



## 1. Project Data

<b>Project ID</b> P157055	<b>Project Name</b> CI-Electricity Transmissn and Access-SUF	
<b>Country</b> Cote d'Ivoire	<b>Practice Area(Lead)</b> Energy & Extractives	
<b>L/C/TF Number(s)</b> IDA-59990	<b>Closing Date (Original)</b> 31-Dec-2022	<b>Total Project Cost (USD)</b> 284,796,599.99
<b>Bank Approval Date</b> 30-Mar-2017	<b>Closing Date (Actual)</b> 30-Sep-2023	
	<b>IBRD/IDA (USD)</b>	<b>Grants (USD)</b>
Original Commitment	325,000,000.00	0.00
Revised Commitment	271,763,426.25	0.00
Actual	284,796,599.99	0.00

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## 2. Project Objectives and Components

### a. Objectives

The project development objective (PDO) for the **Electricity Transmission and Access Project (ETAP)** as stated in the PAD (Page 7) and in the Financing Agreement (Page 6) was **“to contribute to the improvement of the efficiency and reliability of electricity supply and increased access to electricity in Côte d'Ivoire”**

This IEG ICR Review will assess the following two objectives:



- To contribute to the improvement of the efficiency and reliability of electricity supply in Côte d'Ivoire.
- To contribute to increased access to electricity in Côte d'Ivoire

**b. Were the project objectives/key associated outcome targets revised during implementation?**

Yes

**Did the Board approve the revised objectives/key associated outcome targets?**

No

**c. Will a split evaluation be undertaken?**

Yes

**d. Components**

The project, as approved in March 2017, included these four components:

**Component 1: Reinforcement of Transmission Systems (amount at approval of US\$115.6 million equivalent, estimated actual amount of US\$119.9 million).**

The three sub-components at approval were as follows:

- The construction of a new substation (225kV/90kV) at Gagnoa, about one kilometer (km) of 225kV and five km of 90kV transmission lines from the substation to reduce the load on the existing substation,
- The upgrade of three existing 90kV Substations to 225kV (Youpougou 1, Bia-Sud, and Treichville) toward improving the dynamic behavior of the electricity network in Abidjan,
- The improvement of quality and reliability of supply in selected 225kV/90kV substations and 10 High Voltage (HV)/Medium Voltage (MV) substations in selected towns through financing the supply and installation of HV/MV transformers in selected overloaded HV substations of Abobo, Taabo, Kossou, Man, and Ferke. This sub-component was also to finance transformers to improve reliability of supply (n-1), and reduce technical losses in 10 substations, namely Agboville, Attakro, Ayamé 2, Bongo, Bouake 1, Daloa, Danané, Dimbokro, Abengourou, and Dabou.

**Component 2: Rehabilitation, Reinforcement, and Extension of Distribution Systems in Abidjan and Selected Regional Capital Cities (amount at approval of US\$95.4 million equivalent, estimated actual amount of US\$64.9 million).**

The three subcomponents at approval were as follows:

- The Rehabilitation, Reinforcement, and Extension of Distribution Systems in selected Regional Capitals aimed at financing the rehabilitation, reinforcement, and extension of distribution systems in the towns of Gagnoa, Man, Soubré, Duekoue, Guiglo, Seguela, Odienne, Katiola, Sassandra, and Touba.
- The Replacement of Overhead MV Lines with Underground Lines in Abidjan of about 460km of the existing overhead conductors by underground cables.



- The upgrade of MV Cables by replacing Impregnated Paper Insulation Cables with Synthetic Insulation Cables (CIS) in Abidjan of around 120 km of the existing overloaded and aged paper insulated MV cables with cables covered by synthetic insulation in Abidjan.

**Component 3: Rural Electrification and Support to Electricity for All Program (amount at approval of US\$100.6 million equivalent, estimated actual amount of US\$81.5 million).**

The two subcomponents at approval were as follows:

- Improvement of Rural Electrification by funding for the MV and Low Voltage (LV) networks required to electrify 201 villages in selected rural areas in the regions of Gboklè, Haut-Sassandra, Nawa, and San Pedro.
- Support to Electricity for All Program. Funds under this sub-component were to be used to set up the transitional revolving fund to help finance household connection costs (including internal house wiring) to obtain grid supply in the above mentioned 201 villages and in 10 regional capital cities for low-income households.

**Component 4: Strengthening Institutional Capacity of the Electricity Sector and Project Management (amount at approval of US\$13.4 million equivalent, estimated actual amount of US\$18.5 million).**

The three subcomponents at appraisal were as follows:

- Capacity Building aimed to finance the training plan of the State-owned Energy Asset Holding Company (CI-Energies) staff and other energy sector entities in the areas of project management, power distribution and rural electrification, electricity transmission, procurement, finance and accounting, and environmental and social safeguards, and the monitoring and evaluation (M&E) system to track the performance of the power sector, as well as support to inclusive and equal access to electricity services for men and women.
- Services of two engineering firms to supervise and control the quality of the implementation of engineering works financed under the project.
- Project Management to cover the cost of managing the project, including remuneration of key experts to be hired under the project to support the project implementation unit. Key experts will include a project coordinator, an accountant, a procurement specialist, and a social and gender development specialist.

**e. Comments on Project Cost, Financing, Borrower Contribution, and Dates**

**Project Cost.** The original appraised cost was US\$325 million. This amount was revised to US\$271.76 million. The actual amount disbursed was US\$ 284.79 million.

**Financing.** The project was financed by IDA Credit.

**Borrower contribution.** There was no borrower contribution.

**Dates.** The project was approved on Mar 30, 2017, became effective on July 14, 2017. A midterm review was conducted on October 22, 2021. The project and was initially scheduled to close on December 31,



2022. It was extended twice, first on October 26, 2022 (for 6 months) and again on May 11, 2023 (for 3 months), i.e., a total extension of 9 months. The final closing date was September 30, 2023.

**Other changes.** The project was restructured four times on June 11, 2020; October 26, 2022; May 11, 2023; and on September 27, 2023. The PDO remained unchanged during the restructurings, but there were some changes in the PDO and output indicators. The specific changes are described below.

**First Restructuring:** During the restructuring of June 11, 2020, the following changes were made:

1. Addition of 420 new localities (later removed during the 2nd restructuring) having 12,948 households to be electrified in the scope of the rural electrification activities under 'Component 3
2. Addition of 77,478 new connections under the Electricity for All Program activities under 'Component 3
3. Revision of the Results Framework to reflect the above additions to the project scope.
4. Some reallocations were made between disbursement categories with decrease in category 1 and increase in category 2 following the changes of the costs of components.
5. Economic and financial analyses were updated to reflect the changes

**Second Restructuring:** During the restructuring approved on October 26, 2022, the PDO remained unchanged, but the following changes were made:

1. The 420 new localities identified in the first restructuring could not be electrified because some were already electrified by the government, with its own funds, prior to the elections in 2021
2. The high targets of the Results Framework (RF) were revised downward to reflect the reduced scope of the project. For example, the target for number of villages/localities to be electrified was reduced to 120, compared to a target of 621 localities after the first restructuring (i.e., 201 localities as appraised and 420 added at the first restructuring, hence the new target level of 120 is 60 percent of the appraised target and 19 percent of the target set at the first restructuring). In addition, other indicators were revised accordingly under the rural electrification sub-component.
3. Savings under Component 1 led to the decision to acquire 33 transformers. Two regions (San Pedro and Gbokle) faced delays due to the revision of the list of localities to be electrified and the environmental and social works.
4. Extension of the Project closing date from December 31, 2022, to June 30, 2023, and an update of the disbursement estimates and the implementation schedule.

**Third Restructuring:** During the third restructuring of May 11, 2023, the PDO remained unchanged, but following changes were made:

1. There was a large uncommitted balance, and CI-Energies and the World Bank considered additional activities to use that balance, but by the current project closing date, about US\$45.7 million would not be disbursed. Thus, the restructuring cancelled US\$40 million of funds under Credit IDA-59990.
2. The Project closing date was extended from June 30, 2023, to September 30, 2023.

**Fourth Restructuring:** During the fourth restructuring of September 27, 2023, an amount of US\$12.7 million, which was undisbursed, was canceled and returned to the country's IDA allocation. Following cancellation, the components cost, the amounts under the respective categories and disbursement were revised.



**Split rating.** Yes. A split assessment is being undertaken as the project went through a revision of the targets in the results framework. During the first restructuring of June 2020, the scope of the project was increased and the associated indicators and targets were revised upwards. However, during the second revision of October 2022, the scope of the project was revised and reduced. Although, a split assessment is not required if the scope of the project is increased, a subsequent restructuring made major revisions, while nearly 44% of the project’s resources had been deployed by the first restructuring (June 2020). In addition, the targets set during that June 2020 restructuring were mostly revised backward in the second restructuring (October 2022) to somewhat align with the original scope. Hence, to ensure that the originally appraised targets, based on an actual demand assessment in the field and approved by the government by a legally binding Financial Agreement, are considered, this ICRR will carry out split assessments for both the restructurings where the project scope and targets were revised. Therefore, two split assessments will be carried out starting from the originally appraised targets: (1) without and with the targets set during the restructuring of 2020, and (2) without and with the targets set during the restructuring of 2022.

**Disbursement Percentages:** The following disbursement percentages will be used in deriving the weights to be applied to the assessment of original and revised objectives in Outcome rating. The disbursed amounts are taken from the “Restructuring and/or Additional Financing” table on page 6 of the ICR.

**Table 1**

<b>Project Objective Period</b>	<b>Disbursed Amount</b>	<b>Disbursement Percentage</b>
Original Period	US\$ 124.21 million	44%
First Revision Period after June 2020	US\$ 113.94 million	40%
Second Revision after October 2022	US\$ 46.64 million	16%
Total	US\$ 284.79 million	100%

### 3. Relevance of Objectives

#### Rationale

#### Country and sector context:

Since the late 1990’s, Côte d'Ivoire has faced several crises, including a political crisis and war in the North and West of the country from 2002 to 2010, followed by a post-election crisis and armed conflict from 2010 to 2011. During this period, the country’s electricity sector remained resilient, but the negative impact stayed on beyond the 2011 political settlement. Electricity access was poor outside major urban centers with only 26 percent of households connected. This was significantly lower than what it was two decades ago and compared to countries with similar GDP. Urban power distribution systems faced strain from aging infrastructure and high demand that surpassed capacity. To avoid hindering economic growth, increased energy sector investments were crucial. Limited natural gas discoveries led to the sector



becoming increasingly reliant on costly fuel imports, straining finances and requiring budget subsidies to cover operational expenses. With the Government's reluctance to increase tariffs to reflect costs, this heavy reliance on subsidies was not a commercially viable option. Despite all challenges faced by the sector, the involvement of the private sector in the energy supply chain helped mitigate a more severe decline during the crisis years by maintaining payment discipline throughout the supply chain (PAD, para 4; ICR, para 2).

The country relied heavily on domestic gas, but had substantial untapped hydro potential. Gas accounted for 79 percent of power generation capacity, hydropower accounted for 16 percent and the remaining 5 percent was from liquid fuels. Expected growth in domestic gas production was 200 percent, and hydropower capacity was estimated at over 1,900 MW, with the first 275 MW hydropower plant on the Sassandra River (Soubré) under construction. The main sector challenges included financial sustainability, insufficient network investments, and low household access. During the political crises, tariffs were not revised to reflect costs and the overall transmission and distribution network deteriorated. As a result, the sector struggled with high transmission losses and a low access rate of 29%. To address these issues, the Government aimed to optimize gas supply, add to electricity grid capacity to match with the demand, and reduce losses while maintaining high levels of billing collection.

#### **Alignment with Government strategy:**

ETAP aligned with the country's priorities both at appraisal and at project closure. The Government's Programme National de Développement (PND) for 2021-2025 aimed to foster structural transformation for an emerging economy. Pillar 3 of the PND focused on private sector development and investment to improve economic competitiveness. The project's objectives of eliminating major bottlenecks in the electricity transmission and distribution system and expanding access to electricity will boost economic activity and provide households and industries with modern energy. This initiative also supports the Government's aim of becoming an industrialized economy by 2040. (PAD, para 19; ICR, para 18). In addition to this, the project's PDO on expanding access to electricity also aligned with the Government's *Programme National d'électrification rurale* (PRONER), which was launched in 2014 and aimed to increase the penetration rate of electricity to 80 percent by 2020 and the coverage rate to about 100 percent of the population. As part of this initiative, the Government had committed 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. (PAD, para 17)

#### **Alignment with Bank strategy:**

The PDOs aligned with the World Bank's strategies in Côte d'Ivoire, and were consistent with the WBG's Country Partnership Framework (CPF) for FY23-FY27 and the previous FY18-FY22 period. The CPF's fourth objective aimed to expand connectivity through quality climate-resilient infrastructure, crucial for Côte d'Ivoire's continued rapid economic growth. Ensuring affordable, reliable, and resilient energy and digital services is essential for improving quality of life, productivity, and entrepreneurship. ETAP's focus on access expansion also helped foster inclusive growth, especially in lagging regions. (ICR, para 19)

#### **Previous World Bank Experience:**

Prior to ETAP, the World Bank engaged with the energy sector of through the *Urgent Electricity Rehabilitation Project (P112573)* (2009-2014). This project, which was the World Bank's re-engagement in the sector after a significant time gap, focused on rehabilitating distribution systems and providing electricity to underserved areas of Abidjan after the conflict. The World Bank's contribution was notable as it



recognized the transmission and distribution networks as a public asset requiring public investments for their expansion. These public investments eventually paved the way for private sector involvement in power generation and distribution management, thereby creating opportunities for further development and innovation in the sector. (PAD, para 21). This experience and engagement in the sector helped with the design and development of the ETAP. In addition to this, the rural electrification component of ETAP was also able to incorporate lessons from World Bank interventions in similar projects in countries like Peru and Vietnam, which emphasized the importance of including user connections in program design, setting affordable initial connection fees, and allowing long-term recovery of connection charges through tariffs to keep costs manageable for low-income users (ICR, para 44).

### **Level of the PDO:**

The PDO's were directly relevant to the past and current strategies of the Bank and the Government and were pitched at a level where they would be able to capture the broader development outcome for the electricity sector in Côte d'Ivoire. The Theory of Change (TOC) in the ICR showed the causal linkages between the PDO and the long-term impacts of improved of the efficiency and reliability of electricity supply and increased access to electricity in Côte d'Ivoire. However, there were some shortcomings in the project's implementation readiness, particularly in safeguards compliance and procurement expertise. The TOC and project design indicated a strong alignment with the longer-term strategies for the country and the WB. Hence, on balance, the relevance of objectives is rated **Substantial**.

### **Rating**

Substantial

## **4. Achievement of Objectives (Efficacy)**

### **OBJECTIVE 1**

#### **Objective**

To contribute to the improvement of the Efficiency and Reliability of Electricity Supply in Côte d'Ivoire

#### **Rationale**

##### **Theory of Change:**

The Theory of Change (TOC) for the project was not included in the PAD, but it was developed retrospectively for the ICR. It showed the causal linkages from inputs (activities) to outputs and how they eventually lead to the achievement of the overall PDO and longer-term development outcomes. ETAP aimed to improve the efficiency and reliability of electricity supply and increase access to electricity in Côte d'Ivoire by upgrading the electricity transmission and distribution networks, focusing on rural electrification, and through institutional and capacity development in the sector. Specifically, on Objective 1, which relates to the improvement of the efficiency and reliability of the electricity supply, the project financed key activities that included reinforcement of transmission systems; rehabilitation, strengthening and expansion of distribution systems in Abidjan and selected regional capital cities; construction and rehabilitation of MV and LV



networks; and capacity building and project management activities. Expected outputs included increased number of new and reinforced HV substations; increased bulk supply capacity in the project area; increased length of distribution lines and cables installed or upgraded in project areas; and improved capacity of electricity sector institutions through an increase in the number of staff trained in the electricity utility and improved project management. This was expected to lead to the outcomes of reduced duration of power outages per year in rehabilitated substations and reduced electricity losses per year. The longer-term outcomes included higher reliability and efficiency of energy service and improved performance in the electricity sector and energy utility in Côte d'Ivoire.

Overall, the TOC of the project was straightforward, the causal pathways from inputs to outcomes were valid, and the indicators identified for the outputs and outcomes were logical. However, there was a shortcoming in the selection and measurement of the outcome indicator for electricity losses, which was measured at the national level as described in the ICR and was not easily measurable at the project level. The project was restructured, and the overall scope of the project changed during two of the restructurings. However, these restructurings were not related to Objective 1.

The critical assumptions, which apply to both Objectives, were well identified. Mobilization of adequate financial resources was essential to ensure a continued maintenance of the new transmission and distribution infrastructure. In addition, pursuit of the electricity sector policy coordination and rationalization agenda, an increased dialogue among the key stakeholders to establish an optimal energy mix, and a financial equilibrium in the electricity sector were essential. However, while there may have been initial coordination among stakeholders, evidence of a sustained collaboration was lacking. The project's scope increased in the first restructuring of 2020 to electrify 420 new localities but was scaled back within two years during the second restructuring in 2022 as these areas were electrified as part of government and other donor projects (Restructuring Paper, Paras 21 and 22). Key stakeholders failed to foresee that the additional scope approved in 2020 would be addressed by the government and hence this assumption did not hold.

## Outputs

- Average power outage duration in reinforced substations reduced to 12 hrs, as against the target of 20 hours and a baseline of 26.5 hours. Target was exceeded.
- Average time of outages in Abidjan reduced to 7.18 hours, as against the target of 20 hours and a baseline of 23.3 hours. Target was exceeded.
- Average time of outages in 10 capital cities went down to 5.32 hours from a baseline of 14.2 hours. Target was 5 hours. Target was almost achieved.
- Bulk supply capacity in the project area increased to 1,264,000 Kilovolt-Amperes (KVA), lower than the target of 1,908,000.00. Target was partially achieved. (66 %)
- A total of 15 HV substations were reinforced, as against the target of 18. Target was partially achieved (83%). The ICR reported that the work in the remaining three substations could not be completed following difficulties encountered by the service provider Grid Solutions, and the pollution encountered at the Bia Sud site. The work in the remaining three substations was only partially completed - Ferké (85%), Man (79%) and Bia Sud (57%)
- One new high voltage substation (Gagnoa) was constructed, as targeted.
- Distribution MV lines constructed under the project in urban areas was 400 km as opposed to a target of 778 km. Target partially achieved. (51%)
- Distribution LV lines constructed under the project in urban areas was 963.7 km, exceeding the target of 903 km





- Distribution MV lines rehabilitated under the project in urban areas went up to 472.9 kms, exceeding the target of 458 km
- Distribution LV lines rehabilitated under the project in urban areas went up to 190, exceeding the target of 113.00 km

The following outputs on capacity and institutions pertain to both PDOs

- Beneficiary Satisfaction Survey was completed as planned, achieving the target.
- 182 people were trained in aspects of safeguards as well as 3 people in World Bank procurement procedures and 3 people trained in the use of lab trucks acquired as part of the project, exceeding the target of 100 staff being trained.
- Around 91.9 project-related grievances were registered and addressed under the project Grievance Redress Mechanism (GRM), as against the target of 100. Target was mostly achieved.

#### **Outcomes:**

- The cumulative duration of power outages per year in substations rehabilitated by the project was reduced to 737 hours, as opposed to the target of 3207 hours and a baseline of 3773 hours. Target was exceeded. The ICR reports that the commissioning and installation of the project's transformers made it possible to ensure there were no longer any power outages due to the unavailability of a transformer in the substations of the project area (ICR, Annex1 Page 34).
- Electricity losses per year in the project area went down to 14.11% from a baseline of 15%, as opposed to a target of 12.5%. Target achievement rate was 36%. The ICR indicates that the percentage of electricity losses, defined as the ratio of electricity generated and electricity available for distribution irrespective of the zone, was the national rate (beyond the project area). It acknowledges that quantifying the project's impact on reducing losses in the project area was challenging, even though both the grid operator, CIE, and CI-Energies acknowledged its positive effect (ICR, para 25). However, the definition of this indicator differs from what was originally proposed in the PAD at the initiation stage. According to the PAD, this indicator was to be calculated by "dividing total electricity losses by the total net injected generation in the project area." Reduction of losses in financed substations was to be added to reduction of losses in rehabilitated distribution network and the baseline would be the actual electricity losses in the project area at the beginning of the project" (PAD, Annex 1, page 29)

With regard to the improvement of the efficiency and reliability of electricity supply in Côte d'Ivoire, the targeted outcome for a reduction in power outages was exceeded. This was also confirmed by a beneficiary survey (ICR, para 27). However, the reduction in electricity losses was only partially achieved. As noted above, the ICR reports that there were indications of reduced losses from the utility, but it was difficult to quantify the impact at the project level as this indicator was calculated at the national level. However, the definition for calculating electricity losses at closing, as described in the ICR, differed from what was proposed in the PAD, which (if used) would have been able to better measure the project level impact of electricity losses. The ICR does not give an explanation on why the definition was revised and why it was not able to correctly measure loss reduction at the project level. Regarding outputs, most of the targets were achieved or exceeded except for the increase in bulk supply capacity, reinforcement of HV substations, and km of distribution MV lines constructed in urban areas, which were only partially achieved. All the targets for



capacity and institutional indicators were achieved. Hence, on balance, the overall efficacy for Objective 1 is **Substantial, with shortcomings.**

**Rating**  
Substantial

### **OBJECTIVE 1 REVISION 1**

#### **Revised Objective**

To contribute to the improvement of the Efficiency and Reliability of Electricity Supply in Côte d'Ivoire.

There was no change in the PDO and targets

#### **Revised Rationale**

While there was a change in the scope of the project and its results framework, and cancellation and reallocation of resources, the original theory of change was not affected. Hence, the TOC presented under Objective 1 (original) applies here as well.

The output and outcome indicators and their targets remained the same as in the original project for Objective 1. Hence the rating remains **Substantial, with shortcomings.**

**Revised Rating**  
Substantial

### **OBJECTIVE 1 REVISION 2**

#### **Revised Objective**

To contribute to the improvement of the Efficiency and Reliability of Electricity Supply in Côte d'Ivoire.

There was no change in the PDO and targets

#### **Revised Rationale**

As mentioned above, there was a change in the scope of the project and its results framework related to Objective 1. Hence, the TOC presented under Objective 1 (original) applies here as well.

The output and outcome indicators and their targets remained the same as in the original project for Objective 1. Hence the rating remains **Substantial, with shortcomings.**

**Revised Rating**  
Substantial



## OBJECTIVE 2

### Objective

To contribute to increased access to electricity in Côte d'Ivoire

### Rationale

#### Theory of Change:

The overall TOC provided under Objective 1 is mostly relevant under Objective 2. Specifically, on Objective 2, which focuses on increased access to electricity in Côte d'Ivoire, the key activities financed included some of the activities included under Objective 1, especially on capacity development and strengthening, and expansion of distribution systems. In addition, the project was to finance specific activities related to expanding rural electrification and supporting the Electricity for All Program, which would focus on household connections and help finance up-front connection costs for low-income households. This was to lead to the outputs of an increase in the number of villages electrified in the San Pedro, Nawa, Gbople and Haut Sassandra Regions as well as an increase in the number of households provided with an electricity connection. The expected outcome was an increased number of people provided with new or improved electricity service (grid or off-grid). The longer-term outcome was that the population of Cote d'Ivoire would have more and better access to electricity.

The assumptions described under Objective 1 (original) hold in this case as well.

The scope of this objective was changed twice during the course of the project. During the first restructuring, the scope was increased to electrify additional villages and the results framework was revised to reflect this increase. During the second restructuring, this increase was scaled back. Table 2 below lists the indicators that were revised during the two restructurings and the changes in their targets values.

**Table 2: Objective 2 - Revised Indicators and Targets**

Indicator	Baseline Source: PAD	Original target Source: PAD	Revised 2020 Source: 1st Restructuring Paper	Revised 2022 Source: 2nd Restructuring Paper	Actual Source: ICR
<b>PDO Indicators</b>					
People provided with new or improved electricity service – People provided with access to electricity under the project by household connections (grid or off-grid) (number) (Corporate Results Indicator)	0	623,316	737,254	225,000	<b>1,073,278</b>
<b>PDO Intermediate Indicators</b>					
Villages electrified (number)	0	201	621	120	<b>132</b>



Households provided with an electricity connection in rural areas under the project (number)	0	85,153	98,101	18,957	<b>191,776</b>
Distribution MV lines constructed under the project in rural areas (km)	0	1,522	2,348	454	<b>451.2</b>
Distribution LV lines constructed under the project in rural areas (km)	0	1,763	2,330	451	<b>1,089.8</b>

### Outputs

- A total of 72,316 households were provided with an electricity connection in urban areas under the project, as against the target of 18,773. Target exceeded.
- 132 Villages were electrified, as against a target of 201. Target partially achieved (66 percent)
- A total of 191,776 households were provided with an electricity connection in rural areas under the project (This includes 6,776 households in localities electrified by the project and 185,000 connections provided under the Electricity for All Program (PEPT) to households in areas outside the project perimeter (ICR, Page 19, Table 5 and was also confirmed by the project team)). The target was 85,153 households. Target was exceeded. However, there appears to be a logical disconnect in the causal chain between the low electrification rate of villages versus the large number of households connected (more than ten-fold compared to the 2022 restructuring target), for which a clear explanation is not provided in the ICR. Moreover, since the PEPT is multi-donor-funded and the Bank is only providing partial program funding, it is unclear from the ICR whether the 185,000 connections under PEPT can be fully attributed to the project, especially since those connections were “outside the project perimeter”, which is not defined in the ICR. The ICR also did not provide any information on counterfactual for the PEPT program as to what the situation would have been with or without World Bank funding for the program.
- Distribution MV lines constructed under the project in rural areas was 451 km as opposed to a target of 1,522 km. Target was barely achieved (29 percent)
- Distribution LV lines constructed under the project in rural areas was 1,089 km, as opposed to a target (2020 revision) of 1,763 km. Target was partially achieved (61 percent)

### Outcomes:

A total of 1,073,278 people were provided with new or improved electricity service (grid or off-grid), far exceeding the target of 623,316 people. However, the attribution issues raised above also apply. The low village electrification rate, the minimal achievement of the MV and LV lines, and the lack of methodological clarity whether the large number of PEPT connections can be fully attributed to the project, all raise important questions about the validity of this reported outcome on number of people benefited.

*(Note: There is a discrepancy in the actual achievement numbers between the main ICR report and Annex 1 – Results Framework. The main report lists 1,073,278 people, while Annex 1 lists 1,373,278 people (ICR, Page 34). For the purpose of this evaluation, the lower number from the ICR Main Report (ICR, para 29 and Table 5) has been used)*

The ICR does not specify any activities or results for off-grid electrification and only includes people connected to grid electricity service. The project team informed IEG that no off-grid activities were financed by



the project. However, this should have been clearly stated in the ICR, explaining why the off-grid activities detailed in the PAD were not pursued.

The overall outcome target was exceeded as were the output targets for number of households electrified in both urban and rural areas through the grid network. However, some of the output targets including number of villages electrified and construction of LV and MV lines in rural areas were not fully achieved. The overall efficacy for Objective 2 is **Substantial, with shortcomings**.

### Rating

Substantial

## OBJECTIVE 2 REVISION 1

### Revised Objective

To contribute to increased access to electricity in Côte d'Ivoire.

There was no change in the PDO, but the scope of the project increased and PDO indicator targets were revised upward

### Revised Rationale

#### Theory of Change:

Please see the discussion of the TOC under Objective 2, Original Project.

The assessment of the output and outcomes based on the revised targets is as follows:

### Outputs

- A total of 72,316 households were provided with an electricity connection in urban areas under the project, as against the target of 18,773. Target exceeded.
- 132 Villages were electrified, as against a revised target (2020 revision) of 621. Target was barely achieved (21 percent)
- A total of 191,776 households were provided with an electricity connection in rural areas under the project (This includes 6,776 households in localities electrified by the project and 185,000 connections provided under the Electricity for All Program (PEPT) to households in areas outside the project perimeter (ICR, Page 19, Table 5 and was also confirmed by the project team)). The revised target was 98,101 households (2020 revision). Target was exceeded. However, as indicated above under Objective 2 (original), it is unclear from the ICR whether the 185,000 connections under PEPT can be fully attributed to the project.
- Distribution MV lines constructed under the project in rural areas was 451 km as opposed to a revised target of 2,358 km (2020 revision). Target was barely achieved (19 percent)
- Distribution LV lines constructed under the project in rural areas was 1,089 km, as opposed to a revised target (2020 revision) of 2,330 km. Target was partially achieved (47 percent)



### **Outcomes:**

A total of 1,073,278 people were provided with new or improved electricity service (grid or off-grid), far exceeding the revised target (2020 revision) of 737,254 people. As indicated under Objective 2 above, this number only includes people connected to grid electricity. However, as mentioned earlier under Objective 2(original), the attribution issues relating to the total number of beneficiaries remain.

The overall outcome target was exceeded as were the output targets for number of households electrified in both urban and rural areas through the grid network. However, the output targets for number of villages electrified and construction of LV and MV lines in rural areas were only barely achieved. It appears that even though construction of MV and LV lines and villages electrified barely achieved the targets, the overall number of households electrified seems to be quite large. This is because majority of the households electrified were connected under the Electricity for All Program (PEPT) and they may be outside the project area, as noted above and also confirmed by the project team to IEG (correspondence dated 06/25/2024). The Results Framework should have been revised to make this clear. The overall efficacy for Objective 2 is **Modest**.

### **Revised Rating**

Modest

## **OBJECTIVE 2 REVISION 2**

### **Revised Objective**

To contribute to increased access to electricity in Côte d'Ivoire.

There was no change in the PDO, but the PDO indicator targets were revised downwards

### **Revised Rationale**

#### **Theory of Change:**

Please see the discussion of the TOC under Objective 2, Original Project.

The assessment of the output and outcomes based on the revised targets is as follows:

### **Outputs:**

- A total of 72,316 households were provided with an electricity connection in urban areas under the project, as against the target of 18,773. Target exceeded. (Indicator not revised)
- 132 Villages were electrified, as against the revised target of 120 (2022 revision). Target was exceeded.
- 191,776 households were provided with an electricity connection in rural areas under the project. (Including 6,776 connections to households in localities electrified by the project and 185,000 connections under the Electricity for All Program (PEPT) to households in areas outside the project perimeter. As mentioned before, the attribution of PEPT households to project areas is unclear from the ICR). However, the revised target of 18,957 households (2022 restructuring) was exceeded.



- Distribution MV lines constructed under the project in rural areas was 451 km as opposed to a revised target of 454 km. Target almost achieved.
- Distribution LV lines constructed under the project in rural areas was 1,089 km, as opposed to a revised target of 451 km. Target exceeded.

**Outcomes:**

- 1,073,278 people were provided with new or improved electricity service (grid or off grid) compared to a revised target of 225,000 people. Target exceeded.
- In addition, the ICR notes that there was evidence of broader social and economic impact. A beneficiary survey showed that 12 percent of households connected to the electricity network had at least one member who has developed a new economic activity because of access to electricity. Out of the 301 households surveyed, 37 new economic activities were initiated as a result of gaining access to electricity through the project's resources.

After the restructuring, the outcome target of overall number of people provided with new or improved electricity service largely exceeded the revised target. It must be noted, however, that the revised targets for all output and outcome indicators were particularly low. This is especially true for the intermediate indicator for 'households provided with electricity connection in rural areas under the project' and also for the outcome indicator of 'people provided with new or improved electricity service' where the actual achievement far exceeded the revised targets. In addition, as mentioned earlier, given the low village electrification rate and the minimal achievement of the MV and LV lines, it is unclear if the large number of overall beneficiaries can be fully attributed to the project.

Despite this, given that most of the targets (both for outputs and outcomes) were either achieved or exceeded, the overall efficacy for Objective 2 is rated as **Substantial, with shortcomings**.

**Revised Rating**

Substantial

**OVERALL EFFICACY**

**Rationale**

The project's efficacy based on the original targets before restructuring was Substantial, with shortcomings for both Objective 1 and Objective 2. Hence, the overall efficacy is rated **Substantial, with shortcomings**.

**Overall Efficacy Rating**

Substantial



## **OVERALL EFFICACY REVISION 1**

### **Overall Efficacy Revision 1 Rationale**

As described, the project's efficacy based on the 2020 restructuring was Substantial, with shortcomings for Objective 1 and Modest for Objective 2 given the partial achievement of some of the output targets. Hence, the overall efficacy is rated **Modest**.

### **Overall Efficacy Revision 1 Rating**

Modest

### **Primary Reason**

Low achievement

## **OVERALL EFFICACY REVISION 2**

### **Overall Efficacy Revision 2 Rationale**

Following the project's restructuring in 2022, it was able to achieve or exceed most of its output targets and also its outcome target. Efficacy was Substantial, with shortcomings for both Objective 1 and Objective 2. Hence, overall efficacy is rated **Substantial, with shortcomings**.

### **Overall Efficacy Revision 2 Rating**

Substantial

## **5. Efficiency**

### **Operational and administrative efficiency**

The project's launch was delayed due to limited implementation readiness, and its implementation was delayed initially due to insufficient expertise in safeguards compliance and complex procurement processes. Inefficient handling of savings reallocation led to an expansion of the project scope in June 2020 of electrifying additional villages, which had to be reversed in November 2022. This was mainly because most of these villages had already been electrified under a government financed electrification campaign. However, despite initial setbacks, the Bank team was able to proactively address other safeguards issues faced by the project, even though the allocated budget for strengthening institutional and project implementation support was exceeded by 25.4 percent. Some of the safeguards issues that were addressed included ones that were not identified at appraisal, such as the depollution of the Bia Sud substation. There were disruptions due to COVID-19 and the Russia-Ukraine conflict which impacted the global supply chain and caused travel restrictions. Once restrictions were lifted, procurement procedures were finalized and the Project Management Unit (PMU) team was able to ensure proper implementation achieving most project goals within nine months of the original closing date.

### **Economic efficiency**

At appraisal, an economic analysis was conducted and anticipated benefits included improved electricity reliability (through reduced technical losses, reduced outages), increased electricity supply to meet existing suppressed demand and demand growth (also through loss reduction and improvements in delivery capacity),





and expanded access to new consumers in peri-urban and rural areas. This analysis estimated an EIRR of 10.8 percent and an NPV of USD 154.6 million at a 6 percent discount rate (ICR, para 34).

At completion, an updated cost-benefit analysis for components 1 and 2 (both accounting for 65% of actual costs) was carried out using actual investment cash flows and estimated projected benefits from the original appraisal as a reasonable representation of what had and was to occur over the expected economic life. The analysis used estimated benefits from appraisal mainly because it was difficult to identify early indications of the project-level impact given the integrated nature of power systems. It was especially difficult to quantify project-level impacts for electricity losses and reductions in outages. The updated economic analysis found Component 1 marginally viable with an EIRR of 4.6 percent and an NPV of minus USD 11.5 million. Component 2 showed strong viability with an EIRR of 22.2 percent and an NPV of USD 138.6 million. The updated economic analysis for Component 3 estimated an EIRR of 17 percent and an NPV of USD 222.9 million. Overall, the combined EIRR for all three components was estimated at 15.4 percent, with an NPV of USD 350 million (ICR, para 35)

*Note: The figures in the main ICR report and those in Annex 4 (Efficiency Analysis) are very different, with the numbers presented in the Annex being much lower. The project team informed IEG that the Annex numbers were not updated and numbers in the main text (quoted above) are correct. For the purpose of this review, the higher figures given in the main ICR report are used. However, the ICR should have corrected the Annex numbers and provided a detailed analysis on how the figures in the main ICR report were calculated, in compliance with the guidelines. As it stands now, the ICR lacks a detailed explanation of the NPV and EIRR calculations that are reported in the main ICR report and is more qualitative. In addition, there are other methodological issues in the economic analysis at the completion stage. The efficiency analysis incorrectly uses actual investment cash flows (i.e., whether and how shadow pricing was applied and transfer prices were excluded are not discussed at all) and estimated projected benefits from the original appraisal were used to represent future economic value, despite multiple project restructurings that have altered the benefits at closing. Furthermore, the claim that “it was difficult to identify early indications of the project-level impact given the integrated nature of power systems” is not logically consistent with the rest of the ICR. The project’s results were measured at closing against quantitative targets measured at project closing for the efficacy analysis, and not at an early stage. The PAD conducted a detailed economic analysis taking into account the integrated nature of the system, which the ICR could have updated and re-calculated in a comparable way.*

Overall, given all of the methodological issues listed above, the project’s efficiency in terms of economic returns is **Modest**.

## Efficiency Rating

Modest

a. If available, enter the Economic Rate of Return (ERR) and/or Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation:

	Rate Available?	Point value (%)	*Coverage/Scope (%)
Appraisal	✓	10.80	0 <input type="checkbox"/> Not Applicable



ICR Estimate	✓	15.40	0 <input type="checkbox"/> Not Applicable
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\* Refers to percent of total project cost for which ERR/FRR was calculated.

## 6. Outcome

**Assessment against the original outcome targets:** Relevance of Objectives was rated Substantial. Efficacy was rated Substantial and Efficiency was rated Modest. Based on this, the original Outcome is rated **Moderately Satisfactory**

**Assessment against the revised outcome targets (2020):** Relevance of Objectives was rated Substantial. Both Efficacy and Efficiency were rated Modest. Based on this, the original Outcome is rated **Moderately Unsatisfactory**

**Assessment against the revised outcome targets (2022):** Relevance of Objectives was rated Substantial. Efficacy was rated Substantial. Efficiency was rated Modest. Based on this, the revised Outcome is rated **Moderately Satisfactory**

A split rating is applied based on the disbursement shares on the baseline, project restructuring after 2020, and after the project restructuring in 2022. Table 3 below provides the details.

The overall outcome rating is **Moderately Satisfactory**.

**Table 3**

	Original Objectives	First Revision (2020)	Second Revision (2022)
<b>Relevance of Objectives</b>	Substantial		
<b>Efficacy</b>			
<b>Objective 1</b>	Substantial	Substantial	Substantial
<b>Objective 2</b>	Substantial	Modest	Substantial
<b>Overall Efficacy</b>	Substantial	Modest	Substantial
<b>Efficiency</b>	Modest		
<b>Outcome Rating</b>	Moderately Satisfactory	Moderately Unsatisfactory	Moderately Satisfactory
<b>Outcome Rating Value (a)</b>	4	3	4
<b>Amount Disbursed (US\$ million)</b>	US\$124.21 million	US\$113.94 million	46.64 million
<b>Disbursement (%) (b)</b>	43.61%	40.01%	16.38%
<b>Weight Value (a)x(b)</b>	1.74	1.20	0.66
<b>Total weights</b>	3.60 (rounds up to 4)		
<b>Overall Outcome Rating</b>	<b>Moderately Satisfactory (4)</b>		



**a. Outcome Rating**  
Moderately Satisfactory

## 7. Risk to Development Outcome

**Institutional Capacity and Sustainability Risk.** The project faced several challenges in the initial implementation stage due to limited capacity to address various safeguards, financial management and procurement concerns. While the project was able to strengthen the institutional capacity at the CI-Energies and Côte d'Ivoire Electricity Company (CIE) to address these issues, there is a risk that changing circumstances, lack of sufficiently qualified and trained staff to handle a growing portfolio and other budgetary constraints may impact the availability of resources to fulfill their responsibilities in the future.

## 8. Assessment of Bank Performance

**a. Quality-at-Entry**

The project faced implementation readiness issues, mainly due to insufficient capacity and pro-activeness in addressing fiduciary and safeguards concerns. Preparatory work on environmental and social safeguards were found to be inadequate despite a strong dialogue between the Bank and the Borrower team during appraisal. Studies required to start activities were not completed before effectiveness and early Board approval did not leave enough time to finalize studies and address the lack of expertise on environmental and social safeguards. During implementation, the project's resource utilization was partially impacted by reduced costs of equipment due to increased global competition among suppliers. As a result, the initial cost estimates at approval were found to be overestimated. Some of the savings were reallocated to other components, leading to a restructuring of the project. This restructuring aimed to increase the scope of under Component 3 and better align with the Borrower's infrastructure needs in electricity transmission and distribution at that time, but this increased scope had to be scaled back later. M&E Design had a few shortcomings with some of the indicators not being able to capture project level impacts. (ICR, para's 70, 71 and 79)The ICR notes that design and setup of implementation arrangements incorporated key lessons learned, such as linking distribution and rural electrification to energy access to ensure that CI-Energies would build the distribution network and then rely on CIE to implement consumer connections to the limited number of customers with the means to pay the high connection fees, establishing a dedicated project implementation unit within CI-Energies, and making high upfront connection charges more affordable through installment payments added to monthly tariffs, benefiting low-income users who could not pay a lumpsum amount upfront. There was a thorough risk assessment carried out at appraisal and the overall project risks were well identified. However, some of the mitigation measures were found to be somewhat ineffective, especially when the



Borrower was unable to promptly handle issues relating to fiduciary, environmental and social aspects of the project. (ICR, para's 72, 73)

**Quality-at-Entry Rating**  
Moderately Satisfactory

**b. Quality of supervision**

The World Bank team carried out 15 supervision missions covering project updates and prepared detailed Aide Memoires, which were shared with key stakeholders including the Government and the PMU. The project was supervised by four senior Task Team Leaders (TTLs), 3 of them were based locally, and supported by resident Bank staff. All of this helped sustain client commitment and focus on project activities. The Bank team was able to provide support to strengthen the PMU's capacity by establishing an environmental and social safeguards unit, hiring specialists, and supporting implementation. Close interaction with the client representatives led to the approval of a Program-for-Results Financing (PforR) operation on National Digitization and Access to Electricity Operation (P176776) in 2023, reflecting confidence that the Bank built in the technical, fiduciary and E&S capacity of the client. This follow-on PforR operation aims to increase electricity access, improve service quality, and enhance institutional capacity. (ICR, para 73)

There were some challenges faced in the design and implementation of the first restructuring of June 2020. The restructuring reallocated savings from equipment acquisition to revise project costs, expand rural electrification, and update economic analyses. However, this coincided with the 2021 elections and with the Governments' own electricity access expansion initiative, resulting in unrealistic targets being set that had to be reversed in a follow-on restructuring of March 2022. (ICR, para 74)

Overall, Bank performance at supervision is rated as Moderately Satisfactory.

**Quality of Supervision Rating**  
Moderately Satisfactory

**Overall Bank Performance Rating**  
Moderately Satisfactory

**9. M&E Design, Implementation, & Utilization**

**a. M&E Design**

At appraisal, the PDO statement was clear and aligned with the project's theory of change and results framework. The PDOs remained consistent from approval through multiple restructuring phases until project closure and there was coherence between the implicit theory of change and the Results Framework. Most PDO indicators and intermediate indicators were measurable, achievable, and based on realistic baselines. However, it was difficult to measure the project level outcomes for two indicators -



“cumulative duration of power outages per year in substations rehabilitated by the project (hours) and the “electricity losses per year in the project area (%)”. Assessment of these indicators in the ICR relied on a qualitative description of progress arising from the modernization of the transmission and distribution system supported by the project. The feasibility of measuring these indicators in the project area should have been assessed further at the design stage given that they reflected progress made at the national level by different stakeholders, and that a single project could have only a limited impact. (ICR, paras 53-56)

## b. M&E Implementation

Supervision missions and ISRs were essential for monitoring and sharing progress with stakeholders. Monitoring and evaluation (M&E) arrangements were well-established and embedded in the right institutions, but there was a delay in setting up the Steering Committee. The PMU and CI-Energies played crucial roles in M&E, with the PMU consisting of project teams and an environmental and social safeguards unit. In the absence of a Steering Committee, effective monitoring was made possible by CI-Energies’ ability to coordinate and centralize all electricity sector information. The Results Framework underwent revisions during the 2020 and 2022 level-2 restructuring to adapt to changes in project scope and resource allocation – the project scope was initially expanded following large savings in implementing components 1 and 2, but the scope had to be scaled back later due to implementation setbacks as a result of inefficient contractors and inaccessible localities and the results framework had to be revised again. The definition used to measure indicators, such as electricity losses, was changed from what was proposed at initiation. During the restructuring, the project failed to make revisions to calculation of the indicators on outages and electricity losses to make them more measurable at the project level.

## c. M&E Utilization

The PMU’s data reporting, along with Aide Memoires and ISRs from the Bank team, played a key role in reporting the status of the Results Framework and fostering dialogue among stakeholders regarding project implementation progress. Additionally, they guided significant implementation decisions, including level-2 restructurings that changed the project scope and determined the closing dates (ICR, para 60)

There were some shortcomings in M&E design and implementation with some of the indicators chosen not easily measurable. There was also a need to reverse the results framework adopted during the 2020 due to it being inadequate. Hence, the overall M&E quality was **Modest**

### M&E Quality Rating

Modest

## 10. Other Issues

### a. Safeguards



The project was classified as a Category B and triggered five safeguards policies. These included: OP/BP 4.01 Environmental Assessment; OP/BP 4.04 Natural Habitats; OP/BP 4.36 Forests; OP/BP 4.11 Physical Cultural Resources; and OP/BP 4.12 Involuntary Resettlement. Various environmental and social instruments were prepared pre- and post-Board approval. At appraisal, an Environmental and Social Impact Assessment (ESIA) was prepared for the Gagnoa 2 substation, along with environmental and social audits for the Bia-Sud, Treicheville, and Yopougon 1 substations. The Environmental and Social Management Framework (ESMF) included sections to address potential issues with Natural Habitats, Forests, and Physical Cultural Resources. During the project, 19 Resettlement Action Plan's (RAP's) were prepared for various subprojects in distribution, transmission, and rural electrification. All environmental and social documents were reviewed, approved, and made public according to the Bank's requirements (ICR, para 62).

The project faced issues with poor compliance with ESHS requirements initially, leading to failures in following the Bank's environmental and social incident response guidelines. At project closing, CI-Energies had not completed four RAPs, affecting 3,663 people with an estimated compensation budget of 2.3 billion FCFA. However, the project was able to demonstrate good practices in social and environmental management by substantially improving its capacity and responsiveness on these issues during implementation and after the World Bank identified problem areas. The successful de-pollution of the Bia Sud was an example of the joint efforts to ensure compliance with the Bank's Environmental and Social (E&S) policies. The project also managed to record, monitor and satisfactorily address all complaints, with the CI-Energies reporting no outstanding complaints under the projects by February 2024. The project was able to establish and maintain a relatively good labor management system.

A post-closure E&S action plan was created to ensure continued compliance with the Bank's policies due to some unresolved safeguard issues before project closure. As part of this, CI-Energies was to address key issues such as compensation payments, RAP completion reports, social audits, and pending complaints by preparing an action plan acceptable to the Bank, allocating necessary resources, and maintaining the monitoring and reporting system until all activities are completed.

## **b. Fiduciary Compliance**

### **Financial Management:**

Financial Management (FM) performance was rated Moderately Satisfactory throughout the project mainly due to the PMU's failure to address issues raised in successive audits. At closure, the PMU ensured performance bonds were managed per contracts, bid bonds were released, and start-up advances were repaid, with follow-up arrangements for any outstanding repayments. The Bank and CI-Energies also agreed to maintain withholding deposit guarantees during the guarantee period.

### **Procurement:**

Procurement of key investment activities faced initial delays due to delays in the preparation of safeguards documents and PMU's slow response to address issues raised in FM audits. The rural electrification component was especially delayed and could start only by late April 2019. Despite these delays the procurement function was generally satisfactory throughout the project. In order to address these issues,



the Bank team has supported organizing a training session to enhance stakeholders' understanding of procurement procedures and expedite delayed procurement processes. (ICR, para 67,68)

**c. Unintended impacts (Positive or Negative)**

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**d. Other**

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**11. Ratings**

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Satisfactory	Moderately Satisfactory	Relevance was rated Substantial as there were some shortcomings in the implementation readiness (thus signaling over-ambitiousness of the objectives in relation to institutional capacity) and the design of some indicators. The overall Efficiency was Modest due to methodological shortcomings and administrative and implementation inefficiencies. Given these issues, and the weighted results of the double split rating for outcome, the overall Outcome was rated Moderately Satisfactory.
Bank Performance	Moderately Satisfactory	Moderately Satisfactory	
Quality of M&E	Substantial	Modest	There were some shortcomings in the M&E design and measurability of project level impacts. Hence, the Quality of M&E is rated Modest.
Quality of ICR	---	Substantial	

**12. Lessons**

- To ensure efficient project implementation, it is important to thoroughly assess technical studies, environmental and social considerations, procurement readiness,**



**and Borrower capacity at the appraisal stage.** The project faced initial delays in implementation due to incomplete studies and insufficient expertise, particularly on environmental and social aspects. The implementing agency, CI-Energies, was overstretched due to its involvement in multiple domestic and donor funded energy projects, impacting supervision. This was later addressed with owner's engineers, notably EDF playing a positive role in facilitating implementation, but future projects should prioritize readiness assessment, institutional strengthening, and enhancement of technical capacity during appraisal.

2. **For effective monitoring, it is crucial to design indicators and targets that can accurately measure performance results and be directly attributed to the project.** The ICR indicates that one of the challenges faced was measuring the system losses, which was difficult to attribute solely to the project. Even though there was evidence of improvement, it was not easily measurable at the project level leading to misunderstandings about its achievement.
3. **Effective resolution of unexpected environmental challenges requires a collaborative effort among all parties involved, particularly government authorities, engineers, and organizations like the World Bank.** During implementation, the unexpected discovery of pollution of water and land with hydrocarbons and Polychlorinated Biphenyls (PCB) led to the suspension of activities on the Bia Sud. Significant work had to be undertaken for depolluting the site, which allowed activities to resume after an 18-month interruption. This incident demonstrated the World Bank's comparative advantage in mobilizing financing and expertise from local and external partners to address unforeseen safeguard challenges. Stakeholders acknowledged that the high standards and thoroughness of the World Bank staff and their environmental and social instruments were crucial in identifying and addressing such unforeseen issues. Similar incidents may arise in other World Bank project sites, so teams should remain vigilant for potential leaks from stored transformers or other pollution when appraising and implementing electricity transmission and distribution projects.

### 13. Assessment Recommended?

No

### 14. Comments on Quality of ICR

The ICR is well-written, provides a detailed overview of the project, and includes a clear discussion on the achievement of outcomes. It appropriately carries out a split rating for objectives, given the original indicators and targets were changed during restructuring. It is also sufficiently candid and accurately points out some of the shortcomings in the project, including design and identification of specific M&E indicators. The evidence and





analysis presented are mostly adequate for evaluating the performance of the project. The lessons were evidence based and useful for future lending operations.

However, there are shortcomings in the ICR with a lack of clarity and conflicting figures on some of the indicators relating to project achievement in the Results Framework and in Efficacy section. Some of the definitions for calculating indicators were changed from what was identified in the PAD, and the ICR should have given a clarification on why this was changed. There was a lack of methodological clarity as to whether the large number of PEPT connections can be fully attributed to the project. In addition, the economic analysis results differ in the main report and in the Annex. The project team clarified (correspondence dated 06/25/2024) that the figures in the Annex were not updated, but these issues should have been resolved and the figures updated. There was a lack of methodological clarity in the efficiency analysis, as highlighted earlier in this review.

Hence, the overall quality of the ICR is rated **Substantial, with shortcomings**.

**a. Quality of ICR Rating**  
Substantial