Specific action(s) to address the gender gaps identified in (a) and/or to improve women or men's empowerment

No

c. Include Indicators in results framework to monitor outcomes from actions identified in (b)

No

SYSTEMATIC OPERATIONS RISK- RATING TOOL (SORT)

Risk Category	Rating
Political and Governance	Substantial
Macroeconomic	Substantial
Sector Strategies and Policies	Substantial
Technical Design of Project or Program	Moderate
Institutional Capacity for Implementation and Sustainability	Substantial
Fiduciary	Moderate
Environment and Social	Low
Stakeholders	Low
Other	
Overall	Substantial

COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

[ ] Yes [X] No

Does the project require any waivers of World Bank policies?

[ ] Yes [ ] No

Have these been approved by World Bank management?
[ ] Yes [ ] No

Is approval for any policy waiver sought from the Board?
[ ] Yes [ ] No

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment OP/BP 4.01		X
Natural Habitats OP/BP 4.04		X
Forests OP/BP 4.36		X
Pest Management OP 4.09		X
Physical Cultural Resources OP/BP 4.11		X
Indigenous Peoples OP/BP 4.10		X
Involuntary Resettlement OP/BP 4.12		X
Safety of Dams OP/BP 4.37		X
Projects on International Waterways OP/BP 7.50		X

Performance Standards (PS)	Applied? (Yes/No/TBD)	Explanation (Optional)
PS 1: Assessment and Management of Environmental and Social Risks and Impacts	**Yes**	This PS is triggered because it is mandatory to assess the CI-ENERGIES' Environmental and Social Management System(ESMS).
PS 2: Labor and Working Conditions	**Yes**	This PS is triggered because the labor and working conditions standard also applies to CI-ENERGIES' own staff.
PS 3: Resource Efficiency and Pollution Prevention	**No**	This PS is not triggered under the proposed guarantee as no civil works or other activities are planned that might induce pollution
PS 4: Community Health, Safety, and Security	**No**	This PS is not triggered under the proposed guarantee as no civil works or other activities are planned that could present risks for health, safety and security
PS 5: Land Acquisition and Involuntary Resettlement	**No**	This PS is not triggered under the proposed guarantee as no civil works or other activities are planned that might require land acquisition or involuntary resettlement
PS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	**No**	This PS is not triggered under the proposed guarantee as no civil works or other activities are planned that might impact biodiversity or living natural resources

PS 7: Indigenous Peoples	**No**	There are no indigenous people in the project area as defined by the PS
PS 8: Cultural Heritage	**No**	This PS is not triggered under the proposed guarantee as no civil works or other activities are planned that would induce excavations with probability to uncover physical cultural resources

Legal Covenants

The Borrower will covenant, among other things, that it will:
(a) comply with applicable laws;
(b) provide annual audited financial statements and other reports;
(c) provide certain notices and other information to IDA;
(d) provide access to the Project Implementation Agency;
(e) not engage in (or authorize or permit any affiliate or any other Person acting on its behalf to engage in) any Sanctionable Practices in connection with the Project;
(f) comply with World Bank requirements relating to Sanctionable Practices regarding individuals or firms included in the World Bank Group list of firms debarred from World Bank Group-financed contracts; and
(g) obtain IDA's consent prior to agreeing to any change to any material Project related transaction document to which it is a party which would affect the rights or obligations of IDA under the Guarantee.
[(h) use the proceeds of the disbursements under the IDA-guaranteed Loan exclusively for the project and in accordance with the terms and conditions of the IDA-guaranteed Loan Agreement.]
[(i) Other specific Covenants to be determined]
[(j) Usual and customary corporate finance financial covenants to be agreed]

Conditions

Usual and customary conditions for financing of this type including but not limited to the following:
a) Provision of relevant legal opinions satisfactory to IDA (including a legal opinion from the appropriate official of Republic of Côte d'Ivoire relating to the Indemnity Agreement and from CI-ENERGIES or counsel thereto on the Project Agreement);
b) Payment [in full] of the Guarantee Fee;
c) Conclusion of an Indemnity Agreement between IDA and Republic of Côte d'Ivoire, a Project Agreement between IDA and CI-ENERGIES, and any other applicable documentation, acceptable to IDA; and
d) Satisfaction of any other conditions precedent under the financing documents.

PROJECT TEAM

World Bank Staff

Name	Role	Specialization	Unit
Manuel Luengo	Team Leader (ADM Responsible)	Senior Energy Specialist	GEE07
Patrice Caporossi	Team Leader (Guarantees)	Senior Infrastructure Finance Specialist	GEEFS
Sunil Mathrani	Team Member	Program Leader	AFCF2
Ali Ouattara	Team Member	Senior Financial Specialist	GEE07

Vincent Launay	Team Member	Infrastructure Finance Specialist	GEEFS
Mariano Salto	Team Member	Energy Economist	GEE01
Lauren Culver	Team Member	Energy Specialist	GEE08
Abdoul Wahabi Seini	Safeguard Specialist	Senior Social Development Specialist	GSU01
Abdoulaye Gadiere	Safeguard Specialist	Senior Environmental Specialist	GEN07
Jean Charles Amon Kra	Financial Management Specialist	Senior Financial Management Specialist	GGO26
Maurice Adoni	Procurement Specialist	Senior Procurement Specialist	GGOPF
Neil Pravin Ashar	Legal	Senior Counsel	LESGSG

REPUBLIC OF CÔTE D'IVOIRE
CI-ENERGIES GUARANTEE PROJECT

TABLE OF CONTENTS

I. STRATEGIC CONTEXT

A. Country Context

1. **Following the resolution of the political crisis in 2011, Côte d'Ivoire has experienced strong economic growth, driven by robust domestic demand and a surge in both private and public investment.** During the first semester of 2017, the strong economic performance has continued with a gross domestic product (GDP) growth estimated at 7.8 percent in 2017 despite the sharp decline in cocoa prices and the uncertainty created by volatile security conditions. While growth was driven largely by domestic consumption and investments, robust industrial growth as well as the rebound of agricultural sector have also contributed. Growth prospects remain strong, with a projected growth rate of 7.4 percent in 2018 (with a real GDP per capita growth of 4.7 percent) and above 7 percent in the medium term. Such growth renders the expansion of the Ivorian economy among the best performing of the Sub-Saharan African region, for which the average forecasted regional growth rate is only 2.4 percent for 2018. Inflation is expected to remain below the 3 percent regional target. Continued improvements in the investment climate, structural reforms in the banking and energy sectors, as well as the Government's commitment to pursue the regional integration agenda will be key to sustain economic performance.

2. **Côte d'Ivoire's current account deficit widened in 2017, reflecting the deterioration of services and income balances.** The trade balance improved and reached 9.8 percent of GDP in 2017 (from 9.2 percent of GDP in 2016) due to increased export volume (+15.7 percent in 2017) and higher cashew and cotton prices. The exceptional increase in cocoa production—up 28 percent in 2016/2017 compared to 2015/2016—was partially offset by the decline in the world cocoa prices (down by about 35 percent over the past 16 months). At the same time, the services and income balance deteriorated, and this led to an increase of the current account deficit which increased from 1.1 percent of GDP in 2016 to 2.2 percent of GDP in 2017. The current account deficit has been financed through a combination of foreign direct investment and public borrowing, including the issuance of Eurobond for a net amount of US$1.2 billion in June 2017. The current account deficit is projected to increase to 3 percent of GDP in 2021, reflecting stronger domestic demand that should lead to higher imports.

3. **The fiscal deficit is expected to decline gradually from 4.2 percent of GDP in 2017 to 3.0 percent of GDP in 2019 because of higher tax revenue collection and lower current expenditures.** The Government has renewed its commitment to comply with the West African Economic and Monetary Union (WAEMU) fiscal deficit target of 3 percent of GDP by 2019 under the International Monetary Fund (IMF) Extended Credit Facility and Extended Fund Facility arrangements. The fiscal consolidation is expected to be achieved by strengthening tax revenue mobilization and reducing current expenditures. On the revenue side, the Government has initiated a series of reforms to strengthen tax administration and streamline tax expenditures. On the expenditure side, the Government plans to significantly reduce current spending by containing the wage bill and subsidies allocated to the energy sector. The Government could face additional fiscal pressures from unexpected financial imbalances in the energy sector, the needed restructuring of the public bank *Caisse Nationale des Caisses d'Epargne* (CNCE), and contingent liabilities related to public-private partnerships (PPPs) and state-owned enterprises (SOEs).

4. **The Government will continue to rely on a combination of concessional and non-concessional funds to finance the fiscal deficit.** The Government successfully tapped the Eurobond market for about US$1.2 billion in June 2017. With this issuance of Eurobonds, the Government mitigated the exchange rate risk and smoothed the debt repayment schedule by buying back some part of the debt expiring in

2024–2025. This successful issuance on the Eurobond market has shown that Côte d'Ivoire is able to borrow at favorable terms with low yields and relatively long maturities. In this context, the Government successfully issued a new Eurobond of EUR 1.7 billion in March 2018, which is expected to cover about 85 percent of the 2018 budget financing. The Government will also continue to rely on regional borrowing. However, the tightening of regional monetary policy might affect the cost of borrowing in the regional market. Overall, the tightening of monetary policy on international and regional markets, is expected to make non-concessional borrowing more expensive for the Government.

5. **Public and private investments are needed to maintain rapid and sustainable economic growth and reduce poverty, as described in the National Development Plan (NDP) for 2016–2020.** The 2016–2020 NDP has ambitious targets both in term of public and private investments. The NDP envisages large investments in physical and human capital, which will require estimated investments of CFAF 29,300 billion (about 125 percent of GDP) over the next four years. The sources of financing are expected to be both the Government (37.6 percent) and the private sector (62.4 percent). Ongoing and additional structural reforms, including as part of the G20 Compact with Africa initiative, are the key to boost private investment and consumption and contribute to faster economic growth.

6. **In this context, the Government continues to promote private sector investment by adopting structural reforms to set the stage for resilient and private sector-led growth.** The Government has implemented reforms aimed at improving the business climate, ensuring financial stability, and greater inclusion, and improving public governance and financial management.

B. Sectoral and Institutional Context

Strategic Context

7. **The financial sustainability of the electricity sector is essential for Côte d'Ivoire to realize its growth prospects.** Although Côte d'Ivoire is relatively rich in primary energy resources, with substantial hydroelectric and natural gas potential, access to modern energy is below the average of countries with similar GDP per capita. The overall electricity access rate is only 33 percent, adversely affecting economic activity and household welfare and its ambition of achieving universal access by 2030. In addition, the Doing Business survey identifies the indicator of getting electricity as one of the most important for a firm to develop its business in Côte d'Ivoire. Increasing access to affordable and reliable electricity and improving service delivery across the country is necessary to achieve the Government's goal of becoming a middle-income country.

8. **The electricity sector in Côte d'Ivoire is poised for significant expansion as it evolves in line with rapid economic growth.** At present, Côte d'Ivoire is one of the main electricity exporters in West Africa, exporting around 1,200 gigawatt hour (GWh) to Ghana, Mali, Burkina Faso, and Benin/Togo in 2017. By 2020, Côte d'Ivoire will have electrical transmission interconnections with Ghana, Burkina Faso, Mali, Liberia, Sierra Leone, and Guinea, and by the early 2020s, the completion of the primary interconnectors will enable Côte d'Ivoire to expand its electricity exports to at least 500 megawatt (MW) to all countries within the West African Power Pool (WAPP).[1] Current generating capacity is sufficient to meet existing national demand and export contracts, but additional investment in generation capacity and improvements to the transmission and distribution network will be necessary in the coming years as Côte

[1] World Bank Group - WAPP Task Force on Securitization of Payments, 2018.

d'Ivoire seeks to meet universal access by 2030 and to continue its role as an export hub for electricity. Côte d'Ivoire has a comprehensive investment plan across the energy sector.

9. **The ability of Côte d'Ivoire's electricity sector to attract much-needed private capital for investments in generation, as well as sufficient concessional funds for transmission and distribution expansion, largely depends on the long-term financial viability of the sector.** Côte d'Ivoire has a track record of private investment in thermal generation since its first Independent Power Producer (IPP) in 1994 and has identified a number of priority projects to promote its shift toward cleaner energy, which includes hydro, renewable energy, and natural gas-based generating capacity. Domestic gas production offshore is sufficient to meet the current demand in the power and industrial sectors, and private sector-led gas development projects are competing to deliver additional gas supply after 2020. The sector is also taking steps to improve its technical and commercial performance by upgrading the transmission and distribution system, while at the same time expanding electricity access in rural areas with donor support. In summary, the sector has the ability to continue to meet energy demand at affordable prices and maintain its position as a net electricity exporter, provided it is able to keep pace with planned investments to shift the energy mix and improve system-wide operating efficiencies.

10. **Under current conditions, *Société des Energies de Côte d'Ivoire* (CI-ENERGIES) (the state-owned asset-holding company responsible for managing public assets in the electricity sector), is able to cover its operating costs and will achieve full-cost recovery by 2022; however, sector growth prospects are threatened by a short-term debt crisis stemming from 2016 to 2017.** CI-ENERGIES is able to cover its operating costs through revenues it generates from the sale of electricity and implicit subsidies[2] to the sector. In the short term, no tariff adjustment is required for CI-ENERGIES to be able to honor its payment obligations to power producers and gas suppliers. However, during 2016 and 2017, the level of payment arrears grew rapidly following a short-lived tariff increase in 2016 that was reversed due to public protests. The situation was aggravated by (a) payment arrears from the public sector during that period; (b) recurring non-payments for electricity exports to neighboring countries; and (c) a currency depreciation that resulted in higher gas costs. To deal with the crisis, CI-ENERGIES (through the operator CIE) had to resort to short-term borrowing at non-favorable terms to finance operating expenditures. As the Government gradually resumed more timely payments to CI-ENERGIES for its electricity consumption, the situation has stabilized. The company no longer needs to raise debt to pay for its operating expenses. However, the financial viability of the sector is still under threat, as short-term liabilities currently stand at around EUR 400 million as of March 31, 2018. Prolonged arrears to private power and gas suppliers threaten much needed new investment in additional gas and power production facilities.

11. **When assessed with a conservative set of assumptions, the long-term financial sustainability of the sector faces challenges that require key commitments from the GoCDI.** Electricity demand in Côte d'Ivoire is assumed to grow at an 8.4 percent compound annual rate from 2017 to 2022, which is consistent with the GDP growth estimates prepared by the IMF and the historical elasticity of demand versus GDP growth. By 2022, the sector can reach full-cost recovery[3] provided (a) CI-ENERGIES optimizes gas supply to keep pace with growth in demand and avoids recurring to expensive liquid fuels; (b) a shift

[2] According to the Gas Supply Agreements with private domestic producers, the State has a certain share that it receives in kind and sells to the electricity sector at market price. According to Decree No. 2012-112, the Government retains CFAF 50 billion of the revenues from the sales of the gas and any revenue above this threshold is returned to the sector (CI-ENERGIES). The electricity sector share of the gas sector revenues represents an implicit subsidy.

[3] Recover operational costs and finance debt service for CAPEX.

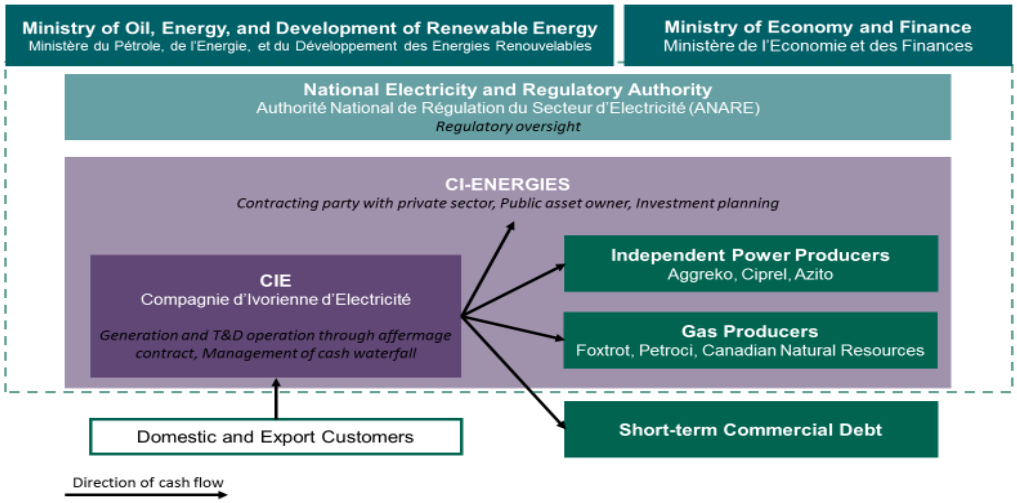
toward a clean energy and more efficient energy generation mix is maintained; (c) overall collection rates are maintained at 92 percent or above (including from private and public consumption as well as exporters); and (d) technical and commercial losses are reduced from 21 percent to 14 percent by 2022. Furthermore, the GoCDI is committed to maintain (and increase if needed) electricity tariffs from 2021 onward and to maintain the transfer of part of the State's share of gas revenues to the power sector, according to Decree No. 2012-112.

12. **Coupled with budgetary support for Government actions to reduce public sector non-payment of electricity consumption, Côte d'Ivoire expects to be able to maintain a favorable climate for private investment and continue implementing its plan for further expansion of the energy sector.** The World Bank is supporting the sector through (a) support to key policy actions and sector reforms through an ongoing Development Policy Financing (DPF) Series (see Box 1) that addresses the financial sustainability of the sector. The third operation in the series, which is expected to be submitted to the Board for its consideration in Q2 of FY19, will solidify mechanisms to stop the flow of new arrears from both private and public consumers; and (b) concessional financing of transmission and distribution lines through the Electricity Transmission and Access Project (ETAP) (P153743), alongside other donors. Maintaining a favorable climate for new private sector investments will unlock efficiency gains associated with future investments to replace costly, inefficient turbines and expand low-cost, renewable energy. Additions to generating capacity, coupled with improved efficiency and reliability of the grid and expanded access to electricity, through the ETAP (P157055, approved in 2017), will consolidate the financial sustainability of the sector.

Electricity Sector Overview

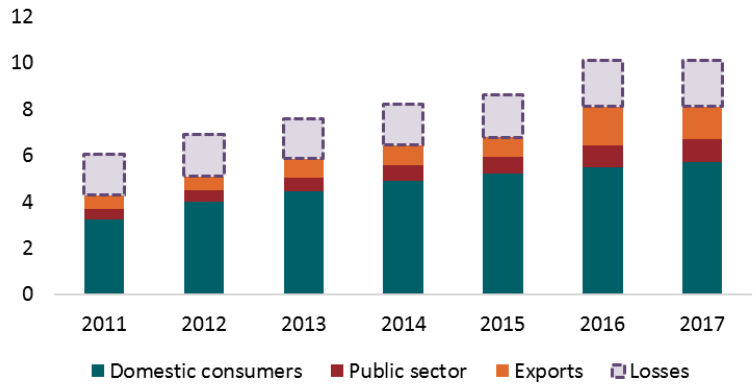
13. **The key electricity sector institutions and operators in Côte d'Ivoire include both public and private sector players.** The key institutions are shown in Figure 1. CI-ENERGIES is a state-owned asset-holding company responsible for managing public assets in the electricity sector as well as planning and contracting investments. The *Compagnie Ivoirienne d'Electricité* (Ivorian Electricity Company, CIE) is a private company that operates and maintains, on behalf of CI-ENERGIES, a vertically integrated business combining the national transmission and distribution networks and hydro generation plants under a 15-year renewable '*affermage*' (concession, without investment obligations) contract. The CIE's *affermage* contract is set to expire in 2020, and the Government has begun an analysis of post-2020 options to improve the performance of the sector. IPPs such as *Compagnie Ivorienne de production d'électricité* (Ivorian Company of Electricity Generation, CIPREL), Azito, and Aggreko dominate thermal power generation and rely on indigenous natural gas production from private producers, such as Foxtrot or Canadian Natural Resources (CNR). The *Autorité Nationale de Regulation du Secteur d'Electricité* (National Regulation Authority of the Electricity Sector, ANARE) is the regulatory agency which has purely advisory functions. The Ministry of Oil, Energy, and Development of Renewable Energy sets policy and plays an overarching surveillance role of the sector. CI-ENERGIES is the contracting party with the gas suppliers and IPPs.

Figure 1. Institutional Structure



14. **Côte d'Ivoire's existing electrical system is the third largest in West Africa and is positioned to be one of the main hubs of electricity trading within the WAPP.** Côte d'Ivoire has installed generation capacity of 2,199 MW. Three IPPs provide gas-fired generation capacity which account for 60 percent of Côte d'Ivoire's power capacity and 80 percent of generation. The remaining 40 percent of capacity is hydropower. As described in Figure 2, in 2017, domestic electricity sales totaled 6,600 GWh. In 2017, Côte d'Ivoire also supplied 1,190 GWh to *Énergie du Mali* (Mali Energy Company) in Mali, VRA in Ghana, *Communauté Electrique du Bénin* (Electric Community of Benin, CEB) for Benin-Togo, the *Société Nationale d'Électricité* (National Society of Electricity) in Burkina Faso, and the Liberia Electricity Corporation. At present, Côte d'Ivoire is one of the major regional electricity exporters within the WAPP.

Figure 2. Electricity Consumption (TWh), 2011–2017[4]



15. **The payments to power sector stakeholders out of sector revenues are governed by a cash flow waterfall system set up 20 years ago.** This cash flow waterfall was established to secure payments to private producers and enable private sector investments. Execution of sector expenditures is made in the order of alphabetical priority by category (Category A having the highest priority level and Category F

[4] Source: CI-ENERGIES

having the lowest priority level). This cash waterfall system, in place since 1998, amended in 2010, and managed by the CIE, has been a key strength for the sector and has shielded private operators even during political turmoil. All financial resources are assigned to cover electricity sector expenditures that are grouped into categories according to Table 1.

Table 1. Cash Flow Waterfall Categories

Category	Description
A	Remuneration of CIE, in its capacity as concessionaire, for the services it provides; the CIE's annual remuneration is based on amounts of energy kilowatt hour (kWh) sold and collected in the year*
B	Purchasing fuel and electricity
C	Operating expenses of the entities in charge of management and control of the electricity sector (CI-ENERGIES and ANARE)
D	Electricity Sector Investment Funds, excluding debt service
E	Debt service
F	Supply or reconstitution of the Electricity Sector Stabilization Fund

Note: *The annual remuneration scheme of the CIE is as follows: CFAF 22.6 per kWh up to 4,000 GWh; CFAF 11 per kWh from 4,001 GWh to 5,400 GWh; CFAF 3 per kWh above 5,401 GWh; and CFAF 2 per kWh for exported energy.

Electricity Sector Development Plan

16. **Côte d'Ivoire is mobilizing funding for a long-term plan for the electricity sector that includes improving transmission and distribution, expanding electricity access and generation capacity, and increasing domestic gas production.** CI-ENERGIES completed a Generation and Transmission Master Plan (GTMP), a Distribution Master Plan, a Rural Electrification Master Plan, and a Grid Automation Master Plan in 2015. The Strategic Plan for the Development of the Electricity Sector by 2030 includes 66 projects in generation, transmission, distribution, and electrification. The main selection criteria for investments defined in the master plans includes developing capacities to meet the growing domestic and regional demand, including demand from increased rural access to electricity, the mining sector, and industrial growth, and to ensure security of supply.

17. **As part of its Nationally Determined Contribution (NDC) toward climate change mitigation, Côte d'Ivoire set a target to generate 42 percent of electricity from renewable energy (hydro and others) by 2030.** Côte d'Ivoire has unconditionally agreed to reduce its emissions by 28 percent compared to business as usual by 2030 under the Paris Agreement of 2015. Currently, the energy mix is 80 percent gas-based electricity generation, and the other 20 percent is based on hydro. A key element of the Government's NDC was a new target to generate 42 percent of electricity from renewable energy by 2030, and with current plans, they can already achieve around 30 percent by 2025, the rest being generated by gas-fired electricity plants. The electricity sector is expected to be the highest contributor to emissions reduction over the period to 2030 (reduction of 7.8 percent). In line with the NDC, the GTMP targets to increase solar and biomass capacity to 20 percent by 2030.

18. **The investments planned in the Distribution and Transmission Master Plans are designed to reduce system losses and increase reliability.** Transmission losses on the high voltage grid are estimated at 6 percent, while distribution technical and non-technical losses are in the range of 16 percent. The Distribution and Transmission Master Plans estimate that investments of about US$2 billion are required over the next decade in transmission and US$680 million in urban distribution. The country is mobilizing financial resources to invest in transmission lines and substation expansion from various development

finance institutions, including the African Development Bank (AfDB), the *Agence Française de Développement*, the European Union (EU), the *Banque Ouest Africaine de Développement* (West African Development Bank, BOAD), and the World Bank. Assistance from China of about US$820 million has also been secured for the construction of new transmission lines and rural electrification (Table 2 shows donor contributions to the financing of the sector). Despite this major mobilization of resources, the financing is still not enough to cover all identified needs, as further investments would depend on the long-term financial viability of the sector.

Table 2. Donor Contributions to the Power Sector Investments

Item	Required Investment (MUSD)	Commitments approved (MUSD)	Donor Financiers
Transmission Master Plan (2016–2030)	2,000	1,081	BOAD, AfDB, World Bank, China
Distribution Master Plan (2016–2030)	680	177	AfDB, World Bank, EU
Rural Electrification Master Plan (2016–2020)	675	219	World Bank, EU, China
PEPT Program (2016–2020)	270	21	EU, AFD, World Bank
TOTAL	**3,625**	**1,498**	

Note: PEPT = *Programme d'Électricité Pour Tous* (Electricity for All Program).

19. **The Government has made strong commitments to fund projects to increase the electricity access rate beyond the current 33 percent.**[5] The National Program for Rural Electrification, launched in 2014, aims to electrify all localities with over 500 inhabitants in the coming years and maintain an annual rate of electrification of 500 new localities until 2020. This program is expected to require capital investments of US$675 million over a five-year period. To accelerate access to electricity for the population, in May 2014, the GoCDI adopted the PEPT. The PEPT has a target of 200,000 new grid connections per year, both rural and urban, through a dedicated funding vehicle—the Fund for PEPT—which would help eliminate the current barrier to access that the present high upfront connection charge of CFAF 150,000 (US$250)[6] represents for the poor. This initiative is expected to bring access to electricity to around 1 million low-income households over five years. A component of the recently approved IDA ETAP (P157055) supports the Government's electrification program.

20. **The Government is planning additional investments in generating capacity throughout the coming decade to meet growing domestic and export demand.** The additional thermal, gas-based, generating capacity will be overwhelmingly privately financed, in the form of IPPs, while additional hydropower capacity will mostly be publicly funded. From 2014 to 2016, domestic demand grew at 8 percent annually. In the coming years, Côte d'Ivoire expects continued demand growth for electricity domestically as well as from its neighbors, Burkina Faso, Mali, Liberia, Sierra Leone, and Guinea, as cross-border transmission capacity is expanded. New investments in generating capacity totaling 2,700 MW are anticipated in the next decade. Combined-cycle plants Azito IV (240 MW) and CIPREL V (390 MW) are expected in the early 2020s and will displace existing, inefficient turbines (Vridi, Aggreko). Several hydro

[5] ANARE Annual Reports, 2012–2016.
[6] The connection charge currently covers the costs of connecting the client from the distribution network and installing the meter.

projects, including Gribo Popoli (112 MW), are being developed for a capacity of 775 MW along with a few biomass and solar projects totaling 400 MW in the coming decade.

21. **Sector investments in additional natural gas supply are critical to the security of electricity supply in the coming years**. Côte d'Ivoire's existing domestic gas production of 230 million cubic feet per day (mmcfd) (the bulk of which comes from the Foxtrot field) is sufficient to meet demand until 2020. As the Azito IV and CIPREL V combined-cycle plants become operational, additional gas supply will be needed. A new producer (Vitol) could add an additional 60 mmcfd to meet the new demand in the early 2020s, enough to provide gas to the new gas-fired plants of Azito IV and CIPREL V. Even with this source of supply, Côte d'Ivoire will need additional gas between 2022 and 2027, depending on the evolution of demand growth, the variability in hydro availability, and the expansion of generating capacity. For this additional gas, there are currently two gas supply projects under development: (a) Foxtrot, an existing producer is considering additional investment that could add up to 55 mmcfd to meet the new demand and offset the natural decline rate in its fields; and (b) an imported liquefied natural gas delivery project to Abidjan is under preparation by an international consortium.

22. **Bringing the Government's plans for the sector to fruition is essential to reduce the cost of electricity service and underpin the future financial sustainability of the sector.** The transmission and distribution projects planned will reduce system losses, and the electrification program will reduce non-technical losses by regularizing unrecorded clients in urban areas. Improving system efficiency will lower operating costs in the medium term. New hydro capacity and more efficient thermal power plants will reduce the cost of production of electricity and reduce the need for tariff increases.

Short-Term Debt Threatens Growth

23. **While the Government is taking ambitious steps in line with its plan to develop the electricity sector, its financial viability is imperiled by short-term debt.** The financial sustainability of the electricity sector is threatened by a short-term debt overhang of about CFAF 268 billion (EUR 400 million) as of March 31, 2018, divided between arrears to IPPs/gas suppliers and short-term bank borrowing. Confidence in the long-standing cash waterfall is being undermined by this liquidity crisis as the related financial charges are being prioritized over payments to IPPs and gas suppliers. The sales growth of CI-ENERGIES from 2013 to 2017 was accompanied by a large buildup of payment arrears and short-term debt as the company was not able to collect revenues on time. While CI-ENERGIES' revenues and cost of generation both grew by 52 percent and 53 percent, respectively, over the period, its receivables grew at an even faster pace. Receivables over the period increased by more than CFAF 250 billion. As a result, CI-ENERGIES' payables and short-term debt increased to allow the company to offset its increase in receivables. While the Earnings before Interest, Tax, Depreciation, and Amortization (EBITDA) margin had been heavily negative from 2013 to 2015, the situation improved in 2016 and 2017 when the EBITDA margin was close to zero, meaning that the company was at least able to cover its operating costs.

24. **The rapid buildup in short-term debt is due to multiple factors**, including (a) currency depreciation against the U.S. dollar resulting in higher gas costs in local currency; (b) reduced revenues caused by the rollback in retail electricity tariffs of 2016; and (b) increased payment arrears by the public sector and neighboring countries. In June 2017, the cash flow situation of the electricity sector was critical. Accounts receivables from the GoCDI, state companies, and the public lighting of the city of Abidjan totaled CFAF 115 billion (US$200 million). At that time, accounts receivable from Ghana's VRA and Togo/Benin's CEB amounted to CFAF 48 billion (US$85 million). Accounts payable to IPPs and gas

producers were CFAF 140 billion (US$250 million), averaging five–six months of billing. To cover part of the sector's payment obligations to suppliers, CIE, on behalf of CI-ENERGIES, took on expensive short-term debt from commercial banks totaling CFAF 125 billion (US$220 million). In November 2017, this situation deteriorated further, as shown in Table 3. Arrears to IPPs and gas producers reached CFAF 180 billion (US$330 million), bringing the total short-term debt to CFAF 305 billion (US$550 million). In December 2017, following payments by export clients (essentially Ghana's VRA), by SOEs and Government bodies, which the DPF[7] supports through its prior actions, the sector's cash flow balance improved. Arrears to IPPs and gas producers were reduced to a level similar to June 2017 and have remained stable in recent months. However, although the GoCDI has taken appropriate actions to limit the buildup of arrears, the sector's financial equilibrium will remain sensitive to operational performance improvements and external shocks, such as the Euro/U.S. dollar parity or the payment for export sales by importing countries.

Table 3. CI-ENERGIES Short-Term Liabilities

	Arrears to Suppliers (US$, millions)	Commercial Short-Term Debt (US$, millions)	Total Short-Term Debt (US$, millions)
June 2017	250	220	470
November 2017	330	220	550
December 2017	270	220	490

25. **The current situation does not result from a profitability issue at the CI-ENERGIES level.** While the appreciation of the U.S. dollar between 2014 and 2016 temporarily deteriorated CI-ENERGIES' financial ratios, the U.S. dollar has depreciated and stabilized since then and under current conditions the company is able to cover its operating costs. However, the legacy short-term debt that accumulated at the level of CI-ENERGIES may hinder its ability to undertake the investments that are necessary to further improve the efficiency of the sector and to achieve long-term financial sustainability.

26. **The sector's current liquidity challenges undermine the sector's credibility to deliver its medium- and long-term promises and could jeopardize what is otherwise a conducive framework for sector investment.** The lack of liquidity in the cash waterfall increases tension among IPPs and gas suppliers. IPPs and gas suppliers have indicated that clearing sector arrears is a precondition to moving forward with new investments. The arrears are deterring private investors from funding needed investments in generation and gas delivery and are weighing on the Government budget. If this debt overhang is not cleared in on time, Côte d'Ivoire's position as one of the anchor electricity suppliers to the sub region will be jeopardized and risks of power shortages will increase substantially. Furthermore, the ability of Côte d'Ivoire to achieve its NDC commitments according to 21st Conference of Parties (known as COP21), through increasing the share of electricity generated by renewable sources will be in peril.

Reversing the Short-Term Crisis

27. **The refinancing of short-term debt and the repayment of arrears coupled with an improvement in operating margins should reduce stress on the financial situation of the sector.** CI-ENERGIES' operating margin is expected to increase from zero on average over the past five years up to 10 percent over the next five years. This increase is made possible by (a) the reduction in electricity production costs through a shift in the energy mix towards cleaner and more efficient generation; (b) an increase in demand

[7] Second DPF on fiscal management, education, energy, and cocoa reforms (P163284).

for electricity of 8 percent per year over the next five years, consistent with the GDP growth forecasts; (c) an increase in billing collection; and (d) a reduction in electricity losses. However, even after accounting for private sector investments in the power generation and gas production, CI-ENERGIES will still have to rely on debt or government grants/subsidies to finance its ambitious investment program because its internal cash flow generation will not be sufficient to cover capital expenditures (CAPEX). That said, CI-ENERGIES is expected to be able to finance the debt service for CAPEX once it has achieved full-cost recovery, expected in 2022.

28. **As a result of the proposed refinancing, to be supported by an IDA guarantee, CI-ENERGIES can expect to generate an additional CFAF 50 billion in EBITDA margin per year between 2020 and 2023 compared to a 'Business as Usual' scenario in which new investments would not be undertaken by the private sector."** Table 4 illustrates the impact of the refinancing on two of CI-ENERGIES key indicators—its EBITDA and the coverage ratio of Category B costs, which comprise payments to power producers and gas suppliers. It also illustrates the impact on the installed capacity and the electricity production costs. The 'Refinancing Scenario' assumes that as a result of the debt refinancing, investments in the energy sector continue and are not delayed by the arrears situation, including critically the two efficient combined-cycle plants that are expected in the early 2020s that will displace existing, inefficient turbines. These investments will contribute to lowering the cost of power in the sector and to improved margins at the CI-ENERGIES level. The 'Business as Usual' scenario considers that inefficient Heavy Fuel Oil (HFO) production has to be put in place in the near future to cover the demand as a result of the delay of investments. More details on the 'Business as Usual' scenario can be found in Annex 5.

Table 4. Key Indicators of Refinancing on CI-ENERGIES' sustainability

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
EBITDA - Refinancing Scenario (RS), CFAF Billion	37	74	61	75	109	131	122	117	155	176	182
EBITDA - Business As Usual (BAU), CFAF Billion	37	74	47	15	51	80	112	91	88	176	182
Impact of Refinancing (CFAF Billion)	**—**	**—**	**+14**	**+59**	**+58**	**+52**	**+10**	**+27**	**+67**	**+0**	**+0**
Coverage Ratio of Category B costs* - RS	1.14x	1.01x	0.97x	1.05x	1.10x	1.12x	1.08x	1.06x	1.10x	1.11x	1.11x
Coverage Ratio of Category B costs* - BAU	1.14x	1.01x	0.94x	0.95x	1.00x	1.03x	1.07x	1.03x	1.01x	1.11x	1.11x
Impact of Refinancing	**—**	**—**	**+0.02x**	**+0.10x**	**+0.10x**	**+0.09x**	**+0.01x**	**+0.04x**	**+0.09x**	**(0.00)x**	**+0.00x**
(*) Ratio of cash available after payment to the concessionnaire CIE over Category B costs, which include payments to power and gas suppliers											
Installed Capacity (MW) - RS	2,214	2,229	2,390	2,861	2,786	3,105	3,324	3,627	3,923	4,151	4,546
Installed Capacity (MW) - BAU	2,214	2,229	2,679	2,840	3,236	3,309	3,774	3,954	4,373	4,152	4,547
Impact of Refinancing (MW)	**—**	**—**	**(289)**	**+21**	**(450)**	**(204)**	**(450)**	**(327)**	**(450)**	**(1)**	**(1)**
Production costs - RS (CFAF Billion)	217	218	224	254	282	307	335	396	434	463	510
Production costs - BAU (CFAF Billion)	217	218	286	276	328	367	382	466	488	463	510
Impact of Refinancing (CFAF Billion)	**—**	**—**	**(63)**	**(21)**	**(46)**	**(60)**	**(47)**	**(70)**	**(54)**	**(0)**	**(0)**

29. **The financial sustainability of the sector relies on revenue increases and follow through by the GoCDI on its sector commitments.** While no tariff increase is expected until the end of 2020, moderate tariff increases might be required from 2021 onward to ensure that the sector can cover its operating costs. A clear commitment from the GoCDI on the level of revenues CI-ENERGIES can expect to receive from transfers of the revenues from the State's share of local gas production to the sector[8] will also be key to ensure that sufficient revenues will be available to meet payment obligations. It has been assumed,

[8] As explained earlier, according to the Gas Supply Agreements with private domestic producers, the State has a certain share that it receives in kind and sells to the electricity sector. According to Decree No. 2012-112, the Government retains CFAF 50 billion of the revenues from this sale and the rest is returned to the sector.

in line with existing Decree No. 2012-112, that any amount above CFAF 50 billion per year collected by the GoCDI from its share of revenues from indigenous gas fields will be used to contribute to the electricity sector's cash waterfall mechanism. This implicit subsidy by the GoCDI to CI-ENERGIES is required to help the company finance its CAPEX, because the current level of electricity tariffs only allows the company to cover its operating expenditures.

30. **The GoCDI has taken actions to clear and prevent payment arrears by the public sector to improve the sector's cash flow balance.** Collection rates for private consumption have returned to historical levels of 98 percent following the 2016 tariff crisis. The clearance of arrears from the public sector is supported by the World Bank through the DPF series.[9] In December 2017, the GoCDI paid part of its arrears for electricity consumption by the public sector in cash (CFAF 6 billion/US$10 million) and paid the arrears of the city of Abidjan and part of state enterprises companies in the form of promissory notes (CFAF 42 billion/US$80 million). Public sector payments will be centralized within the Ministry of Finance to ensure adequate and on time payment of future electricity bills.

31. **The Government is making further commitments under the third operation in the DPF series to prevent future buildups of arrears.** The Government will (a) pay in full the unpaid electricity bills accumulated by the central administration as of December 2017, and thereafter pay on time all current electricity bills of the central administration; (b) will pay in full through securitization, the unpaid electricity bills accumulated by the District of Abidjan covering the period until December 2017 and pay on time all its electricity bills related to public lighting through an additional cash transfer beyond the prorated value of the gas that belongs to the Government; and (c) continue to implement the repayment plans agreed with the SOEs to reduce their level of arrears.

32. **The Government commitments under the DPF series and IMF program have already resulted in the clearance of most public arrears[10] and will prevent the accumulation of new arrears.** The prior actions set in the DPF series have the objective to eliminate in full all public arrears and set up a payment mechanism that avoids the accumulation of further arrears from public entities. These actions coupled with the recovery of billing collection from private customers to the historical levels of 98 percent and the elimination of all export arrears in 2018, lead to no further accumulation of arrears from 2018 onward. From 2016 to 2018, the GoCDI did not provide any direct subsidy to the power sector. However, CI-ENEERGIES's share of gas production revenues, which is expected to be about CFAF 139 billion from 2018 to 2020, will be available to the sector to ensure financial equilibrium.

33. **Restructuring existing costly short-term debt into lower-interest long-term debt is critical to strengthen the viability of the sector and allow sector development to continue.** Refinancing short-term debt with longer-term commercial financing is essential to make the debt service sustainable. The extension of the average life of CI-ENERGIES debt would mitigate the rollover risk the company faces constantly, that is, the risk that short-term commercial debt may not be available when needed or that the cost of financing increases over time. Reducing the debt burden will allow the planned structural improvements to the sector to progress and will restore confidence in the sector to maintain the inflow of private investments. As a result of the proposed refinancing, to be supported by an IDA guarantee, CI-ENERGIES can expect to generate an additional CFAF 50 billion in EBITDA margin per year between 2020

[9] Three-year (FY17, FY18, FY19) DPF series on fiscal management, education, energy, and cocoa reforms.
[10] The outstanding arrears of CFAF 15 billion for the 2017 consumption of the City of Abidjan is expected to be cleared by the Board date.

and 2023 compared to a 'Business as Usual' scenario in which new investments would not be undertaken by the private sector. These new investments are expected to reduce production costs and increase the supply available to meet the fast-growing electricity demand. It will also help CI-ENERGIES build a track record as a creditworthy borrower that will be valuable in the future, given that additional investment is needed in the coming years that could reasonably be financed under commercial terms at the sub-sovereign level. The sector has little prospect of reducing its short-term debt without external support either from the GoCDI or international financial institutions (IFIs). Commercial lenders are clearly interested in participating in a debt refinancing operation to extend maturities with the partial backstop of a World Bank Guarantee.

Box 1. Development Policy Financing (DPF) Series (FY17–FY19) on Fiscal Management, Education, Energy, and Cocoa Reforms

Electricity Pillar

Objective: The program of policy actions supported by the electricity pillar aims to improve the financial and operational performance of the electricity sector. This will be achieved through a two-pronged approach: (i) the program includes policy actions to improve the financial and operational performance of CI-ENERGIES by adopting a methodology to arrive at cost-reflective tariffs, eliminating public arrears and setting up sustainable mechanisms for payment of public sector electricity consumption, and defining a framework for continuous improvement through a performance contract between the Government of Côte d'Ivoire (GoCDI) and CI-ENERGIES; (ii) the program includes a set of policy actions to promote the private sector participation in generation, thus enabling a lower cost of electricity production.

Progress so far: The DPF series supports the Government in its effort to improve the financial and operational performance of the electricity sector. As part of this effort, the Government has adopted a comprehensive plan to address the challenge of the debt overhang with the objective to eliminate all arrears in the electricity sector. This plan is based on the combination of an effort to recover unpaid electricity bills from domestic customers and neighboring countries, the rescheduling of the short-term debt with domestic commercial banks, and a small but strategic increase in the electricity tariffs of large customers. The Government has cleared most of the public-sector related arrears. Part of the export-related arrears have been reduced as Volta River Authority (VRA) (Ghana) has paid in full the arrears (US$33 million). As a prior action for DPF2 (P163284) (Board date December 5, 2017), the GoCDI paid in cash part of their arrears to CI-ENERGIES as of December 2016 (CFAF 6 billion) and paid in promissory notes the arrears of the City of Abidjan as of December 2016 and part of the state-owned companies (CFAF 42 billion). As of 2018, all arrears arising from public electricity consumption will be cleared, and cost recovery from private consumers will have reached 98 percent. As a result, the GoCDI is not expected to provide any direct subsidies to the sector in 2018.

Results indicators for the energy sector:

1. Reduced commercial and technical losses of on an annual basis - *Baseline (2015): 22 percent; Progress (2017): 20.9 percent; Target (2019): less than 20 percent.*
2. Improvement in the collection rate of electricity bills paid by domestic customers - *Baseline (2016): 85 percent; Progress (2017): 98 percent; Target (2019): 95 percent.*
3. Reduction of all arrears accumulated by the public sector on its electricity bills - *Baseline (2016): FCFA 80 billion; Progress (2017): CFAF 32 billion; Target (2019): CFAF 20 billion.*
4. Legal framework to promote private sector participation and the use of renewable sources of energy in place - *Baseline (2015): No; Progress (2017): Yes; Target (2019): Yes.*

C. Higher Level Objectives to which the Project Contributes

34. **The proposed project is aligned with the most recent Country Partnership Framework (CPF) 2016–2019[11] updated with the Performance and Learning Review (2018–2021)[12],** in particular with the objective of strengthening economic infrastructure to accelerate private sector-led economic growth. It would help strengthen CI-ENERGIES' financial situation and enable to develop its long-term investment plan, which in its turn will help currently underserved regions of the country attain acceptable levels of basic services, which depend upon a supply of electricity.

35. **The proposed project is also aligned to the World Bank's Energy Strategy**[13], which is designed to help client countries secure affordable, reliable, and sustainable energy supply needed to meet the World Bank Group's twin goals of poverty reduction and shared prosperity.

36. **By strategically using IDA resources to leverage commercial financing, the proposed project supports the implementation of Maximizing Finance for Development (MFD) approach.** The goal of this approach is to maximize development finance for value-adding investments, promote judicious use of scarce public and concessional resources, crowd-in commercial capital, and minimize the public debt burden. The objective of this approach is to mobilize commercial finance, enabled by upstream reforms where necessary to address market failures and other constraints to private sector investment at the country and sector level, including the provision of guarantees and risk-sharing instruments to mitigate sectoral risks. Private investors and IFIs are currently considering financing extensions of the main gas-fired IPPs, which currently generate most of the thermal electricity in Côte d'Ivoire. Gas suppliers' additional investments may need to be supported by International Finance Corporation (IFC). IDA support through the proposed operation will enable these capital-intensive private investments to materialize, by improving the enabling environment and crowding in a significant amount of commercial financing with a limited level of World Bank guarantees

37. **This operation is part of a package of World Bank Group support that is expected to restore the financial viability of the sector and keep the Government's plans for public and private investment in the sector on track to meet the growing demand.** The proposed World Bank Guarantee would enable CI-ENERGIES to refinance the existing short-term debt on favorable terms, which will reduce the immediate debt service burden and enable clearance of payment arrears to private fuel and power suppliers. It will thus restore investor confidence for future financing of new projects, including IPPs—such as the expansion of the Azito IPP or the development of additional private gas reserves. It will also permit CI-ENERGIES to access international capital markets for the first time, obtain attractive conditions on the local market, and overall establish its credentials as a creditworthy borrower. The use of an IDA Partial Credit Guarantee will have a large leveraging effect and permit the sector to access additional resources without recourse to a sovereign guarantee.

38. **This operation will run concurrently with the final operation in a series of three programmatic DPF operations.**[14] The policy program supported by the DPF aims at (a) enhancing tax revenue collection and public procurement; (b) strengthening the efficiency and equity in the education sector; (c) improving

[11] Report no. 96515-CI. August 17, 2015.
[12] Report no. 122566-CI. April 24, 2018.
[13] Report no. 79597. July 9, 2013
[14] Third Fiscal Management, Education, Energy, and Cocoa Reforms DPF (P166388).

the performance of the electricity sector by enabling private participation and diversification; and (d) consolidating transparency in the management of the cocoa sector. The proposed DPF series is closely aligned with the 2016–2020 NPD and is an integral element of the World Bank CPF.

39. Overall, this coordinated World Bank Group-approach, which includes budget support with targeted sectoral actions and support for public and private investments, is expected to be instrumental in enabling sustainable growth of the electricity sector.

II. PROJECT DEVELOPMENT OBJECTIVES

A. PDO

40. The proposed development objective is to refinance the short-term liabilities of CI-ENERGIES to improve the electricity sectors' financial performance and its ability to attract investments to support the shift towards cleaner energy.

B. Project Beneficiaries

41. The project will contribute to enhancing the financial sustainability of the entire power sector in the country and to crowd-in private capital investment across the sector value chain. CI-ENERGIES will be a direct beneficiary of the project by accessing long-term commercial financing, thereby creating the space to meet its financial obligations to suppliers and developing a credit history that will be useful to support future investment in the sector. Commercial lenders will be the direct beneficiaries of the IDA Guarantee which will support the debt refinancing process.

42. The CIE will be an indirect beneficiary as the long-term debt will be used in part to pay down the short-term debt that was taken on behalf of CI-ENERGIES. The IPPs and gas suppliers will also be indirect beneficiaries as current arrears are cleared.

43. Future/potential investors will benefit from a more conducive and financially sustainable environment.

44. The people of Côte d'Ivoire will be indirect beneficiaries as the resolution of the liquidity crisis will allow investment in new and upgraded power generation that will increase the security and reliability of supply and reduce the cost of electricity.

C. PDO-Level Results Indicators

45. Project Development Objective (PDO) indicators:

- Private capital mobilized (EUR, million)
- Debt service coverage (ratio)
- Category B costs coverage (ratio)
- EBITDA (CFAF)

- Capital indirectly leveraged from private sector investments in electricity generation from cleaner energy sources[15] (US$, million)

46. Intermediate indicators encompass improvements in billing and collection. These include the following:

- Billing to collection ratio of public entities (percentage)
- Billing to collection ratio of export clients (percentage)
- Total electricity losses (percentage)

III. PROJECT DESCRIPTION

A. Project Component

47. **The project will provide an IDA Guarantee not to exceed EUR 240 million[16] (or CFAF equivalent) to enhance CI-ENERGIES' credit quality.** It will enable the company to raise an amount of up to EUR 400 million equivalent (part of which is potentially to be raised in Euro and/or CFAF) of new commercial debt with a lower interest rate and longer tenor than the current short-term and expensive financing available to it. This new debt will be used to repay a substantial portion of the sector's existing short-term commercial debt and pay arrears to IPPs and gas suppliers. The result of this operation would be to smoothen out the debt repayment profile of CI-ENERGIES and, therefore, to improve the sustainability of the cash waterfall to pay IPPs and gas suppliers in the future. The operation will be an introduction of CI-ENERGIES to local and international banking markets and will facilitate CI-ENERGIES' initial access to commercial long-term lenders who could be potential future financiers of the sector's investment program.

48. **The IDA-guaranteed commercial financing has been sized at an equivalent amount of up to EUR 400 million, which corresponds to the total funding needs to repay 100 percent of the IPPs and gas suppliers arrears, as well as 100 percent of the short-term debt contracted by the CIE**. The actual amount of new debt to be contracted will be determined based on the outcome of a competitive bidding process between commercial banks and will be based on the actual repayment in 2018 of the GoCDI arrears to the sector, in the amount of CFAF 65 billion, which will affect the refinancing needs. The equivalent amount of up to EUR 400 million will incorporate a contingent tranche in case the GoCDI payments to the sector are delayed.

49. **The proposed IDA Guarantee will accomplish this by enhancing CI-ENERGIES' credit quality and enabling the company to raise sufficient volume of commercial debt with lower interest rates and longer tenors than what is currently available to it.** Interest rates on the CIE's existing short-term commercial debt range between 7 percent and 8 percent in local currency, which has a fixed exchange rate with the Euro. IDA-guaranteed new commercial debt is expected to reduce the interest cost of debt

[15] Cleaner energy sources include gas-fired, hydroelectricity, and other renewable sources.
[16] The final structure and sizing of the guarantee will depend on the outcome of negotiations between CI-ENERGIES, commercial banks, and IDA.

substantially while also extending its tenor to up to 15 years, thus generating direct financial savings that will support the sector's short- and medium-term sustainability.

50. **The operation aims to set Côte d'Ivoire's electricity sector on the path to long-term financial sustainability.** Commercial lenders typically instill more financial discipline in companies as they must adhere to strict enforcement of financial covenants, increase reporting obligations (provide quarterly, semiannual, and annual financial statements) to demonstrate sound financial management. This will support CI-ENERGIES' long-term financial sustainability, thus unlocking needed investments in the sector. CI-ENERGIES is responsible for managing public assets in the electricity sector as well as planning and contracting investments, and as such, it is the main body to implement the renewable energy target and the Distribution and Transmission Master Plan enshrined in the country's NDC. As mentioned earlier, these action plans will increase the country's renewable energy share and reduce the technical losses in the system. This proposed operation is critical to guarantee the financial viability of CI-ENERGIES to implement these action plans, which in its turn is critical to achieve the NDC goals agreed in the Paris Agreements.

51. **The market sounding carried out by CI-ENERGIES and its financial advisor confirmed a significant appetite for a Euro and/or CFAF-denominated sub-sovereign refinancing operation among local and international banks with partial cover from IDA and an appropriate security mechanism to be negotiated.** The halo effect provided by a large refinancing operation will most likely be perceived by the other actors in the sector as a vote of confidence not only from IDA but also from commercial lenders that will have done their due diligence and believe in the financial sustainability of the energy sector.

52. **As part of the IDA Guarantee due diligence, the team has undertaken a comprehensive assessment of the financial situation and prospects of CI-ENERGIES,** including detailed financial projections under various scenarios and financing options available to CI-ENERGIES in the commercial market. This assessment indicates an urgent need and the benefits from guaranteeing CI-ENERGIES' commercial debt. Under conservative scenarios, the guaranteed commercial debt is viable, with the understanding that the sector will remain sensitive to external shocks.

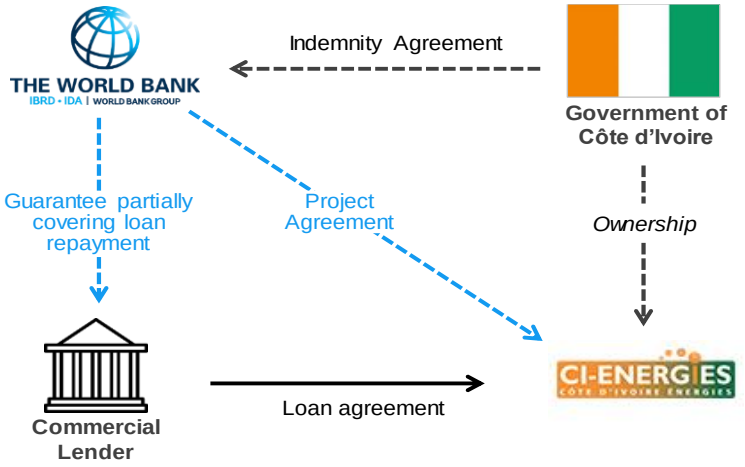
53. **More specific improvements in terms and savings generated through refinancing will be identified after CI-ENERGIES has selected and appointed a commercial bank as a Mandated Lead Arranger.** The Request for Proposals for this commercial financing is expected to be issued by the end of June 2018 and negotiations to start soon thereafter. Financial close of the IDA-guaranteed commercial financing is expected in Q2 FY 2019 after Board approval of the IDA Guarantee.

B. Project Cost and Financing

Financing Instrument

54. **The proposed project is an Investment Project Financing (IPF), utilizing an IDA-Guarantee instrument.** Based on the outcome of market soundings with the commercial bank(s), the structure of the IDA Loan Guarantee was developed by the transaction advisors in coordination with the World Bank. The banks will submit financing offers based on a structure proposed by the transaction advisor. The structure will ultimately reflect the outcome of negotiations between CI-ENERGIES and the selected commercial bank(s). Figure 3 presents the basic structure of the operation.

Figure 3. Guarantee Structure



Proposed IDA Guarantee Structure

55. **The proposed IDA Guarantee not to exceed EUR 240 million or equivalent in CAFA in support of CI-ENERGIES funding needs would be structured as a credit enhancement tool and enable the company to raise commercial financing on terms and conditions (interest rate and tenor) that are significantly better than those currently available to it.** The proceeds of this financing will be exclusively used to repay existing short-term commercial debt held by CIE and to pay arrears to IPPs and gas suppliers. The credit enhancement may take the form of either a rolling/first-loss guarantee, a guarantee of selected installments, or other forms to be designed as appropriate.

56. **The final amount and structure of the guarantee will be adapted during the selection process of the banks, with a view to limit the IDA Guarantee to what is strictly necessary to mobilize this financing and to work within the existing cash waterfall mechanism.** As the World Bank expects risks to be partly taken by the commercial banks, which have some familiarity with power sector risks in Côte d'Ivoire, IDA will attempt to limit its guarantee to a maximum of 60 percent of the commercial debt amount to be raised, and in general, will leverage its involvement on the commercial banks. The debt service obligation will be designed in a manner to work within the existing cash waterfall mechanism, and it is not envisaged that this mechanism would need to be substantively amended.

57. **Regardless of the final structure, the IDA Guarantee will be applied to debt service payments (principal and/or interest) by CI-ENERGIES to the commercial lenders.** If CI-ENERGIES fails to make a guaranteed payment under the guaranteed commercial loans, subject to the cure periods provided under the Loan Agreement(s), the lender(s) will have recourse to the IDA Guarantee. IDA will be obliged to pay to the claimant the amounts due and not paid by CI-ENERGIES within the period stipulated in the Guarantee Agreement.

58. **According to the terms of the Indemnity Agreement to be signed between IDA and the GoCDI, a payment by IDA to the lender(s) under the IDA Guarantee will trigger the obligation of the GoCDI to repay IDA.** Repayment shall be made upon demand by IDA or as IDA may otherwise direct. IDA would also enter into a Project Agreement with CI-ENERGIES containing undertakings of CI-ENERGIES toward IDA relating to the implementation of the project.

59. **The IDA Guarantee would be issued for a maximum term equal to the tenor of the guaranteed loans, which is not expected to exceed 15 years.** In accordance with the pricing policy for IDA Guarantees as described in the Term Sheet in Annex 4, the applicable fee(s) will be charged, calculated on the average outstanding financial exposure of the guarantee for a given year and payable by CI-ENERGIES on or by the date of and as a condition to effectiveness of the IDA Guarantee.

C. Lessons Learned and Reflected in the Project Design

60. **The proposed project will build on experience in attracting commercial financing to state-owned utilities through the support of IDA and IBRD instruments.** This has been done successfully in Pakistan, where the World Bank supported the Water and Power Development Authority (WAPDA) financing dedicated to the Dasu project (P121507), and in Kenya, where the Kenya Power and Lighting Company (KPLC) financing closed in 2018, or the recently approved KenGen guarantee (P162422). These projects are replicable both in the energy sector and in other infrastructure sectors.

61. **The proposed project has benefited from the lessons learned and implementation experience of an IDA Guarantee that helped KPLC, the electricity distribution utility in Kenya, in a successful debt restructuring that resulted in significant savings and strengthening of its balance sheet.** Through an IDA Guarantee of US$200 million, KPLC successfully mobilized US$500 million in long-term commercial loans— at a much lower cost and longer tenor—which was used to refinance the existing short-term and expensive debt on the books of KPLC. The competition between international banks for this operation led to large pricing benefits and tenor extension that had never been achieved previously. The proposed operation therefore intends to replicate this success by having an open competition between international and local banks to ensure that the best terms are achieved.

62. **Precedents indicate that a guarantee coverage close to 60 percent is likely to be required.** In 2016, KPLC successfully raised US$350 million and US$150 million equivalent with the support of a US$200 million IDA Guarantee. The IDA Guarantee only backstopped the U.S. dollar-denominated tranche, effectively covering 57 percent of the U.S. dollar-denominated tranche. In 2017, the WAPDA of Pakistan raised US$350 million with the support of a US$210 million guarantee, or a 60 percent cover. This number is consistent with the results gathered during the market sounding carried out by CI-ENERGIES' transaction advisors who had reached out to more than a dozen local and international banks. Even though the guarantee coverage will eventually depend on a number of variables it is likely that the level of cover required for the project will be around 60 percent.

63. **Lessons learned from other World Bank projects in Côte d'Ivoire's energy sector demonstrated that it is key to align project design with sector priorities, but it is not sufficient.** Lending may need to be combined with assistance to increase impacts. In Côte d'Ivoire, the World Bank, together with Multilateral Investment Guarantee Agency (MIGA), has supported the Foxtrot gas project (US$960 million of investments), including an IDA payment guarantee. The GoCDI and the local markets in general are therefore knowledgeable about the type of support which the World Bank can bring.

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

64. **The CI-ENERGIES Finance and Accounting Department will be responsible for the overall implementation, coordination, and monitoring of the project.** The Finance and Accounting Department is managed by the finance and accounting director supported by three managers—sector accounting and monitoring manager, finance manager, administration and accounting manager—each one of them with their subsequent reports. The finance team is in the process of selecting commercial banks which will arrange this financing of equivalent amount of up to EUR 400 million. CI-ENERGIES, with the support of its financial and transaction advisor Rothschild/Maycap will issue a Request for Proposals and invite local and international commercial banks to bid. This process is expected to start in June 2018, to be followed by banks' selection, mandate negotiations, banks' due diligence, negotiation, and signing of the legal documentation.

65. **CI-ENERGIES will be advised by an external legal counsel to support the company in negotiating the legal documentation.** A consortium of White and Case and Chauveau (CI legal firm) are expected to provide services under an IDA Project Preparation Advance. This is a critical component as these legal agreements (for a first international, long-term, structured, and non-sovereign transaction) will set a precedent for future commercial financings in the sector.

66. **The implementation of the guarantee will include the drafting of the Guarantee Agreement between IDA and the commercial banks.** A Loan Agreement will be signed with the commercial banks, and it is likely that the provision of the Guarantee Agreement will be included in the Loan Agreement, the Project Agreement signed between the World Bank and CI-ENERGIES, and the Indemnity Agreement between the GoCDI and the World Bank.

B. Results Monitoring and Evaluation

67. **There will be periodical reporting requirements including quarterly reports (key financial ratios); semiannual reports (unaudited Balance Sheet, Profit &Losses, and Cash Flow); and the annual audited financial statements that will be prepared by the Finance Department**. Through this reporting, the World Bank will be able to monitor CI-ENERGIES' compliance with the financial covenants and ensure that the company uses a stricter financial discipline and proper financial planning, which are key for the financial sustainability path. CI-ENERGIES and the commercial banks agent will inform the World Bank about the request for drawdowns and their uses.

C. Sustainability

68. **CI-ENERGIES and the GoCDI are committed to ensuring that the sector entities contribute to a financially sustainable electricity sector.** The long-term commercial financing that will be facilitated by an IDA Guarantee will help in this pursuit as there will be a stricter financial discipline imposed on the sector, which will send strong signals to the market and give more comfort to investors. The life of the IDA Guarantee is expected to be up to 15 years, but it will ultimately depend on the terms of the commercial

financing to be raised and the structure of the guarantee[17]. The World Bank will monitor the project and CI-ENERGIES' financial position throughout that period to ensure that the company makes payments to the lenders on time and meets financial covenants that will be imposed by commercial banks on the partially guaranteed financing.

69. **The sustainability of the proposed project, and that of the commercial debt for the sector, relies on continued commitment to improve operating practices in the electricity sector.** Over the coming years, CI-ENERGIES and the CIE will continue to work on improving cost control and cost recovery. New generation capacity will continue to be procured competitively, the efficiency of existing plants will be improved. New power plants will be built according to the recommendations of the least-cost development plan, and investments in transmission and distribution should continue to reduce energy losses, thereby helping reduce the cost of electricity. Revenues should be boosted by regularizing unrecorded customers through grid densification programs and measures to improve bill collection from public and private customers.

70. **This efficiency plan is supported by the three-year (2016–2018) DPF series[18] in which the electricity pillar plays a critical role.** The program of policy actions supported by the electricity pillar aims to improve the financial and operational performance of the electricity sector. This is achieved through a two-pronged approach: on one side, the program includes policy actions to improve the financial and operational performance of CI-ENERGIES by establishing a methodology for setting up cost-reflective tariffs should the political environment allow for such a policy, eliminating public arrears and setting up binding mechanisms of payment for public electricity consumption, and defining a framework for continuous efficiency improvement through a performance contract between the GoCDI and CI-ENERGIES. On the other side, the program includes a set of policy actions to promote private sector participation in generation. In addition, the ETAP (P157055) will contribute significantly to the much-needed improvements in the transmission and distribution networks, thus reducing losses. Finally, the technical assistance component of ETAP provides support to further strengthen the regulator in its role to determine and apply cost-reflective tariffs.

V. KEY RISKS

A. Overall Risk Rating and Explanation of Key Risks

71. **The overall risk rating for the proposed operation is Substantial.** Key risks and mitigation measures are discussed in the following paragraphs.

72. **Political and Governance risks (Substantial).** Since the end of the post-election crisis in 2011, the GoCDI has taken important steps to attenuate political tensions and foster a climate of reconciliation and social cohesion. The Dialogue, Truth, and Reconciliation Commission recently presented its report and recommendations to compensate victims of the crisis. The security situation has improved significantly. All security services and legal institutions are once again under the full control of the GoCDI, completing the country's administrative reunification. Progress has been made in disarming, demobilizing, and reintegrating former combatants, some of whom have been incorporated into the security forces and the

[17] The terms of the guarantee, including its tenor, will be defined during the banks bidding process. Tenor of the financing may range from 10 to 15 years for a EUR tranche and from 7 to 10 years for a FCFA tranche

[18] DPF series on fiscal management, education, energy, and cocoa reforms.

civil service. The AfDB has relocated its headquarters to Abidjan. While encouraging progress has been made in restoring peace and stability, many of the root causes of the country's recent conflicts have yet to be fully addressed, including important issues involving the security of land tenure and high levels of unemployment, especially among the country's youth. This might affect the long term financial viability of CI-ENERGIES and hence the achievement of the PDO.

73. **Mitigation.** While none of these risks are addressed directly by the project, it will contribute to greater resiliency in weathering such risks by ensuring the financial sustainability of the electricity sector and allowing an investment program to improve the overall service quality and reduce public discontent and to reduce the pressure of youth out-migration from rural areas by increased access to electricity services in currently unserved villages.

74. **Macroeconomic risks (Substantial).** The main sources of macroeconomic risks are linked to the challenges associated with the need for fiscal adjustment over the next few years and the possible appreciation of the U.S. dollar. The Government plans to reduce its fiscal deficit by approximately 1.2 percent of GDP over the next two years to ensure fiscal and debt sustainability, in line with the IMF-supported program and the WAEMU targets. Some tax reforms to increase revenue collection could be resisted by vested interest groups, as shown by the recent revision of the 2018 tax schedule. The Government may find it difficult to control current expenditures, especially the wage bill, when confronted with complaints from civil servants. The measures supported by the World Bank DPF series partially mitigate these risks. The macroeconomic and fiscal framework can also be affected by external shocks that may increase fiscal pressures, which in turn can pose stress on public institutions to maintain their commitments to pay on time. Finally, a key contributor to the buildup in arrears between 2014 and 2017 was an unfavorable movement in foreign exchange rates. Revenues in the electricity sector are collected in local currency, CFA francs, but the natural gas price and a major IPP's charges are fixed in U.S. dollars. When the U.S. dollar appreciates, the gas bill in CFA francs increases. In addition, the sector's financial equilibrium is sensitive to electricity demand growth, which is directly linked to GDP growth. A slower GDP growth rate will affect the sector's financial equilibrium, since profitability depends on robust sales growth.

75. **Mitigation.** The proposed operation relies on a recourse that IDA will have on GoCDI, through the Indemnity Agreement it will sign with the GoCDI. Thus, the Government is incentivized to favor financial equilibrium of the power sector and to have the new commercial debt repaid, to avoid IDA triggering its sovereign recourse. In addition, the World Bank will work through the technical assistance of the ETAP (P153743) to develop a U.S. dollar/Euro hedging mechanism for CI-ENERGIES.

76. **Sector Strategies and Policies Risks (Substantial).** Maintaining cost-recovery tariffs and improving payment discipline for electricity remain key challenges for the sector. Under the Urgent Electricity Rehabilitation Project (closed in 2014), several studies on sector strategies and policies were prepared. Many of the recommendations from these studies were implemented and a substantial tariff increase was applied in July 2015. The mechanism to adjust tariff levels was designed to maintain the viability of the sector, although the political backlash against tariff hikes shows that this is susceptible to reversal. As of 2017, 96 percent of the cost of electricity is recovered through the domestic tariff. Throughout the period of analysis, the end user tariff is expected to cover operating expenses and capacity charges of IPPs (see financial analysis in Annex 5); it is also projected to be sufficient to cover the debt to be contracted under this operation. This is contingent upon (a) CI-ENERGIES maintaining an adequate optimization of gas

supply and demand; (b) electricity capacity being added to the grid at the same pace as the growth in electricity demand to avoid recourse to the use of inefficient liquid fuels or onerous take-or-pay commitments; (c) achieving set targets for loss reduction; (d) maintaining high levels of billing and collection; and (e) the GoCDI remains politically committed to a long-term reform vision with a coherent sector-wide strategy.

77. **Mitigation.** Achieving these objectives is dependent on consistent financial discipline and is highly intertwined with ongoing parallel sector efforts through the ongoing ETAP and the DPF. The DPF constitutes a risk mitigation tool for electricity sector risks by supporting (a) the signing of a performance-based contract between CI-ENERGIES and the GoCDI with the objective to improve the financial and commercial performance as well as the transparency of the sector; (b) clearing of public arrears and setting up good public payment discipline going forward; and (c) implementation of required measures to strengthen the sector cash flow waterfall by making it more transparent. The GoCDI would commit to ensure that the State's share of gas remains available to the power sector, ensure that future tariff adjustments be made as necessary, and overall, ensure the financial equilibrium of the sector. IDA would be ready to assist the GoCDI in reaching a decision on the future institutional configuration of the power sector and implementation of required investments in transmission, distribution, and generation by funding advisory services through the recently approved ETAP. In addition, the World Bank is assessing the options to improve commercial discipline on payments for electricity trade within the WAPP, including measures to securitize payments with an initial focus on arrears owed to Côte d'Ivoire.

78. **Institutional Capacity for Implementation and Sustainability (Substantial).** This operation will be the first long-term international commercial financing raised by CI-ENERGIES. Debt raised by CI-ENERGIES to date has been in the form of either (a) short- or medium-term commercial debt raised through local commercial banks or (b) long-term concessional debt on-lent by the GoCDI. CI-ENERGIES has no prior experience in raising large amounts of long-term financing with international commercial banks. The information asymmetry between more experienced bankers and the GoCDI could lead to unfavorable terms and conditions and/or rights granted to the commercial lenders beyond what is considered to be market practice. In addition, the long-term viability and sustainability of the sector depends on a number of improved operational efficiencies, including (a) maintaining cost recovery at 92 percent for private sector consumer, public sector consumers, and imports; (b) reducing losses from 22 percent to 14 percent; (c) maintaining an optimum use of gas resources without recourse to expensive liquid fuels; and (d) promoting a shift toward cleaner energy.

79. **Mitigation.** CI-ENERGIES has hired a consortium of financial and transaction advisors comprising Rothschilds and MayCap to assist them in delivering a successful operation. Both advisors have extensive experience in raising capital in developing countries, which should ensure that CI-ENERGIES receives the best possible advice and achieves competitive terms on the financing raised. In addition, CI-ENERGIES has hired the international law firm White and Case, to help them on the legal documentation associated with the operation. The CIE concession contract and CI-ENERGIES performance contract will include performance parameters to improve system-wide efficiencies and promote the shift toward cleaner energy. The refinancing of CI-ENERGIES' short-term liabilities is expected to improve the sector's ability to attract much-needed private capital for generation and concessional funds for investments in transmission and distribution.

VI. APPRAISAL SUMMARY

A. Economic and Financial Analysis

80. **Rationale for Public Sector Provision/Finance.** This operation is at the core of the financial sustainability of CI-ENERGIES and the sector as a whole. Beyond the direct positive impact of a short-term debt refinancing on CI-ENERGIES' cash flow position, the enhancement of its financial performance is expected to generate a cascade effect across the power sector: (a) by reducing off-taker risks, private partners such as IPPs, and gas suppliers will increase their appetite to participate in the next round of generation projects; and (b) by reducing the financial costs and risks, utility customers will benefit from lower cost of electricity. Those benefits include leveraging scarce public IDA resources to mobilize larger amounts of commercial financing and limited sovereign borrowings.

81. The GoCDI needs to attract private capital to support its aspirations to scale-up infrastructure development, particularly in the energy sector. However, CI-ENERGIES has limited relationships with commercial banks and risks of lending to it remains high. Without some form of credit enhancement, it would be very difficult—if not impossible—for CI-ENERGIES to access the financial market to carry out this debt-restructuring process. The use of IDA support in the form of an IDA Guarantee to attract large amounts of private financing (in the form of commercial debt at lower rates and longer tenor represents an efficient use of public resources because it minimizes the contingent liabilities for the GoCDI). The all-public-sector alternative is suboptimal as it would require the GoCDI to take on additional sovereign debt to clear the sector's arrears and transfer the funds as subsidy to the sector, at a time when the Government has quantitative ceilings to contracting more sovereign debt. An IDA Guarantee will be backed by an Indemnity Agreement to be signed with the GoCDI, thus reducing the risk of government action or inaction that would impact the project.

82. **Value Added of the World Bank's Support.** Successful World Bank experience with debt-restructuring processes in other client countries across Sub-Saharan Africa and beyond has signaled to the international financial markets that an IDA Guarantee used as part of a comprehensive sector dialogue is able to provide commercial lenders with enough comfort to support a refinancing mechanism. Such targeted use of World Bank guarantees represents an efficient use of the available IDA resources to leverage substantial amounts of lending from the private sector at competitive rates. Increasing the share of private financing in the power sector is part of the implementation of the World Bank Group MFD approach; furthermore, leveraging commercial debt along with World Bank support not only shows private lenders and investors that the company is determined to be more commercially oriented but also that the World Bank is a strategic partner in this effort.

83. **This operation is a good example of MFD in power sector financing,** aiming at maximizing the mobilization of commercial financing, minimizing sovereign financing, and strengthening the viability of the sector and its capacity to deliver sustainable and affordable electricity. CI-ENERGIES is a public company, holding assets which have historically been financed through on-lending of sovereign borrowings from development partners. This operation is a first introduction of CI-ENERGIES to long-term private financing sources. It facilitates the participation of commercial banks in the financing of the power sector beyond IPPs and gas production, potentially paving the way for additional future commercial financing for the medium- and long-term investment plan of CI-ENERGIES. The broader engagement of the World Bank Group through a policy dialogue, a DPF series, public investments in transmission and

distribution, and the participation of IFC in IPPs enables this operation to attract interest from private financing sources with an appropriate level of support from IDA.

Economic Analysis

84. **The economic viability of the project was assessed by analyzing the quantified economic costs and benefits of implementing the proposed IDA Guarantee.** However, the net benefits for this project go beyond what may be quantified as the effective economic benefit of an improved environment for investment as a consequence of the IDA Guarantee does not lend itself to quantification. Three sources of economic benefits have been identified for this project: the opportunity cost of public funds to remedy the short-term debt, building of a credit history for CI-ENERGIES, and enabling of system efficiencies by unlocking sector investments. Because of the difficulty in quantifying the net economic impact of the first two sources, the economic analysis conservatively focuses on quantifying the economic impact of preventing delays on exclusively private sector investment in the energy sector.

85. **The economic analysis shows that the IDA Guarantee project is economically robust.** Assuming the cost of the IDA Guarantee is represented by its face value (EUR 240 million plus fees, or US$288 million), the net present value (NPV) for the IDA Guarantee Project—excluding environmental benefits—is US$61 million (at 9 percent discount rate[19]), with an economic internal rate of return (EIRR) of 13 percent. Table 5 summarizes the results of the economic analysis. Annex 5 presents the details of the economic analysis of the project.

Table 5. Summary of the Economic Analysis

Discount rate	%	9
EIRR		
EIRR excluding CO_2	%	13
EIRR including CO_2	%	16
NPV		
NPV excluding CO_2	US$, millions	61
NPV including CO_2	US$, millions	102

Financial Analysis

86. **The World Bank has carried out a thorough due diligence to ensure that the sector and CI-ENERGIES are financially robust.** The terms of the financing, assumed to be consistent with market practice and reflective of the IDA risk, make sense for the sector. The financial analysis relies on financial models developed by the GoCDI's transaction advisor and reviewed by the World Bank's team.

87. **The financial analysis of CI-ENERGIES demonstrates the sustainability of an IDA-guaranteed commercial financing at the CI-ENERGIES level, provided that power demand grows in line with expectations, that no external shock such as a strong appreciation of the U.S. dollar occurs, and that the cash waterfall mechanism in the power sector is applied without granting exceptions.** The sector is

[19] The growth rate of GDP per capita (constant LCU) in Côte d'Ivoire in 2019 is 4.5 percent. The discount rate used in this analysis is twice that at 9 percent.

not susceptible to an oil price shock, as its consumption of oil products is negligible and the gas price is not linked to the oil price.

88. CI-ENERGIES' revenues are the sum of (a) the revenues coming from Category C (see Paragraph 15); (b) the revenues of the Soubré hydropower plant, owned by CI-ENERGIES, power sales to the sector, which are part of Category B; and (c) its share of gas revenues from the GoCDI stake in gas fields.

89. The main sector assumptions that support the abovementioned analysis are the following:

(a) A modest annual tariff increase of 1 percent starting from 2021

(b) Efficiency gains, especially in the distribution sector with collection rates for the domestic private sector improving from 92 percent to 98 percent[20]

(c) Payments to CI-ENERGIES of revenues collected by the GoCDI in excess of CFAF 50 billion from the GoCDI's stakes in indigenous gas fields

90. The IDA-guaranteed commercial financing has been sized at an equivalent amount of up to EUR 400 million, which corresponds to the total funding needed to repay 100 percent of the IPPs and gas suppliers arrears, as well as 100 percent of the short-term debt contracted at the CIE level. The actual amount of the new debt to be contracted will be determined based on the outcome of the bidding process to select lenders and based on the actual payment in 2018 of the GoCDI arrears to CI-ENERGIES. Any amount in excess of what is required to repay these arrears may be used as a contingent financing in case additional payment arrears materialize.

91. Assuming that revenues available to cover payments to power and gas suppliers (Category B costs as described in Table 1) are shared with the IDA-guaranteed financing, with the understanding that adding new debt repayment pari passu with Category B payments is not allowed under the current sector regulations, the Debt Service Coverage Ratio (DSCR) is above 1.0x on average over the next five and ten years. The level of seniority of the IDA-guaranteed financing in the cash waterfall mechanism will be determined following negotiations with the selected commercial bank(s), with the understanding that adding new debt repayment pari passu with Category B payments is not allowed under the current sector regulations. Additional security mechanisms such as the allocation of the Soubré hydro cash flows to the repayment of the IDA-guaranteed financing may be contemplated. The simulation in Table 6 assumes that (a) equivalent amount of up to EUR 400 million IDA-guaranteed loan is disbursed in 2018; (b) there is a two-year grace period; and (c) the loan gets repaid linearly over the next eight years, bringing the total door-to-door maturity to ten years. Table 6 illustrates the profile of the IDA-guaranteed financing's DSCR over the next five years.

[20] The hypotheses for collection rates of public and export clients is 75 percent and 83 percent, respectively.

Table 6. IDA-guaranteed Debt Sustainability Analysis

CFAF Billion	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Cash flow from Sale of Power	559	600	662	737	794	849	910	964	1,025	1,091	1,151
Management Contractor Fee	(120)	(127)	(134)	(143)	(150)	(157)	(165)	(172)	(179)	(187)	(195)
Revenues available for Category B	**439**	**474**	**528**	**594**	**644**	**692**	**745**	**792**	**846**	**904**	**956**
Category B costs	387	471	545	567	585	618	688	744	770	811	862
Debt service on IDA-guaranteed loan	3	12	19	40	40	40	40	40	40	40	30
Category B costs + IDA-guaranteed debt service	**389**	**484**	**564**	**606**	**625**	**658**	**727**	**783**	**810**	**851**	**892**
Debt Service Coverage Ratio	**1.13x**	**0.98x**	**0.93x**	**0.98x**	**1.03x**	**1.05x**	**1.03x**	**1.01x**	**1.04x**	**1.06x**	**1.07x**
Sensitivities											
Addition of Soubré free cash flows	1.16x	1.04x	1.06x	1.02x	1.05x	1.07x	1.04x	1.02x	1.06x	1.07x	1.08x
10% USD appreciation vs. CFAF	1.08x	0.94x	0.89x	0.93x	0.98x	1.00x	0.98x	0.97x	1.00x	1.02x	1.03x

92. Sensitivity analyses show that the DSCR falls below 1.00x upon a U.S. dollar appreciation of 10 percent over the CFA franc in the next five years. Government financial support would be needed at this point to offset increase in costs due to adverse changes in the U.S. dollar exchange rate.

93. Overall, CI-ENERGIES cash flows revenues are sufficient to pay for operating expenses and service the IDA-guaranteed financing, but investment needs—apart from the generation investment needs which are covered by the private sector—will have to be financed by the GoCDI, unless significant tariff increases are implemented.

94. Given the above and the sensitivity of CI-ENERGIES cash flow projections to external shocks and sectorial hypothesis, as part of this commercial financing, the GoCDI would commit to:

(a) Access the Soubré hydropower plant cash flows to repay the commercial debt, providing seniority to this debt compared to other CI-ENERGIES liabilities;
(b) Ability of CI-ENERGIES to have access to the GoCDI State share of gas revenues over the loan life as currently allowed by the law;
(c) Ability of the sector to implement moderate tariff increases from year 2021 onwards; and
(d) Overall financial support to the sector in case of significant financial imbalances.

B. Technical

95. The proposed operation consists of an IDA Guarantee that will support CI-ENERGIES in raising long-term commercial financing that will be used to refinance an expensive portion of the sector's existing commercial loans held by the CIE. Since the project will support a financial transaction, it does not present any of the usual construction or operational challenges. The proposed operation will be implemented by CI-ENERGIES' Finance Department which has experience with local commercial financing and the necessary structure to successfully manage the implementation, monitoring, reporting, and repayment of the loan.

C. Financial Management

96. **Financial management.** The IDA Guarantee does not require any financial management due diligence on the part of IDA as no IDA funds are disbursed.

D. Procurement

97. **Procurement.** The IDA Guarantee does not require IDA procurement due diligence. The World Bank Policy - Procurement in IPF and Other Operational Procurement Matters excludes the application of the Procurement Policy to Procurements under World Bank Guarantees. A competitive tender will be organized by CI-ENERGIES' and its financial advisor to select the commercial bank(s) offering the most attractive terms for the debt refinancing.

E. Social (including Safeguards)

98. The proposed project is not expected to have any direct social impact. This guarantee operation will enable the refinancing of existing debt that has already been used in the power sector. Therefore, no direct physical investment will be realized on the ground which are associated with any potential adverse impacts. According to safeguards policies applicable to guarantee operations, it is mandatory to assess the Environmental and Social Management System (ESMS) of CI-ENERGIES (PS1 is therefore triggered). Such an assessment was conducted and concluded that CI-ENERGIES has an acceptable ESMS[21].

99. In addition to the PS1, the PS2 related to Labor and Working conditions is also triggered as CI-ENERGIES has to apply that PS on its own staff. The assessment has shown that staff work 40 hours a week and have annual and sick holidays, maternity and paternity leave, and insurance for themselves and their relatives. Staff of CI-ENERGIES have access to clean toilets, and offices are equipped with safe drinking water supply and health centers. Buildings are equipped with fire extinguishers and staff are regularly trained for their proper use. The working environment allows any employee to bring to the management attention any concern related to working conditions and/or bad behavior of a colleague. CI-ENERGIES has a work environment policy that guides staff behavior. Each staff has a contract stating the conditions of his/her employment, including benefits and training. No minors are employed by CI-ENERGIES. All these conditions are assessed as satisfactory.

F. Environment (including Safeguards)

100. The proposed project is a guarantee that is not expected to have any environmental impact. This guarantee operation will enable the refinancing of existing debt that has already been used in the power sector. Therefore, no direct physical investment will be realized on the ground which are associated with any potential environmental adverse impacts. The ESMS assessment of CI-ENERGIES concluded that CI-ENERGIES has an acceptable ESMS.

101. CI-ENERGIES has an Environmental and Sustainable Development Department with two environmental specialists. The recruitment of a social development specialist is under way. The company has an Occupational Health and Safety (OHS) policy. In addition to that, it is also certified Quality Safety and Environment—ISO 9001 (2008), OHSAS 18001 (2007), and ISO 14001 (2004). On each site operated by CI-ENERGIES/CIE, there is an Internal Operation Plan (IOP) and staff are regularly trained for more

[21] The ESMS of CI-ENERGIES was appraised as part of the preparation process of the ETAP (P157055) project, which went to the Board on March 9, 2017. The conclusions of the positive analysis were included in the PAD, annex 3 implementation arrangements.

effective and efficient interventions when needed. Regular drills and exercises are organized and the ESMS is audited annually.

102. On the legislative level, all the CI-ENERGIES' investments are subjected Law No. 96-766 on the Environment Code, promulgated on October 3, 1996, and to the regulatory plan Decree No. 96-894 of November 8, 1996, determining the rules and procedures for the development of Environmental and Social Impact Assessment. Investments are subjected to other relevant laws namely: Law No. 88-651 of 07 July 1988 on the Protection of Public Health and the Environment against the effects of toxic and nuclear industrial waste and harmful toxic substances; Law No. 98-755 of 23 December 1998 on the Water Code, Law No. 2002-102 of 11 February 2002 on the establishment, management and financing of national parks and nature reserves, Law No. ° 2014-138 of March 24, 2014 bearing the Mining Code, the Law n ° 2014- 427 of July 14th, 2014 bearing Forest Code.

103. In Côte d'Ivoire, the Ministry of Sanitation, Environment, and Sustainable Development is responsible for setting policy guidelines on environmental issues and ensuring compliance with national environmental standards. It has different departments among which the National Agency of Environment (*Agence Nationale de l'Environnement*) in charge of safeguards compliance of all projects in the country. The unit is well staffed but its capacities are considered moderate. The Project Implementation Agency, CI-ENERGIES, is familiar with World Bank safeguards policies, having recently implemented two World Bank-funded projects. However, this is not the case with respect to PSs that are new to it and on which no training has been undertaken yet. Despite this, there are no concerns because this operation is a guarantee and no safeguards work is expected. However, the environmental and social safeguards specialists will be trained on the new environmental and social framework (PSs) so that they can be ready to handle safeguard aspects in full compliance with PSs.

G. Other Safeguard Policies (if applicable)

104. Not applicable.

H. World Bank Grievance Redress

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

106. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org

VII. RESULTS FRAMEWORK AND MONITORING

Results Framework
Republic of Côte d'Ivoire
CI-ENERGIES' Guarantee Project

Project Development Objectives

The proposed development objective is to refinance the short-term liabilities of CI-ENERGIES to improve the electricity sectors' financial performance and its ability to attract investments to support the shift towards cleaner energy.

Project Development Objective Indicators

Indicator Name	Core	Unit of Measure	Baseline (2017)	End Target (2022)	Frequency	Data Source / Methodology	Responsibility for Data Collection
Private capital mobilized		EUR, millions	0	400	Semiannually	CI-ENERGIES financial statements	CI-Energies
Description: measures the amount of commercial financing raised in EUR or EUR equivalent with the support of the IDA Guarantee							
Debt service coverage		Ratio	N/A	1.10	Semiannually	CI-ENERGIES financial statements	CI-Energies
Description: measures the cash flow available to service the IDA-guaranteed loan(s) over the IDA-guaranteed loan(s) debt service							
Category B costs coverage		ratio	1.03	1.10	Semiannually	CI-ENERGIES financial statements	CI-Energies
Description: measures the cash flow available to pay for Category B costs over Category B costs							
EBITDA		CFAF	10	109	Semiannually	CI-ENERGIES financial statements	CI-Energies
Description: Earnings Before Interest, Tax, Depreciation and Amortization							
Capital indirectly leveraged from private sector investments in electricity generation from cleaner energy sources		US$, million	0	800	Semiannually	CI-ENERGIES financial statements	CI-Energies
Description: measures investments in renewable energies and natural gas in the energy sector							

Intermediate Results Indicators

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source / Methodology	Responsibility for Data Collection
Billing to collection ratio of public entities		Percentage	80	92	Semiannually	CI-ENERGIES financial statements	CI-Energies
Description: measures the percentage of revenues to billed consumption collected from public entities							
Billing to collection ratio of export clients		Ratio	64	92	Semiannually	CI-ENERGIES financial statements	CI-Energies
Description: measures the percentage of revenues to billed consumption collected from export clients							
Total electricity losses		Percentage	21	14	Semiannually	CI-ENERGIES financial statements	CI-Energies
Description: measures the percentage of total electricity losses of the electricity system							

Target Values

Project Development Objective Indicators

Indicator Name	Baseline	End Target
Private capital mobilized (EUR, million)	0	400
Debt service coverage (Ratio)	n.a.	1.10
Category B costs coverage (Ratio)	1.03	1.10
EBITDA (CFAF)	10	109
Capital indirectly leveraged from private sector investments in electricity generation from cleaner energy sources (US$, million)	0	800

Intermediate Results Indicators

Indicator Name	Baseline	End Target
Billing to collection ratio of public entities (Percentage)	80	92
Billing to collection ratio of export clients (Percentage)	64	92
Total electricity losses (Percentage)	21	14

ANNEX 1: DETAILED PROJECT DESCRIPTION

Republic of Côte d'Ivoire
CI-ENERGIES' Guarantee Project

Project Development Objective and Components

1. The proposed development objective is to refinance the short-term liabilities of CI-ENERGIES to improve the electricity sectors' financial performance and its ability to attract investments to support the shift toward cleaner energy.

2. The proposed project is composed of an IDA Guarantee not to exceed EUR 240 million or equivalent in CFAF that will support CI-ENERGIES in raising equivalent amount of up to EUR 400 million (or CFAF equivalent) in long-term commercial financing. This new debt will be used to restructure/replace a substantial portion of the sector's existing short-term commercial debt accumulated at the level of the CIE—the private operator—and to repay arrears to IPPs and gas suppliers.

3. The proposed IDA Guarantee will accomplish this by enhancing CI-ENERGIES' credit quality and enable the company to raise new commercial debt with a lower interest rate and longer tenor than what would be available on a stand-alone basis. The cost of CI-ENERGIES' existing commercial debt ranges between 7 percent and 8 percent for tenors of six to 12 years in local currency. IDA-guaranteed new commercial debt is expected to both reduce the level of interest paid by CI-ENERGIES and extend the tenor of its financing.

4. The extension of CI-ENERGIES' debt, made possible by long-term commercial financing, will smoothen out CI-ENERGIES' debt repayment profile and, consequently, will improve CI-ENERGIES to meet its financial obligations with all sector stakeholders. The commercial financing raised will increase CI-ENERGIES' ability to continue investing in reliability and low-cost supply of electricity and unlock private sector investment in the energy sector. The operation aims to set CI-ENERGIES and the CIE on the path to long-term financial sustainability by introducing consistent financial discipline and opening the possibility of commercially financed investments in the future.

5. The preparation of the IDA Guarantee is underpinned by a comprehensive assessment of the financial situation and prospects of CI-ENERGIES. A transaction advisor has supported CI-ENERGIES in the development of a financing strategy. As part of this activity, CI-ENERGIES' finance and planning teams have been conducting detailed financial projections under various scenarios of capital investments and financing costs, as well as an assessment of the financing options available to CI-ENERGIES in the commercial market. The assessment confirmed the urgent need and the benefits of raising new, long-term commercial debt.

6. The Request for Proposals for the commercial debt is expected to be issued in June 2018, followed by banks' selection, mandate negotiations, banks due diligence, negotiation, and signing of the legal documentation.

ANNEX 2: IMPLEMENTATION ARRANGEMENTS

Republic of Côte d'Ivoire
CI-ENERGIES' Guarantee Project

Project Institutional and Implementation Arrangements

1. CI-ENERGIES Finance and Accounting Department will be responsible for the overall implementation, coordination, and monitoring of the project. The Finance and Accounting Department is managed by the finance and accounting director supported by three managers—sector accounting and monitoring manager, finance manager, administration and accounting manager—each one of them with their subsequent reports. The finance team is in the process of selecting the commercial banks which will arrange this financing of equivalent amount of up to EUR 400 million which will be used to refinance the sector's existing short-term commercial loans and pay for arrears. CI-ENERGIES, with the support of its financial and transaction advisor, will issue a Request for Proposals and invite local and international commercial banks to bid. This process is expected to start in June 2018, followed by banks' selection, mandate negotiations, banks due diligence, negotiation, and signing of the legal documentation.

2. CI-ENERGIES will be advised by an external legal counsel to support the company in negotiating the legal documentation. This is a critical component as these legal agreements, for a first international, long-term, structured, and non-sovereign transaction, will set a precedent for future financings the sector will have access to.

3. The implementation of the guarantee will include the drafting of the Guarantee Agreement which will be between IDA and the commercial banks agent. A Loan Agreement will be signed between the commercial banks and CI-ENERGIES and it is likely that the provision of the Guarantee Agreement will be included in the Loan Agreement; the Project Agreement signed between the World Bank and CI-ENERGIES; and the Indemnity Agreement between the Ministry of Finance and the World Bank.

Financial Management

4. The IDA Guarantee does not involve any financial management due diligence on the part of IDA.

Disbursements

5. Not applicable

Procurement

6. The IDA Guarantee does not involve IDA procurement due diligence. The World Bank Policy – Procurement in IPF and Other Operational Procurement Matters excludes the application of the Procurement Policy to procurements under World Bank Guarantees. A competitive tender will be organized by CI-ENERGIES' and its financial advisor to select the commercial bank(s) offering the most attractive terms for the debt refinancing.

Environmental and Social (including safeguards)

7. The proposed project is not expected to have any direct social impact. This guarantee operation will enable the refinancing of existing debt that has already been used in the power sector. Therefore, no direct physical investment will be realized on the ground which are associated with any potential adverse impacts. According to safeguards policies applicable to guarantee operations, it is mandatory to assess the Environmental and Social Management System (ESMS) of CI-ENERGIES (PS1 is therefore triggered). Such an assessment was conducted and concluded that CI-ENERGIES has an acceptable ESMS[22].

8. In addition to the PS1, the PS2 related to Labor and Working conditions is also triggered as CI-ENERGIES has to apply that PS on its own staff. The assessment has shown that staff work 40 hours a week and have annual and sick holidays, maternity and paternity leave, and insurance for themselves and their relatives. Staff of CI-ENERGIES have access to clean toilets, and offices are equipped with safe drinking water supply and health centers. Buildings are equipped with fire extinguishers and staff are regularly trained for their proper use. The working environment allows any employee to bring to the management attention any concern related to working conditions and/or bad behavior of a colleague. CI-ENERGIES has a work environment policy that guides staff behavior. Each staff has a contract stating the conditions of his/her employment, including benefits and training. No minors are employed by CI-ENERGIES. All these conditions are assessed as satisfactory.

9. The proposed project is a guarantee that is not expected to have any environmental impact. This guarantee operation will enable the refinancing of existing debt that has already been used in the power sector. Therefore, no direct physical investment will be realized on the ground which are associated with any potential environmental adverse impacts. The ESMS assessment of CI-ENERGIES concluded that CI-ENERGIES has an acceptable ESMS. CI-ENERGIES has an Environmental and Sustainable Development Department with two environmental specialists. The recruitment of a social development specialist is under way. The company has an Occupational Health and Safety (OHS) policy. In addition to that, it is also certified Quality Safety and Environment—ISO 9001 (2008), OHSAS 18001 (2007), and ISO 14001 (2004). On each site operated by CI-ENERGIES/CIE, there is an Internal Operation Plan (IOP) and staff are regularly trained for more effective and efficient interventions when needed. Regular drills and exercises are organized and the ESMS is audited annually.

10. In Côte d'Ivoire, the Ministry of Sanitation, Environment, and Sustainable Development is responsible for setting policy guidelines on environmental issues and ensuring compliance with national environmental standards. It has different departments among which the National Agency of Environment (Agence Nationale de l'Environnement) in charge of safeguards compliance of all projects in the country. The unit is well staffed but its capacities are considered moderate. The Project Implementation Agency, CI-ENERGIES, is familiar with World Bank safeguards policies, having recently implemented two World Bank-funded projects. However, this is not the case with respect to PSs that are new to it and on which no training has been undertaken yet. Despite this, there are no concerns because this operation is a guarantee and no safeguards work is expected. However, the environmental and social safeguards

[22] The ESMS of CI-ENERGIES was appraised as part of the preparation process of the ETAP (P157055) project, which went to the Board on March 9, 2017. The conclusions of the positive analysis were included in the PAD, annex 3 implementation arrangements.

specialists will be trained on the new environmental and social framework (PSs) so that they can be ready to handle safeguard aspects in full compliance with PSs.

Monitoring and Evaluation

11. There will be periodical reporting requirements including quarterly reports (key financial ratios), semiannual reports (unaudited Balance Sheet, Profit & Losses, and Cash Flow), and the annual audited financial statements that will be prepared by the Finance Department. Through this reporting, the World Bank will be able to monitor CI-ENERGIES' compliance with the financial covenants and ensure that the company uses a stricter financial discipline and proper financial planning, which are key for the financial sustainability path. CI-ENERGIES and the commercial banks agent will inform the World Bank about the request for drawdowns and their uses.

ANNEX 3: IMPLEMENTATION SUPPORT PLAN

Republic of Côte d'Ivoire
CI-ENERGIES' Guarantee Project

Strategy and Approach for Implementation Support

1. The Implementation Support Plan described in Tables 3.1 and 3.2 explains how the World Bank will support the implementation of the IDA Guarantee as well as the risk mitigation measures which has been identified as part of this s. The objective is to ensure that CI-ENERGIES successfully implements the project to achieve the PDO through the indicators included in the Results Framework.

Implementation Support Plan and Resource Requirements

2. **Implementation Support Plan.** The level of technical support needed includes staff with energy sector knowledge and expertise, specialized commercial Partial Risk Guarantee expertise including commercial legal counsel and financial experts, safeguards specialists, power engineering, and monitoring and evaluation expertise. The focus in terms of support during implementation is summarized in Tables 3.1 and 3.2.

Table 3.1. I-ENERGIES IDA Guarantee Project Costs

Time	Focus	Skills Needed	Resource Estimate
First 12 months	Effectiveness, selection of banks, loan and guarantee signature, political developments	Sector Financial, Economic, Legal Country team	US$150,000
12–48 months	Review of sector and CI-ENERGIES' financial performance; Review of policy and regulatory environment	Sector Financial, Economist Country team	US$100,000

Table 3.2. Matrix of Skill Mix Required

Skills Needed	Number of Staff Weeks	Number of Trips per Year	Comments
Team leader	4	2	—
Infrastructure finance specialist (Co-Task Team Leader)	4	2	—
Energy sector specialist	4	0	Local staff
Financial analyst	4	2	—
Energy economist	4	1	—
Lawyer	6	2	—

ANNEX 4: INDICATIVE TERMS AND CONDITIONS OF THE GUARANTEE

CÔTE D'IVOIRE: CI-ENERGIES Guarantee Project
Preliminary Summary of Indicative Terms and Conditions
of the Proposed IDA Guarantee

This draft term sheet contains a preliminary general summary of indicative terms and conditions of a potential loan guarantee ('IDA Guarantee') that could be provided by the International Development Association ('World Bank' or 'IDA') for the CÔTE D'IVOIRE: CI-ENERGIES Guarantee Project ('Project') with respect to which CI-ENERGIES and the Government of the Republic of Côte d'Ivoire are in discussions with IDA. This draft term sheet is for discussion purposes only and does not constitute an offer to provide an IDA Guarantee. The provision of the IDA Guarantee is subject, among others, to satisfactory appraisal of the project by IDA, compliance with all applicable policies of the World Bank, including those related to environmental and social safeguards, review and acceptance of the ownership, management, financing structure, and transaction documentation by the World Bank, and the approval of the management and the executive directors of IDA in their sole discretion.

IDA-guaranteed Loan (the Financing)	
IDA-guaranteed Loan Agreement:	Agreement among the Borrower, the Agent [on behalf of] [and the] Lenders and IDA as Guarantor setting out terms and conditions of the Financing, mechanism for payment on the Financing [and containing the Guarantee].[23]
Borrower:	CI-ENERGIES
Currency:	EUR and/or CFAF
Loan Principal Amount:	Equivalent amount of up to [EUR 400] millions
Term:	A CFAF-denominated local tranche expected at [7-10 years] A EUR-denominated international tranche expected at [10-15] years
Repayment of the Financing:	[Annual][Semi-annual]
Loan Interest Rate:	[Spread above EURIBOR acceptable to IDA] or [Interest rate acceptable to IDA]
Use of Proceeds:	[Payment of arrears to IPPs and gas supplies and refinancing of short term debt contracted by CIE on behalf of CI-ENERGIES]
Drawdown:	[TBD]
IDA Guarantee Agreement	
Guarantor:	International Development Association (IDA)
Parties:	IDA and the Guaranteed Lender.
Guarantee Face Value:	A partial amount of Financing not to exceed EUR 240 million or equivalent in CFAF
Guarantee Support:	IDA would guarantee the payment, following occurrence of a Guaranteed Event, of [principal and interest amounts] [selected, pre-agreed debt service payments] due on scheduled payment dates up to the Maximum Guaranteed Amount.
Guaranteed Events:	Failure by the Borrower to [make certain payments of [principal] [and interest] on] [repay at scheduled maturity the principal amount of] the IDA-guaranteed Loan.

[23] The Guarantee could be contained in the IDA Guaranteed Loan Agreement or separately in an IDA Guarantee Agreement between IDA and the Agent on behalf of the Lenders.

Guarantee Period:	[Tenor of the IDA-guaranteed Loan] plus period for final demand, if appropriate to guarantee structure.
Maximum Guaranteed Amount:	A partial amount of financing, not to exceed the Guarantee Face Value.
Amendments and waivers:	IDA will be entitled to be kept fully informed about any proposed waiver or amendment to the terms of the transaction. Certain amendments or waivers to the provisions of the finance documentation and IDA Guarantee, insofar as they relate to the IDA Guarantee, requires the prior written consent of IDA, including, but not limited to, any material amendment or modification to a finance document or any amendment or waiver that affects the rights and obligations of IDA.
Suspension:	IDA may, during the availability period for drawdown of the guaranteed financing, inform the Agent that no further drawdown of the guaranteed financing, from the date of notification by IDA up until such notice is revoked by IDA, will be covered by the IDA Guarantee upon the occurrence of the following types of scenarios, inter alia: (i) an event of default occurs under the guaranteed financing; (ii) the Borrower has breached a material obligation [under the Project Agreement] and such breach continues after any applicable cure period; or (iii) the Agent or a beneficiary of the IDA Guarantee engaged in certain sanctionable practices (fraud, corruption, coercion, collusion, obstruction) relating to the guaranteed financing. If the event giving rise to a suspension has been waived by IDA, or remedied to IDA's satisfaction, then IDA may revoke its suspension notice and let the Agent know which amounts are reinstated for coverage under the IDA Guarantee]. If such suspension continues for a period of [6] months, the IDA Guarantee will reduce permanently by the amount with respect to which IDA had suspended coverage.
Exclusion:	IDA is not liable for losses directly resulting from noncompliance with, or the invalidity, illegality or unenforceability of any transaction document under laws in effect on, or events occurring before, the date of the [IDA-guaranteed Loan Agreement]. IDA may deny payment to a beneficiary of the IDA Guarantee in the following types of scenarios, inter alia: (i) a sanctionable practice (fraud, corruption, coercion, collusion, obstruction) has been found to have been committed by the Agent or a beneficiary of the IDA Guarantee; (ii) the Agent or a beneficiary of the IDA Guarantee, inter alia, amends the guaranteed financing documents, or transfers, or assigns the financing to a non-commercial lender without IDA's prior written consent; (iii) the Agent or a beneficiary under the IDA Guarantee engages in Repackaging Arrangements in respect of the IDA Guarantee. If such withholding continues for a period of [12] months, IDA may terminate the IDA Guarantee in whole (in the case of a withholding event affecting the Agent or all Lenders) or in part.
Termination:	The Guarantee may be terminated, inter alia, if (i) an installment of the Guarantee Fee is not paid when due; (ii) an amendment, waiver, modification or other change is made or given relating to certain provisions of the finance documentation, IDA's rights or obligations, or the Guarantee without IDA's prior written consent, including but not limited to any material amendment or modification to a finance document or any amendment or waiver that materially and adversely affects the rights and obligations of IDA; (iii) following full payment of all guaranteed amounts; or (iv) after the final date for payment under the Guarantee.

No Discharge:	Neither the obligations of IDA under the IDA Guarantee nor the rights, powers and remedies conferred upon the Agent with respect to IDA by the IDA Guarantee or by applicable law or regulation shall be discharged, impaired or otherwise affected by: (i) any insolvency, moratorium or reorganization of debts of or relating to the Borrower; (ii) any of the obligations of the Borrower under the financing agreements being or becoming illegal, invalid, unenforceable, void, voidable or ineffective in any respect; (iii) any time or other indulgence being granted to the Borrower in respect of its obligations under the financing agreements; or (iv) any other act, event or omission (other than the failure of the Agent to make a timely and duly completed demand under the IDA Guarantee) which might otherwise operate to discharge, impair or otherwise affect any of the obligations of IDA under the IDA Guarantee or any of the rights, powers or remedies conferred on the Agent by the IDA Guarantee or by applicable law or regulation.
Reduction of Demand:	If, after the Agent has made a demand on IDA for payment under the IDA Guarantee, but before IDA has made payment of the amount so demanded, the Agent receives payment in respect of such amount from the Borrower (or the Agent recovers otherwise than from IDA) any sum which is applied to the satisfaction of the whole or any part of such amount, the Agent shall promptly notify IDA of such fact and IDA's liability under the IDA Guarantee in respect of such demand shall be reduced by an amount equal to the portion so paid by the Borrower (or so recovered by the Agent) and so applied.
Non-Accelerability of Guarantee:	The Guarantee cannot be accelerated and become payable prior to the scheduled debt service payment dates under any circumstances, including if the underlying Loan is accelerated as a result of a Guaranteed Event. In such instances, the IDA Guarantee will cover payment of debt service up to the Maximum Guaranteed Amount in accordance with the original payment schedule.
Conditions Precedent to Effectiveness of the IDA Guarantee:	Usual and customary conditions for financing of this type including but not limited to the following: a) Provision of relevant legal opinions satisfactory to IDA (including a legal opinion from the appropriate official of Republic of Côte d'Ivoire relating to the Indemnity Agreement and from CI-ENERGIES or counsel thereto on the Project Agreement); b) Payment [in full] of the Guarantee Fee; c) Conclusion of an Indemnity Agreement between IDA and Republic of Côte d'Ivoire, a Project Agreement between IDA and CI-ENERGIES, and any other applicable documentation, acceptable to IDA; and d) Satisfaction of any other conditions precedent under the financing documents.
Subrogation:	If and to the extent IDA makes any payment under the Guarantee, IDA will be subrogated immediately to the extent of such unreimbursed payment to the lenders' rights.
Right to Purchase:	[If IDA guarantees payment of interest, then upon payment default by the Borrower, IDA will have the right to purchase all rights, title and interests of the Beneficiaries in the Financing.]
Repackaging Arrangements:	The Guaranteed [Lenders] [Beneficiaries] will severally undertake for the benefit of IDA that, provided the IDA Guarantee remains in effect, they will not enter into or permit any of their affiliates to enter into any arrangement pursuant to which any security or other similar obligation is created or issued, the economic effect of which is the separation of rights of payment from IDA under the IDA Guarantee and of rights of payments from the Borrower under the financing, which is referred to as "Repackaging Arrangements".

Guarantee Fee (recurrent):	[75] basis points per year. The IDA Guarantee fee is charged on that portion of the guaranteed amount that IDA has contractually committed and for which IDA has financial exposure under the guarantee. Payment of this fee is the obligation of [CI-ENERGIES] and must be paid [in advance semi-annually] [in a one-time lump sum]. [Where the Guarantee Fee is payable in installments,] The Guarantee will terminate in the event of nonpayment of any installment of the relevant Guarantee Fee.
Governing law:	English Law or New York Law.
Indemnity Agreement	
Parties:	IDA and Republic of Côte d'Ivoire (the "Member Country")
Indemnity:	The Member Country will reimburse and indemnify IDA on demand, or as IDA may otherwise direct, for all payments under the Guarantee and all losses, damages, costs, and expenses incurred by IDA relating to or arising from the Guarantee.
Covenants:	[Usual and customary covenants included in agreements between member countries and IDA, as well as undertakings to pay the fees and expenses of IDA's external counsels and other advisors in connection with the Loan negotiation.] [Specific covenants to be determined]
Remedies:	If the Member Country breaches any of its obligations under the Indemnity Agreement, IDA may suspend or cancel, in whole or in part, the rights of the Member Country to make withdrawals under any other loan or credit agreement with IDA, or any IDA loan to a third party guaranteed by the Member Country, and may declare the outstanding principal and interest of any such loan or credit to be due and payable immediately. A breach by the Member Country under the Indemnity Agreement will not, however, discharge any guarantee obligations of IDA under the Guarantee.
Governing Law:	The Indemnity Agreement will follow the usual legal regime and include dispute settlement provisions customary for agreements between member countries and IDA.
Project Agreement	
Parties:	IDA and the Borrower
Representations and Warranties:	The Borrower will represent, among other standard and project-specific provisions, as of the effective date, that: (a) it is in compliance with applicable laws and the applicable World Bank guidelines, and other applicable requirements; and (b) neither it (nor its direct and indirect shareholders and any other relevant project participants, as determined by IDA), nor any of its affiliates has engaged in any Sanctionable Practices {"Sanctionable Practices" include corrupt, fraudulent, collusive, coercive, or obstructive practices, as defined in IDA's Anti-Corruption Guidelines.} in connection with the Project. [(c) Other specific Representations and Warranties to be determined]

Covenants:	The Borrower will covenant, among other things, that it will: (a) comply with applicable laws; (b) provide annual audited financial statements and other reports; (c) provide certain notices and other information to IDA; (d) provide access to the Project Implementation Agency; (e) not engage in (or authorize or permit any affiliate or any other Person acting on its behalf to engage in) any Sanctionable Practices in connection with the Project; (f) comply with World Bank requirements relating to Sanctionable Practices regarding individuals or firms included in the World Bank Group list of firms debarred from World Bank Group-financed contracts; and (g) obtain IDA's consent prior to agreeing to any change to any material Project related transaction document to which it is a party which would affect the rights or obligations of IDA under the Guarantee. [(h) use the proceeds of the disbursements under the IDA-guaranteed Loan exclusively for the project and in accordance with the terms and conditions of the IDA-guaranteed Loan Agreement.] [(i) Other specific Covenants to be determined] [(j) Usual and customary corporate finance financial covenants to be agreed]

ANNEX 5: ECONOMIC AND FINANCIAL ANALYSIS

Project Development Impact

1. The proposed project will provide an IDA Guarantee of not to exceed up to EUR 240 million (or CFAF equivalent) to enhance CI-ENERGIES' credit quality. It will enable the company to raise equivalent amount of up to EUR 400 million (part of which is potentially to be raised in equivalent amounts in Euros and/or CFAF) of new commercial debt with lower interest rate and longer tenor than the currently short-term and expensive financing available to it. This new debt will be used to restructure/replace a substantial portion of the sector's existing short-term commercial debt accumulated at the level of the CIE, the private operator. The result of this operation would be an expected reduction of the sector's annual financing costs and an increased sustainability of the cash waterfall to pay IPPs and gas suppliers. The operation is a first introduction of CI-ENERGIES to local and international banking markets and will facilitate CI-ENERGIES' access to commercial long-term financial sources in view of potential future investment financings.

2. This project represents a direct implementation of the World Bank's MFD approach that aims at prioritizing the use of private sector finance whenever possible. To maximize the impact of scarce public resources, this approach first seeks to mobilize commercial finance, enabled by upstream reforms where necessary to address market failures and other constraints to private sector investment at the country and sector levels. This approach prescribes that first private investments and commercial financing for projects need to be considered, together with risk instruments to try to encourage private investments, then PPPs, and if the first two are not available then, and only then, consider public and concessional financing.

Rational for Public Sector Provision/Financing

3. This operation is at the core of the financial sustainability of CI-ENERGIES and the sector as a whole. Beyond the direct positive impact of a short-term debt refinancing on CI-ENERGIES' cash flow position, the enhancement of its financial performance is expected to generate a cascade effect across the power sector - (a) by reducing off-taker risks, private partners such as IPPs and gas suppliers will increase their appetite to participate in the next round of generation projects; and (b) by reducing the financial costs and risks, utility customers will benefit from lower cost of electricity. Those benefits include leveraging scarce public IDA resources to mobilize larger amounts of commercial financing and limited sovereign borrowings.

4. The GoCDI needs to attract private capital to support its aspirations to scale-up infrastructure development, particularly in the energy sector. However, CI-ENERGIES has limited relationships with commercial banks and risks of lending to it remains high. Without some form of credit enhancement, it would be very difficult—if not impossible—for CI-ENERGIES to access the financial market to carry out this debt-restructuring process. The use of IDA support in the form of an IDA Guarantee to attract large amounts of private financing (in the form of commercial debt at lower rates and longer tenor represents an efficient use of public resources because it minimizes the contingent liabilities for the GoCDI). The all-public-sector alternative is suboptimal as it would require the GoCDI to take on additional sovereign debt to clear the sector's arrears and transfer the funds as subsidy to the sector. An IDA Guarantee will be backed by an Indemnity Agreement to be signed with the GoCDI, thus reducing the risk of the Government's action or non-action that would impact the project.

Value Added of the World Bank's Support

5. Successful World Bank experience with debt-restructuring processes across Sub-Saharan Africa and beyond has signaled to the financial market that an IDA Guarantee used as part of a comprehensive sector dialogue is able to provide private lenders with enough comfort to support a refinancing mechanism. Also, the World Bank is at the forefront in supporting Côte d'Ivoire's efforts to reform its power sector. Côte d'Ivoire needs to attract private capital to support its aspirations to become a regional supplier of low-cost electricity. However, key power sector players have limited relationships with commercial banks and risks on lending to power sector entities remain high. The use of targeted IDA Guarantees for sectoral risk mitigation represents an efficient use of the available IDA allocation to leverage substantial amounts of private capital at competitive rates. Increasing the share of commercial debt along with World Bank support not only shows private lenders and investors that the company is determined to be more commercially oriented, but also that the World Bank is a strategic partner in this effort.

Economic Analysis

6. The economic viability of the project was assessed by comparing the quantified economic costs and benefits of debt-refinancing process supported by an IDA Guarantee against a business as usual scenario (that is, no refinancing). However, the net benefits for this project go beyond what may be quantified. The effective economic benefit of an improved environment for the private sector as a consequence of the IDA Guarantee does not lend itself to quantification. Three sources of economic benefits have been identified for this project:

(a) **Opportunity cost of public funds to remedy the short-term debt.** The project generates economic benefits by avoiding direct public support from the GoCDI to CI-ENERGIES to pay down short-term debt. With the IDA Guarantee, CI-ENERGIES financial needs will be covered with private sector capital, therefore, the GoCDI may use those funds in other sectors where the use of public funds is required because of the limited availability of private capital.

(b) **Building a credit history for CI-ENERGIES.** The project assists CI-ENERGIES in accessing long-term commercial financing for the first time. Building credit history and experience with financial discipline will allow CI-ENERGIES to finance future, planned investment in the sector.

(c) **Enabling system efficiencies by unlocking sector investments.** The debt-restructuring process is crucial for the successful implementation of the sector's investment pipeline; should the project not be implemented, the entire sector may suffer the reverberations from a financial crisis in the main power utility, which would simply translate into a delay of planned infrastructure investment projects.

7. However, due to the difficulty in the estimation of the economic flows of the first two benefit streams, the economic analysis focuses on the quantification of the economic benefits from enabling system efficiencies by unlocking sector investments.

Methodology and Assumptions

8. The net economic benefits for the project were calculated by comparing the incremental generation costs for the 'with project' and 'without project' scenarios, under the same steady power demand growth outlook.

9. While the 'without project' scenario would potentially entail delays in investment projects across the entire sector value chain over an indefinite time period, a conservative approach would assume —at minimum—that projects for which private capital is required (that is, the three Combined Cycle Gas Turbines (CCGTs): Azito IV, Ciprel V, and Songon and the Vitol domestic gas project) are delayed by at least one year compared to the 'with project' scenario due to increased risk perception in the market. Under this assumption, emergency heavy fuel oil (HFO)-fired power generation would thus be required to serve the load.

10. Table 5.1 summarizes the estimated production output (GWh-denominated) and generation costs (expressed in CFAF, millions, and CFAF per megawatt hour [MWh]) for existing and future hydro and renewables, existing and future gas-fired generation, and emergency HFO-fired power plants, for both scenarios, with and without the IDA Guarantee project.

11. In generation costs, the following elements have been considered for the analysis of the power-generation capacity and the estimate of its cost base for the two scenarios (see Table 5.1):

(a) **Fuel cost.** The cost of fuel for each of the thermal generators supplying electricity to the grid based on the electricity generated from each. From 2018–2025, this includes the cost of existing natural gas plants, future natural gas plants, and emergency HFO plants.

(b) **Energy cost.** The energy cost is the product of the unit energy cost and the total generation at each power plant or the cost of the take-or-pay requirement if the plant is not fully utilized. The energy cost is what each generator (state-owned and IPPs) charges the distribution company for the fixed and variable cost of providing electricity. From 2018–2025, all types of generators (hydro, renewables, and gas) and the emergency HFO plants charge energy cost per kWh.

12. The conservative 'without project' scenario considers the following:

(a) The CCGT plants planned for commissioning in 2019–2025 are delayed one year. This includes Azito IV, CIPREL V, and Songon.

(b) Domestic gas production from Vitol is delayed one year.

(c) The energy cost of new plants is 2 percent higher because of the heightened risk caused by continued arrears to current IPPs.

(d) HFO-fired emergency power is available for dispatch to meet the total load. It is conservatively assumed that there is no fixed capacity charge for the emergency plants. The cost is only the energy charge when dispatched and the fuel cost.

Table 5.1. Economic Analysis: Impact of Delayed Sector Investment

With IDA Guarantee project									
Year	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
Production output (GWh)									
hydro	2,670	2,370	2,370	2,370	2,762	2,781	3,505	3,948	4,441
renewables	0	0	0	0	396	421	753	753	871
gas-fired	7,948	9,182	10,284	11,081	11,112	12,054	11,911	12,399	12,734
liquid-fired	0	0	0	0	0	0	0	0	0
Total	10,618	11,552	12,654	13,451	14,271	15,256	16,168	17,101	18,046
Generation cost (FCAF million)									
hydro	40,950	40,950	40,950	40,950	56,648	57,699	98,221	120,371	142,377
renewables	0	0	0	13	29,649	30,171	50,884	51,185	58,536
gas-fired	388,989	465,204	523,530	541,799	529,363	597,350	592,095	597,013	607,897
liquid-fired	0	0	0	0	0	0	0	0	0
Total	429,939	506,154	564,480	582,761	615,660	685,220	741,200	768,569	808,810
Generation costs (FCAF/MWh)									
hydro	15.3	17.3	17.3	17.3	20.5	20.7	28.0	30.5	32.1
renewables	0.0	0.0	0.0	60.0	74.8	71.6	67.6	68.0	67.2
gas-fired	48.9	50.7	50.9	48.9	47.6	49.6	49.7	48.1	47.7
liquid-fired	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	40.5	43.8	44.6	43.3	43.1	44.9	45.8	44.9	44.8

Without IDA Guarantee project (1-year delay in CCGT and domestic gas development)									
Year	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
Production output (GWh)									
hydro	2,670	2,370	2,370	2,370	2,762	2,781	3,505	3,948	4,441
renewables	0	0	0	0	396	421	753	753	871
gas-fired	7,948	8,792	8,062	10,256	10,485	10,775	11,911	11,435	12,732
liquid-fired	0	405	2,222	825	689	1,279	0	1,016	2
Total	10,618	11,568	12,654	13,451	14,332	15,256	16,168	17,153	18,046
Generation cost (FCAF million)									
hydro	40,950	40,950	40,950	40,950	56,962	58,034	99,366	121,959	144,406
renewables	0	0	0	13	30,242	30,775	51,902	52,209	59,707
gas-fired	388,989	400,829	469,550	514,052	502,577	513,113	550,140	579,101	610,645
liquid-fired	0	80,345	114,958	88,185	85,582	97,090	72,375	91,857	118
Total	429,939	522,123	625,459	643,201	675,362	699,011	773,783	845,126	814,876
Generation costs (FCAF/MWh)									
hydro	15.3	17.3	17.3	17.3	20.6	20.9	28.4	30.9	32.5
renewables	0.0	0.0	0.0	61.2	76.3	73.0	69.0	69.3	68.6
gas-fired	48.9	45.6	58.2	50.1	47.9	47.6	46.2	50.6	48.0
liquid-fired	0.0	198.2	51.7	106.9	124.2	75.9	0.0	90.4	60.1
Total	40.5	45.1	49.4	47.8	47.1	45.8	47.9	49.3	45.2

Greenhouse Gas Estimation

13. The delay in the commissioning of CCGTs will affect the generation mix between 2019 and 2025, as emergency rental plants are needed to cover the electricity demand. The expected GWh to be replaced each year is shown in Table 5.2. Based on the emission factors for emergency HFO diesel generation and gas thermal generation in the country, it can be estimated that the greenhouse gas emission trajectory of

the project scenario (with project) and baseline scenario (without project), would result in the abatement of about 1.4 million tCO_2 over the forecasting period.[24]

Results

14. The net economic benefits of the IDA Guarantee to Côte d'Ivoire's energy sector, and the total generation costs for the power capacity used in both scenarios are shown in Table 5.2. Assuming the cost of the IDA Guarantee is represented by its face value (US$288 million plus fees), the baseline NPV (excluding environmental impacts) for the proposed IDA Guarantee is estimated at US$61 million (at 9 percent discount rate), with an EIRR of 13 percent. If the impact of the net emissions reductions is included, the NPV of the project is US$102 million with an EIRR of 16 percent.

Table 5.2. Main Highlights for the Economic Analysis Results (US$, millions)

Year	With Project		Without Project	Net Economic Benefit	Net Emissions Reductions	Net Economic Benefit (including emissions reductions)
	World Bank Guarantee (including fees)	Generation Costs	Generation Costs			
2018	-288					
2019	—	723	723	—	—	—
2020	—	849	875	27	4	30
2021	—	946	1,047	102	19	121
2022	—	976	1,077	101	7	108
2023	—	1,031	1,131	100	7	107
2024	—	1,147	1,170	23	12	35
2025	—	1,240	1,295	54	—	54
2026	—	1,286	1,414	128	11	139
2027	—	1,353	1,363	10	0	10
		Discount Rate		9%		9%
			NPV	61		102
			EIRR	13%		16%

Sensitivity Analysis

15. A sensitivity analysis was run to test the robustness of the economic viability of the project, the analysis was performed through a 'switch value' mode to test the lower boundaries of the analysis. The analysis was performed excluding the impact of environmental benefits as a conservative basis. Table 5.3 summarizes the results of two scenarios compared to the base case results:

(a) **Scenario 1.** It assumes that only one CCGT is delayed, while the rest of private sector investments occur as currently planned. The results show that even a single-year delay in

[24] Carbon prices extracted from the 2017 Shadow Price of Carbon Guidance Note, low price scenario.

the commissioning of one CCGT is sufficient to demonstrate the economic feasibility of the project.

(b) **Scenario 2.** It assumes a drop in the cost of HFO from US$400 per ton in the base case to US$250 per ton (this low-price scenario is consistent with the low global oil price observed over the past few years). The results show that even under historically low HFO prices, the project remains economically feasible.

Table 5.3. Main Highlights for the Economic Analysis Results

	Base (No Environmental Impact)	Scenario 1: Only First CCGT Delayed	Scenario 2: Low Oil Price (US$250 per ton)
NPV (at 9% discount rate)	61	42	9
EIRR (%)	13	13	10

Financial Analysis

Historical Analysis

16. The following financial analysis was performed based on information provided by CI-ENERGIES for the fiscal year ended on June 30 of 2012, 2013, 2014, 2015, and 2016. Financial projections were prepared in collaboration with CI-ENERGIES' transaction advisor.

17. CI-ENERGIES has experienced a large growth of its revenues from 2013 to 2017. Its revenues from the sale of electricity, that is, excluding Government subsidies, grew from CFAF 352 billion in 2013 up to CFAF 540 billion (US$1.1 billion) in 2017, a 53 percent increase over the period. Until 2015, the GoCDI subsidized CI-ENERGIES to cover the tariff shortfall. However, since 2014, CI-ENERGIES started keeping a portion of the value added tax (VAT) it collected on behalf of the GoCDI[25] to cover part of its revenue shortfall. This mechanism replaced the subsidy that was provided by the GoCDI previously and generated CFAF 42 billion of additional revenue for CI-ENERGIES in 2017.

18. **Operating costs have remained under control.** While CI-ENERGIES' revenues from the sale of electricity grew by 53 percent, its operating costs grew at a similar pace at 52 percent, increasing from CFAF 390 billion in 2013 up to CFAF 595 billion in 2017. Operating costs remained under control despite a 65 percent increase in power and fuel costs in part because the fees payable to the CIE increased only by 20 percent over the same period. While the fees due to the CIE accounted for 27 percent of CI-ENERGIES' operating costs in 2013, they only accounted for 21 percent in 2017. Fuel costs increased significantly in 2014, 2015, and 2016 as the U.S. dollar appreciated strongly against the CFA franc, making U.S. dollar-denominated gas purchases costlier for CI-ENERGIES.

19. While CI-ENERGIES' revenues were growing, its receivables grew at a significantly faster pace. Between 2013 and 2017, arrears increased by CFAF 254 billion, or the equivalent of five months of 2017 revenues. A combination of factors is responsible for the increase in receivables. Increases in fuel bills triggered by the U.S. dollar appreciation made it more difficult for CI-ENERGIES to honor all its payment obligations while reduction in collection rates with private customers—resulting from tariff increases—

[25] CI-ENERGIES keeps 11.11 percent out of the 18 percent VAT.

and collection issues with public customers and export clients created an unsustainable financial situation for CI-ENERGIES.

20. As a result of a large increase in receivables, CI-ENERGIES had to delay payments to its power and gas suppliers. From 2013 to 2017, CI-ENERGIES' payables increased by CFAF 360 billion, or the equivalent of seven months of operating costs, and short-term debt started accumulating to cover payment shortfalls.

21. CAPEX have been financed with debt. While annual CAPEX in 2013 were only CFAF 20 billion, they grew to CFAF 175 billion in 2017. Because CI-ENERGIES was unable to finance these expenditures from its free cash flow from operations, CI-ENERGIES resorted to borrowing to finance its development.

22. Therefore, over the past five years, the combination of the increase in receivables and the ramp-up of CI-ENERGIES' CAPEX program led CI-ENERGIES to accumulate payment arrears owed to its power and gas suppliers of CFAF 146 billion (US$272 million) and a short-term debt of CFAF 184 billion (US$343 million).

The Sector's Cash Waterfall Mechanism

23. A sector revenue cash waterfall mechanism was put in place to organize payments to the various stakeholders in the energy sector. The objective of this cash waterfall mechanism was to increase financial discipline in the sector and to ensure that payments to suppliers would not be made at the discretion of the CIE or CI-ENERGIES. Revenues collected from the sale of electricity are paid in the following order:

(a) Payment to CIE, the private operator,

(b) Payments to IPPs and gas suppliers,

(c) Other sector expenses,

(d) Collection of taxes, subsidies, state share of gas,[26] and payments for capacity expenditures and maintenance,

(e) Debt service, and

(f) Other escrow accounts and stabilization fund.

24. Exceptions have been granted to deviate from the normal allocation of revenues. CI-ENERGIES and ANARE's operating costs are paid out of Category A instead of Category C, the share of VAT that the sector keeps is paid in Category A instead of E to help repay debt that has been contracted to finance capacity expenditures and not all IPPs and gas suppliers have been paid pari passu in Category B, that is, some IPPs or gas suppliers have been prioritized over others. Deviations from the cash waterfall mechanism are a negative signal sent to market participants as it undermines confidence that payment flows will be made according to the agreed mechanism.

[26] The GoCDI contributes to the power sector's cash waterfall with revenues from its share of gas in its indigenous gas fields in excess of CFAF 50 billion per year.

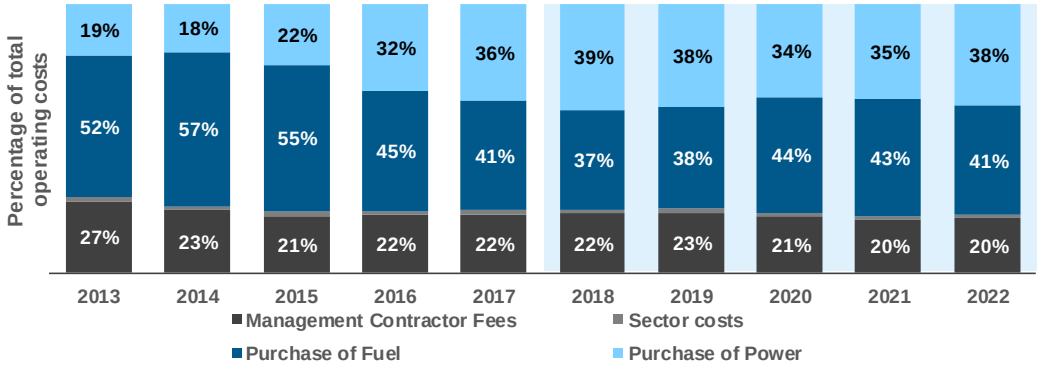
Financial Projections

25. Increase in revenues is to be driven by increased demand. Electricity demand in Côte d'Ivoire is closely linked to GDP growth, the elasticity of demand versus GDP growth has historically been 1.15 on average. Assuming a GDP growth of 7 percent to 8 percent in the next five years, the power demand should grow at a slightly higher pace. An 8.4 percent compound annual growth rate of electricity demand from 2017 to 2022 has therefore been assumed in the financial projections.

26. The cost of power is expected to remain under control as new hydro capacity is added to the grid and gas take-or-pay volumes are renegotiated. The addition of the recently commissioned Soubré hydropower plant is going to have a positive impact on the cost of power as the power produced by the plant is cheaper than thermal plants and will require a lower use of natural gas. This improvement in the energy mix is going to result in lower costs of power for CI-ENERGIES. The volumes negotiated on take-or-pay contracts for the supply of gas are also expected to be adjusted to ensure that CI-ENERGIES does not have to pay for a surplus of gas that may not be required in 2018 and 2019. For these reasons, cost of fuel is expected to remain close to 40 percent of CI-ENERGIES' operating costs in the next five years, or significantly below the 55 percent and 57 percent it reached in 2014 and 2015 when the U.S. dollar appreciated 25 percent in just a few months.

27. Efficiency measures are expected to improve CI-ENERGIES' operating performance. Collection rates are expected to increase from 92 percent up to 98 percent while transmission losses are expected to reduce to 6 percent, down from 8 percent.

Figure 5.1. CI-ENERGIES Operating Cost Breakdown



28. Operating margins are expected to remain positive despite the lack of tariff increase until 2021. The increase in demand coupled with the addition of more hydropower to the energy mix is expected to generate an operating margin of 10 percent on average of the next five years. CI-ENERGIES should therefore be in a position to cover its operating costs going forward.

29. The company will still have to rely on debt, state share of gas, and Government subsidies (including VAT) to finance its development. Cash flow from operations are expected to average CFAF 100 billion in the next five years, which will not be sufficient to undertake the ambitious investment plan contemplated by CI-ENERGIES. CAPEX over the next five years are expected to increase 200 percent compared to the past five years. Consequently, in addition to securing revenues from the state share of

gas, additional sources of funding such as concessional debt, commercial debt, and grants will have to be sought by the company to finance its development.

Risks

30. **Appreciation of the U.S. dollar.** Because the gas supply contracts with gas suppliers are denominated in U.S. dollars, any appreciation in the U.S. dollar versus the CFA franc would result in increased fuel costs that may not be compensated by a tariff increase. This risk materialized from 2014 to 2016 when the U.S. dollar sharply appreciated and had a negative impact on CI-ENERGIES' profitability. Going forward, 45 percent of CI-ENERGIES' operating costs are denominated in U.S. dollars and therefore exposed to the risk of U.S. dollar appreciation. The sector could consider hedging its U.S. dollar exposure on a rolling basis to avoid fuel cost shocks. The World Bank will assist CI-ENERGIES in arranging a possible hedging mechanism if this is shown to yield cost savings.

31. **Lower-than-expected demand growth.** CI-ENERGIES' financial recovery hinges on a sustained growth of power demand in Côte d'Ivoire. The lack of projected tariff increases in the next two to three years means that the growth in revenues is solely driven by demand growth. In the event of a slowdown of economic growth at a regional or country level, the likely resulting lower power demand would put pressure on CI-ENERGIES' operating margin. The decrease in expected revenues would only be partially offset by a decrease in costs as CI-ENERGIES would have to honor take-or-pay obligations even if electricity demand were lower than expected.

32. **No improvement in collection rates.** While CI-ENERGIES is implementing measures to increase collection rates, the objective of reaching a 98 percent collection rate in the sector may not materialize. The nonachievement of this target would result in a cash shortfall that may jeopardize CI-ENERGIES' ability to meet all its payments' obligations. Should collection rates not improve and remain at the current level, CI-ENERGIES' revenues would be 4 percent lower than expected in the base case.

33. **Increase in receivables from public entities.** Assuming a successful refinancing and cleanup of the arrears to IPPs and gas suppliers, CI-ENERGIES could end up accumulating arrears again should payment delays arise in the power sector. The resulting buildup of receivables would trigger a corresponding buildup of payables and short-term debt that would eventually need to be addressed by the GoCDI.