

**COMBINED PROJECT INFORMATION DOCUMENTS / INTEGRATED
SAFEGUARDS DATA SHEET (PID/ISDS)
CONCEPT STAGE**

Report No.: PIDISDSC15237

Date Prepared/Updated: 17-Nov-2015

I. BASIC INFORMATION

A. Basic Project Data

Country:	Cote d'Ivoire	Project ID:	P157055
		Parent Project ID (if any):	
Project Name:	Cote d'Ivoire - Electricity Transmission and Access Project (P157055)		
Region:	AFRICA		
Estimated Appraisal Date:	25-Apr-2016	Estimated Board Date:	28-Jul-2016
Practice Area (Lead):	Energy & Extractives	Lending Instrument:	Investment Project Financing
Sector(s):	Transmission and Distribution of Electricity (80%), General energy sector (20%)		
Theme(s):	Rural services and infrastructure (100%)		
Borrower(s):	Government of Cote d'Ivoire		
Implementing Agency:	CI-Energies		
Financing (in USD Million)			
	Financing Source		Amount
	Borrower		5.00
	IDA Credit from CRW		100.00
	Financing Gap		5.00
	Total Project Cost		110.00
Environmental Category:	B - Partial Assessment		
Concept Review Decision:	Track II - The review did authorize the preparation to continue		
Is this a Repeater project?	No		
Other Decision (as needed):			

B. Introduction and Context

Country Context

1. Cote d'Ivoire, with its 23 million inhabitants, is the largest economy in the West African Economic and Monetary Union (WAEMU) and has major economic influence over the rest of the region. It has experienced a robust economic recovery in the wake of its recent political crisis, with GDP growth reaching 7.9 percent in 2014, one of the highest rates in Sub-Saharan Africa (SSA). Sustained progress on structural reforms facilitated the country's impressive performance. In the wake of the 2010 post-elections crisis the country has embarked on an extensive reform program aimed at leveraging its considerable endowments of human capital, natural resources and infrastructure to generate robust, broad-based and sustainable economic growth facilitated by the active engagement of the donor community.

2. Real GDP per capita increased by more than 20 percent during the 2012-2014 period. A combination of good weather conditions and the establishment of farm-gate floor prices for key export crops bolstered agricultural production. Meanwhile, a combination of public and private investment generated a boom in the construction sector. An estimated 2,800 firms were established or formalized in 2013, underpinning a remarkable increase in formal-sector employment. These developments reflect the highly positive response of the private sector to the surge in public investment that began in 2012, as well as rising investor confidence as the political situation stabilized. Policies designed to improve the business environment and a significant reduction in arrears on domestic public debt further stimulated private-sector growth.

3. Côte d'Ivoire's growth prospects are strong, with growth rates of 7-8 percent expected over the medium term, and its macroeconomic framework continues to reflect the importance of maintaining fiscal discipline while prioritizing public investment. The 2015 budget calls for a significant expansion in public investment financed by a combination of donor inflows, domestic borrowing and a moderate increase in tax revenues.

Sectoral and Institutional Context

4. Household access to electricity, at about 27 percent, is relatively low compared to the per capita income of Cote d'Ivoire, which is above US\$1,400. The electricity "penetration" rate is around 40 percent (number of electrified villages out of the total number of villages in Cote d'Ivoire), indicating that a significant part of the population in electrified areas is unable to get a grid connection, despite available supply.

5. The country currently has a tight electricity supply-demand situation. Given high GDP growth, electricity demand has been increasing by over 10 percent annually for the past several years. Electricity consumption in 2014 was 5,569 GWh and peak demand reached 1,148 MW. Installed (nameplate) generation capacity exceeds 1,600 MW, but electricity supply is not keeping up with demand. Generation from hydroelectric plants (600 MW) contributed 23 percent of total production in 2014, with local natural gas providing the bulk of the rest. Liquid fuel accounts for only 6 percent of generation but weighs heavily on the overall costs of the sector.

6. Cote d'Ivoire has a substantial hydroelectric potential capacity of over 1,900 MW, which can theoretically generate about 10,000 GWh/year. Despite this significant untapped hydroelectric potential, only the 270 MW site on the Sassandra River (Soubré) is under construction, the first hydro plant to be built in the past 30 years. It is due to be commissioned in late 2017. Other potentially attractive hydro sites are not yet at sufficiently advanced stages of technical

preparation to be commissioned before 2020. Although, the country has a number of thermal generation projects planned to secure additional power supply in the medium term, new thermal independent power projects are handicapped by a lack of gas supply. Local gas production (about 180 mmcfd) is no longer sufficient to meet power sector demand and is not expected to rise significantly due to a lack of new gas discoveries. Importing gas in liquefied form (LNG) has been studied and found to offer a credible supply option. An LNG project is being prepared by the Government of Cote d'Ivoire (GoCI) as a public private partnership (PPP).

7. Cote d'Ivoire is the only significant regional electricity exporter at present, despite the tight supply-demand balance in the country. In 2014, it exported 897 GWh to four clients: EDM in Mali, VRA in Ghana, CEB for Benin-Togo, and SONABEL in Burkina Faso. Going forward, Cote d'Ivoire is well positioned to be the main hub of electricity trading in the sub-region as the West Africa Power Pool (WAPP) transmission line interconnections to Liberia and beyond are built. The recently passed electricity law has removed the monopoly of the system operator, Compagnie Ivoirienne d'Electricité (CIE), thereby giving third parties access to its transmission network. CIE is a private company that operates and maintains the Ivorian power system (for a fee) on behalf of the state-owned asset holding company, Cote d'Ivoire-Energies (CI-Energies), which is responsible for undertaking and financing all capital investments in the network. Virtually all thermal power generation is in the hands of IPPs, while the hydro plants are state-owned.

8. The Ivorian electricity sector faces several challenges and constraints, many of them resulting from the lack of investment during the long political crisis. The transmission and distribution networks are old and overloaded and there has been little funding for rehabilitation and reinforcement over the past decade. Tariffs did not keep up with inflation and furthermore were based upon a predominantly hydro supply cost structure, while thermal power grew increasingly dominant in the generation mix. GoCI has recently announced significant tariff increases spread over the next 18 months, which will significantly help to move the sector towards full cost recovery.

9. CI-Energies has yet to mobilize funding for a major upgrade of the medium and high voltage network. Total energy losses are about 22 percent and cannot be addressed without substantial investment in the network. The recently completed master plan estimated that investments of about US\$1.6 billion are required over the next decade in transmission and a further US\$400 million in distribution. As new generation capacity and transmission lines investments are ongoing, HV substations and the distribution network are increasingly the critical links of the energy value chain. They risk becoming the limiting factors that would constrain the sector's ability to underpin Cote d'Ivoire's sustained economic growth over the next several years. The electricity grid is also very extensive in Cote d'Ivoire, so a large increase in access/connections could be achieved through densification with relatively modest investments. However, an access expansion program will have to be accompanied by substantial grid rehabilitation and upgrading.

11. The country is mobilizing financial resources to invest in transmission lines and substation expansion from lenders like AfDB and BOAD. Assistance from China of about US\$800 million is also expected for the construction of new transmission lines. A major fund raising effort is planned for the access expansion program (more below).

12. To accelerate access to electricity for the population, in May 2014 the Government adopted a

crash program "Electricity for All", with a target of 200,000 new customer connections per year through a dedicated funding vehicle (FPEPT), which would eliminate the current barrier to access that the present high upfront connection charge represents. It would prefinance (for low-income households) the cost of both a grid connection and a standardized internal house-wiring kit. Beneficiaries would only pay a symbolic fee of less than US\$2 dollars to participate and would be able to repay the cost of the connection over a time period as long as 10 years. As currently designed, the FPEPT would be funded by the State, development partners, and commercial loans from the capital market. This initiative is expected to bring access to electricity to around one million households over five years.

13. The National Program for Rural Electrification (PRONER) was also launched in 2014. Its objective is to increase the penetration rate of electricity to 81 percent in 2020 and the coverage rate to about 80 percent of the population. The PRONER is a strong commitment of GoCI 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. These programs, which are expected to require capital investments of US\$850 million over a five-year period are expected to be presented to donors for concessional financing at a round table conference planned for early 2016.

Relationship to CAS/CPS/CPF

14. The proposed project is aligned with the most recent Country Partnership Framework (CPF, 2016-2019) objective of strengthening economic infrastructure to accelerate private-sector led economic growth. It would help currently under-served regions of the country attain acceptable levels of basic services, which depend upon a supply of electricity. It would also go some way towards redressing the heavy, Greater Abidjan-centric pattern of infrastructure service provision in Cote d' Ivoire. The preceding IDA-funded Urgent Electricity Rehabilitation Project (that closed at end-2014), was the Bank's re-engagement in the sector after a considerable gap. It addressed urgent distribution system rehabilitation needs and helped electrify unserved peripheral neighborhoods of Abidjan, but on a modest scale, due to IDA envelope constraints in the immediate post-conflict environment.

15. The proposed project is also aligned to the World Bank's Energy Strategy, 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.

C. Proposed Development Objective(s)

Proposed Development Objective(s) (From PCN)

16. The project development objective is to improve the reliability of electricity supply and increase access to electricity.

Key Results (From PCN)

The proposed PDO indicators are:

17. The proposed PDO indicators are:

- (a) Reduction of outages and average outage durations in upgraded substations (hours)
- (b) Increase in capacity of substations upgraded (MW);
- (c) Losses in the upgraded high voltage substations (percentage);
- (d) Number of households connected to the grid under the project (number) and
- (e) Direct project beneficiaries (number), of which female (percentage).

D. Concept Description

18. The proposed project would support investments in high voltage substations and transformers, as well as access expansion investments drawn from the recently completed long-term Generation and Transmission Master Plan, the GoCI Electricity for All Program and Rural Electrification Master Plan. As new generation capacity and transmission lines are under construction, substations and the distribution network are increasingly the critical links of the energy value chain and the potential limiting factors needing to be upgraded. In the absence of such reinforcement, energy losses will rise and the power supply will become increasingly unreliable. The Access Expansion component of the project will profit rural areas where economic activities and service provision are constrained by the lack of electricity. Finally, the proposed project will also provide targeted capacity building support to the stakeholders involved in implementation of the Project.

19. Component 1: Substations and Transformers. (US\$45 million, IDA). Analysis of the transmission network provided in Generation and Transmission Master Plan showed many overloaded lines and transformers without (n-1) security in selected substations, causing a deterioration of quality of electricity supply and unacceptably high energy loss levels. This component would finance selected high priority investments identified as follows:

Sub-Component 1.1: Extension and upgrade of Gagnoa and Divo 90kV substations to 225kV (US \$17 million). The transmission network around the town of Gagnoa (pop. 170,000) is characterized by high level of electrical demand connected to 90kV substations. In the medium term, the total power demand of this network will reach 200MW. Hence, the two existing 90kV single circuit lines cannot convey the power needs for the three substations in the region (Hire, Divo and Gagnoa). Hence, this subcomponent would finance transmission network upgrades to reduce overloaded substations and voltage drop issues by replacing the existing Gagnoa 90kV substation by a new 225/90 kV one and by adding about 45km of 225kV T-line interconnections.

Sub-Component 1.2: Installation of high-voltage transformers and extension of selected overloaded transmission substations (US\$28 million). This subcomponent would fund investments identified in the Generation and Transmission Master Plan. HV/MV transformers would be installed in selected overloaded HV substations in order to improve security of supply, (n-1) security and reduce losses. This subcomponent will contribute to maintain the voltage level of the transmission grid by installing compensation devices in selected substations to comply with operating voltage standards and reduce losses.

20. Component 2: Rural electrification and Electricity Access (US\$52 million, IDA): The component will support access scaling up as follows:

Sub-Component 2.1: Rural Electrification (US\$42 million). Funding for the MV and LV networks required to electrify about 200 new localities in selected rural areas, and the associated household connections in support of the National Program for Rural Electrification.

Sub-Component 2.2: Funding of the Electricity for all Program (US\$10 million). This component would provide direct financing for the GoCI Electricity for All Program (PEPT), which provides subsidies for household connections (including internal house wiring) to obtain grid supply. About 30,000 households in new localities electrified under subcomponent 2.1 would be the

beneficiaries of this sub-component.

21. Component 3: Strengthening institutional capacity in the electricity sector (US\$8 million,): This Component will support capacity building and project management.

Sub-Component 3.1: (IDA, US\$3 million) Capacity building of key sector institutions and other relevant stakeholders in order to ensure that the implementation of the program is successful. The support provided under this sub-component will benefit the sector as a whole. Capacity building activities will be identified during project preparation to be complementary to support from other donors.

Sub-Component 3.2: Project Management (CI-Energies, US\$5 million). This will include the cost of managing the project, including the hiring of key experts to be identified during project preparation, and an Owner's Engineer for supervision of works.

II. SAFEGUARDS

A. Project location and salient physical characteristics relevant to the safeguard analysis (if known)

22. Project's activities will be implemented in urban, peri-urban and rural areas in the entire country.

B. Borrower's Institutional Capacity for Safeguard Policies

23. The Recipient has several years of experience in applying and implementing World Bank projects. There are considerable legal and institutional frameworks in the country to ensure compliance with World Bank safeguards policies triggered by the proposed project. In Cote d'Ivoire, the Ministry of Environment, Urban health and Sustainable Development (MINESUDD) 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 (ANDE, Agence Nationale de l'Environnement) in charge of safeguards compliance of all projects in the country. The unit is well staffed and its capacities are acceptable. With regard to the PCU, capacity building efforts to support project implementation will be done by implementing recommendations contained in the safeguards instruments prepared for the project. The project will also receive guidance from the Bank's environmental and social specialists in the Project team.

C. Environmental and Social Safeguards Specialists on the Team

Abdoulaye Gadiere (GENDR)

Peter F. B. A. Lafere (GSURR)

D. POLICIES THAT MIGHT APPLY

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	The project will replace the existing Gagnoa substation and add c.45km 225kV T-lines. About 200 new rural localities will be connected to the grid. A limited Environmental and Social Impact Assessment will be prepared for the new Gagnoa S/stn, for which the location is already known. Exact locations for other investments are not yet known, so

		an ESMF will be developed. After their preparation both safeguard instruments will be reviewed, consulted upon and disclosed in RCI and at the Infoshop.
Natural Habitats OP/BP 4.04	No	The policy is not triggered under the proposed project because any activity will not be undertaken near or inside critical ecosystems.
Forests OP/BP 4.36	TBD	It is not anticipated that the project will have negative impacts on forests. However, the triggering or not of the policy will be determined later based upon the data to be gathered.
Pest Management OP 4.09	No	The project does not involve pest management.
Physical Cultural Resources OP/BP 4.11	Yes	This policy is triggered because the project will support construction of substations and power distribution networks that may need earth excavations. However, it is not anticipated that investments under the project affect cultural resources. But in order to anticipate and to be sure that all the precautions have been taken to protect and safeguard physical cultural resources, the ESMF to prepare in accordance with OP/PB4.01 will include a chapter addressing these concerns.
Indigenous Peoples OP/BP 4.10	No	There are no indigenous people as defined by the policy in the project area
Involuntary Resettlement OP/BP 4.12	Yes	The extension of the transmission/work, installation of HV transformers & electrification of 200 villages is likely to result in involuntary resettlement and land acquisition, which could be temporary or permanent, & may require physical relocation of people. As a number of the projected investments sites will only be identified during implementation, a Resettlement Policy Framework will be developed. A Resettlement Action Plan will be prepared for the new Gagnoa S/stn as it involves land acquisition.
Safety of Dams OP/BP 4.37	No	The project will not finance any dam construction nor rely on dams.
Projects on International Waterways OP/BP 7.50	No	The project will not finance any activities with impacts on international waterways.
Projects in Disputed Areas OP/BP 7.60	No	The project will not finance any activities in disputed areas.

E. Safeguard Preparation Plan

1. Tentative target date for preparing the PAD Stage ISDS

31-Mar-2016

2. Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing should be specified in the PAD-stage ISDS.

The borrower will prepare an Environmental and Social Management Framework (ESMF), a Resettlement Policy Framework (RPF) and a limited Environmental and Social Impact Assessment (ESIA). For investments that are identified prior to appraisal, the borrower will also prepare a Resettlement Action Plan (RAP). These instruments once prepared, will be reviewed, consulted upon and disclosed within the country by the Government of Cote d'Ivoire, & at the World Bank's Infoshop prior to project appraisal.

III. Contact point

World Bank

Contact: Sunil W. Mathrani
Title: Senior Energy Specialist

Borrower/Client/Recipient

Name: Government of Cote d'Ivoire
Contact:
Title:
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IV. For more information contact:

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V. Approval

Task Team Leader(s):	Name: Sunil W. Mathrani	
<i>Approved By</i>		
Safeguards Advisor:	Name: Johanna van Tilburg (SA)	Date: 16-Dec-2015
Practice Manager/ Manager:	Name: Meike van Ginneken (PMGR)	Date: 17-Dec-2015
Country Director:	Name: Pierre Frank Laporte (CD)	Date: 22-Dec-2015

1 Reminder: The Bank's Disclosure Policy requires that safeguard-related documents be disclosed before appraisal (i) at the InfoShop and (ii) in country, at publicly accessible locations and in a form and language that are accessible to potentially affected persons.