Report Number : ICRR0020820

1. Project Data

Project ID	Project Name	
P077317	GN-Elec. Sec. Eff. Impr. SIL (FY06)	
Country	**Practice Area(Lead)**	**Additional Financing**
Guinea	Energy & Extractives	P114247,P129148,P129148
L/C/TF Number(s)	**Closing Date (Original)**	**Total Project Cost (USD)**
IDA-H2400,IDA-H7730	31-Dec-2009	18,900,000.00
Bank Approval Date	**Closing Date (Actual)**	
22-Jun-2006	30-Jun-2016	

	IBRD/IDA (USD)	Grants (USD)
Original Commitment	7,200,000.00	0.00
Revised Commitment	24,097,273.26	0.00
Actual	23,695,424.11	0.00

Prepared by	Reviewed by	ICR Review Coordinator	Group
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Project ID	Project Name
P098742	GN-Electricity Sec Eff Improv GEF (FY07) (P098742)

L/C/TF Number(s)	Closing Date (Original)	Total Project Cost (USD)
TF-93404	30-Jun-2013	11,700,000.00

Bank Approval Date	Closing Date (Actual)
15-May-2008	30-Jun-2016

	IBRD/IDA (USD)	Grants (USD)
Original Commitment	0.00	4,500,000.00
Revised Commitment	0.00	3,857,452.14
Actual	0.00	3,857,452.14

2. Project Objectives and Components

a. Objectives

The Project Development Objective (PDO), as cited on p.6 of the Financing Agreement (FA), was "to support the Recipient in its efforts to improve the technical, commercial and operational efficiency of its power sector, through critical investment support and capacity building". This objective differed slightly from the wording in the Project Appraisal Document (PAD), which defined the Project's objective in terms of improving "sector operational and commercial efficiency, and sustainability".
The Project's Global Environment Objectives, under the GEF Grant, were to be "instrumental in containing CO2 emissions by improving the efficiency of the electricity distribution system, and by introducing end-use energy management practices".

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

Yes

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

Date of Board Approval
01-May-2012

c. Will a split evaluation be undertaken?

No

d. Components

The project had the following components funded by an IDA credit and a GEF grant:
1. Distribution Efficiency Improvement: (estimated cost at appraisal US$7.38 million of which IDA: US$5.23 million; GEF: US$2.2 million. Actual costs: US$19.35 million)
This component consisted of (a) upgrading distribution lines, to reconfigure the distribution system from low- to medium voltage, through provision of small-capacity distribution transformers, insulators, etc.; (b)

Installation of low- and medium-voltage meters at various locations, to enhance meter coverage/quality for low- and medium-tension customers; (c) Installation of capacitors on the distribution grid, to improve supply quality; (d) Establishment of networked customer service centers; (e) Introduction of customer-friendly billing systems; (f) Establishment of rapid response outage management program, including rapid response units on a pilot basis in Conakry.

2. Generation Efficiency Improvement: (estimated cost at appraisal US$2 million [IDA]. Actual costs: US$4.14 million)

This component included (a) Rehabilitation of Garafiri hydropower plant, through provision of spare parts and works; (b) Rehabilitation of Tombo thermal generation plant, through provision of critical spares and works; (c) Improvement of generation facility efficiency and overall generation capacity planning in the power sector, through provision of technical advisory services.

3. Technical Assistance for Energy Efficiency and Institutional and Business Process Strengthening (estimated cost at appraisal US$3.79 million of which IDA: US$1.89 million; GEF: US$2.30 million. Actual costs: US$4.68 million).

This component comprised (a) *Energy Efficiency & Conservation*: through (i) implementation of corrective measures based on energy audit of commercial establishments (and on establishment of an energy audit program); development of (ii) tariff and fiscal incentives for energy efficiency, (iii) strategy for private sector participation in energy efficiency/conservation programs, (iv) institutional capacity in the Ministry of Energy for implementing these programs; and (v) implementation of a communication strategy to create awareness of energy conservation; (b) Assessment of possible strategies for private sector capacity development and partnerships; (c) Development/adoption of a comprehensive power sector policy and strategy, through TA services to be provided to the Ministry of Hydraulics and Energy; (d) Strengthening of financial & accounting systems of the Project Implementing Entity; (e) Capacity building in management information systems and operations information technology; and (f) Monitoring and Evaluation of project implementation.

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

Project Cost: The project went through three Level 2 restructurings and one Level 1 restructuring to implement an Additional Financing (AF). The Level 2 restructurings consisted of the reallocation of funds between disbursement categories for the first two restructurings in 2008 and 2014, and the cancellation of undisbursed balance for the third, in August 2016. The final project cost after the AF - which injected US$18.3 million into the project in May 2012, to make up for funding shortfalls - was US$28.17 million, higher than the original projected cost of US$13.2 million.

Financing: The sources of funding for this project at appraisal consisted of IDA resources of US$7.2 million plus a grant from the Global Environment Facility (GEF) of US$4.5 million. An additional US$2.0 million of IDA funding was expected to be made available through the restructured Decentralized Rural Electrification project; however this amount did not actually materialize. These resources were subsequently augmented though an Additional Financing of an estimated US$18.3 million from IDA in 2012, introduced to make up for the funding shortfall, as well as cost overruns, thereby raising the total financing amount to US$30.0 million.

Borrower Contribution: No borrower contribution was envisaged for this project, nor was any provided

during the life of the project.
Dates: The project was originally envisaged to close on December 31, 2009. However, implementation was delayed on account of coup in December 2008, as a result of which the Bank stopped operations in 2009 and 2010. The GEF grant, originally approved in 2008, was only signed in 2011, after operations resumed with a closing date of June 30, 2013. Partly on this account, and partly on account of the Ebola crisis in 2014, which hindered project implementation countrywide, the closing date of the project was extended at the time of the Additional Financing to December 31, 2014, and subsequently once again to June 30, 2016.

3. Relevance of Objectives & Design

a. Relevance of Objectives

Objectives: At the time of appraisal, Guinea was a country whose electricity sector faced low access rates (less than 20 percent), inadequate supply (30 watts per capita), poor service quality (frequent outages), inefficiency (ratio of only 74 customers per employee) and an unsustainable financial and commercial performance. The project's development objective of improving the technical, commercial and operational efficiency of its power sector resonated with the Bank Group's 2003 country partnership strategy (CPS), which assigned high priority to improving the performance of the sector. It remained consistent with the current (2014-17) CPS, which (p.12) prioritized the energy sector as a major constraint to economic growth and included it as part of the CPSs Strategic Areas of Engagement (paras 65-67). It was also consistent with the Government of Guinea's strategy of establishing electricity supply in urban, densely populated areas. The Government's Energy Sector Policy Letter included the objective of achieving sector financial autonomy though an appropriate tariff structure and commercial management.
Relevance of the Global Environment Objectives: The Global Development Objectives of the Electricity Sector Efficiency Improvement Project of containing carbon emissions through improvements in efficiency of the electricity distribution system and by introducing end-use energy management services - were similarly consistent with the Diversified and Inclusive Pillar of the CPS. The Government of Guinea had been fairly active in developing the country's energy sector since 2006, in keeping with the ECOWAS White Paper on a regional policy on access to energy services to rural and peri-urban areas, to achieve the Millenium Development Goals. The approach to energy efficiency under this pillar included a component by Electricite de Guinee (EDG) to distribute 5 million energy-saving lamps in the country (in addition to an efficient biomass use initiative). In this way, the project was substantially relevant to its objectives.

Rating	Revised Rating
Substantial	Not Rated/Not Applicable

b. Relevance of Design

Design: The project's original design was closely allied to its development objectives. The design and causal chain were relatively straightforward, placing emphasis on achieving technical, commercial and operational

efficiency through critical investments, particularly: (a) technical loss reduction via improvements in distribution infrastructure, and (b) commercial loss reduction via installation of theft-prevention devices and metered consumption. These were designed around the CREST Initiative [Commercial Reorientation of the Electricity Sector Toolkit], comprising best-practice interventions, designed and implemented by EDG, with the active support of the Bank team. With the benefit of hindsight, though, the project could perhaps have oriented its focus more strongly towards large users in the Kaloum district, making sure that they were metered using state-of-the-art equipment, and eliminating the possibility of electricity theft from their networks. Secondly, with hindsight, the projects scope was clearly ambitious, given the level of risks prevailing. The results framework adequately captured the projects underlying logic, linking its inputs and outputs to project outcomes.
Relevance of GEF design: The design of the GEF project was substantially relevant to the Global Environment Objectives, which pertained to introduction and dissemination of energy efficiency measures, via provision of technical assistance and services. There was a fairly clear causal link between improvements in the efficiency of the electricity distribution system via better end-use energy management practices, and reductions in CO2 emissions. These links were adequately captured by the results framework.

Rating
Substantial

Revised Rating
Not Rated/Not Applicable

4. Achievement of Objectives (Efficacy)

Objective 1

Objective
To improve technical efficiency in the sector

Rationale
The project set out to improve the project's technical efficiency as part of an effort to facilitate and nurture sustainable growth, and improve access and quality of basic social services in the country. Towards this end, the project supported investments aimed at improving the distribution networks and generation capacity for reliable supply (including equipment and spare parts to improve the reliability of the Garafiri hydro plant and the Tombo thermal generation plant). The GEF funding provided support to the related objective of reducing CO2 emissions by addressing the large inefficiencies in the sector and reducing energy losses. The project focused on the specific area of Kaloum, as a step toward learning how to address the issues associated with technical and commercial losses, which were at the core of the financial and operational underperformance of EDG.
Outputs: Specific outputs from the project included the following:
- The availability rate of the Garafiri hydropower plant increased somewhat, from 95.8 percent to 96.9 percent, though falling well short of the target of 98.5 percent. At the country level, this was offset by an improvement in the overall power supply situation, resulting from the commissioning of the 240 MW Kaleta hydropower plant in August 2015, plus an additional 175 MW supply from thermal Independent Power Producers (IPPs) though this could not be attributed to the project.
- Generation of unit 33G at Tombo thermal plant increased by around 83,000 MWh also well short (less than

40 percent) of the target of 212,000 MWh. The rehabilitation of the unit, using spare parts financed by the project, was undertaken between 2009 and 2011, but without including control equipment. As a result, the unit broke down after two years in 2013, and once again after an attempt to recommission it in 2014 (it is now currently idle).
- Rehabilitation/installation of substations: A number of substations were installed or rehabilitated, with medium voltage (MV) conductors being replaced. The actual number of substations affected (35) fell short of the target, though the borrower's ICR argues that this was largely because the initial technical design had overestimated the number of new/rehabilitated substations actually needed. That said, the targets, originally set in the PAD, could easily have been revised at restructuring, if it was felt that they were seriously off the mark. However, no attempt was made to do so.
- Replacement of underground cables: 25.5 km of underground cables were laid, including changing low voltage (LV) cables to include theft-resistant cables falling well short (46 percent) of the target of 55.5 km. Here too, the borrowers ICR suggests that this reflected an overestimation of the length of cables actually needed (here again, no attempt was made to revise these targets at restructuring).

Outcomes:
Though some progress was made in improving distribution networks and generation capacity, there were shortfalls in achievement of rehabilitation/installation of substations, replacement of underground cables, generation of the Tombo plant and availability of Garafiri. This indicates an overall modest achievement of objectives in terms of improving technical efficiency of the sector.

Rating
Modest

Objective 2
Objective
To improve the commercial efficiency in the sector.

Rationale
The project aimed to improve the commercial efficiency of the sector through installation of electricity meters, including both prepaid and post-paid meters. This was to be one of the main outputs of the project to facilitate commercial recovery of the targeted zone.
Outputs: Specific outputs included the following:
- Installation of prepaid meters: Though this was a critical output, necessary to enhance the commercial viability of the sector, actual achievement was only 4 percent of target (566 meters installed vs. a target of 13,693). This potentially had a significant impact on the bill collection rate, since prepaid meters had, by definition, a 100 percent collection rate. The majority of meters were not installed because of strong consumer protests, which led to the Governments decision to halt the program. At completion there were some 13,000 unused meters in storage, together with a stock of meters acquired through other operations

with different donors.
- There was an increase in legalization of low voltage consumers, which potentially indicated a reduction in commercial losses. In this way, the number of low voltage customers in Kaloum expanded from 11,300 to 14,963 - somewhat in excess of the target of 13,693.

Outcomes:

- Total distribution losses in Kaloum declined from 21.5 percent to 14.7 percent, exceeding the target rate of 16 percent.
- The Bill Collection rate in Kaloum increased from 70 percent to 81.5 percent well short of the target of 95 percent.
The reduction of distribution losses achieved, despite the near-total failure to install prepaid meters in residential customer premises (which accounted for 80 percent of customers), was the result of the installation of postpaid meters in non-residential customers premises. Though the project installed only 566 prepaid meters, it also installed 556 postpaid meters in larger, commercial premises, which helped bring down distribution losses. This was however offset to no small extent by EDGs relatively poor bill collection rate. From the perspective of overall commercial viability, the combination of the loss reduction rate with the bill collection rate leads to a Cash Recovery Index (CRI) of only 0.70 for EDG, well below the target of 0.80 - the rate normally associated with a well-managed utility. As such, overall outcomes in bringing about an improvement in commercial efficiency fell well short of expectations.

Based on this, achievement of objectives in terms of improving commercial efficiency is rated modest.

Rating
Modest

Objective 3
Objective
To improve operational efficiency in the sector

Rationale
Specific outputs under this head consist of the following:
- Management of EDG: In 2015, a private operator (Veolia) was hired to run Electricite de Guine under a management contract. This was actually financed under a separate World Bank project, the Power Sector Recovery Project, rather than the current project (which raises some attribution issues). The Project Implementation Unit (PIU) continued to operate normally under the new management team.
- The project's operation benefited from an improved supply situation, with the commissioning of the Kaleta hydropower plant in August 2015, in addition to 175 MW supplied by thermal IPPs. The Government of Guinea recently decided to privatize most thermal generation power plants and have EDG remain as operator of existing hydropower facilities and some small regional thermal plants, which would help improve

supply reliability (by delegating thermal supply responsibility to the private sector).
Outcome:
The ICR reports that significant improvement in implementation was observed as the project approached closure in the last six months of its life, though preparation of a business plan, a key deliverable under the management contract, was significantly delayed. No data on specific results obtained were provided in the ICR; however data provided by the TTL indicates that Veolia made significant progress towards fulfilling its targets under its Management Contract with EDG. This included reduction in System Average Interruption Duration Index: SAIDI HV to 1.3 hours by end-June 2017 (bettering its 2019 target of 2 hours) and SAIDI MV of 120 hours (bettering its target of 240 hours). The rate of non-planned shutdowns had decreased from 28 percent in 2016 to 18 percent by end-June 2017 (against a target of 15 percent for 2017), and reduction in operations expenditures by 32 percent between 2015 and 2016.
While attribution issues cannot be overlooked entirely, the introduction of private sector management of EDG is strongly consistent with the objective of improving operational efficiency. Achievement of this objective is accordingly rated substantial.
GEF Objective: **To contain CO2 emissions by improving the efficiency of the electricity distribution system, and by introducing end-use energy management practices**

The GEF objective of reducing CO2 emissions was substantially achieved.
The objective was achieved to a high degree through the distribution of efficient lamps and the significant number of energy audits that were conducted, which would have identified scope for improvements in energy efficiency management at user level. Some 585,000 efficient lamps were distributed against a target 600,000 (97.5 percent achievement) and 71 energy audits were conducted against a target of 30 (237 percent achievement). This stimulated a reduction in CO2 emissions of an estimated 35,510 tons, against a target of 36,448 tons (i.e. a 97 percent achievement rate).

Rating
Substantial

5. Efficiency

Administrative and Operational Efficiency:
The project's efficiency was impacted negatively by lengthy delays that occurred in implementation (nine years since effectiveness). Most of these delays occurred on account of factors outside the control of the project; namely on account of the military coup that took place in December 2008, leading to the World Bank suspending disbursements until 2010. During this period procurement contracts for rehabilitation of the Kaloum distribution network and other key investments could not be awarded, and as EDG lacked the funds the project effectively came to a halt. Another (subsequent) event affecting implementation was the Ebola epidemic in early 2014, which had a devastating economic impact and hindered project implementation considerably for nearly 12 months with consultants and contractors abandoning project activities. That said, the initial

implementation period of three years was clearly unrealistic, and most of the investments that took place under the project were concentrated in the post-restructuring period (2012-16), which helped mitigate the effects of these implementation delays

Economic and Financial Efficiency:

Economic evaluation of the project at closure indicated an economic internal rate of return (EIRR) of 16 percent and Net Present Value (NPV) of US$9.78 million (discounted at 12 percent), and a financial return (FIRR) of 21 percent, taking into account the project's investments in distribution rehabilitation and Demand Side Management in the Kaloum district of Conakry, together with the distribution of efficient lamps. Economic benefits were estimated on the basis of technical loss-reduction in the distribution network, which were valued directly through energy savings and avoided generation cost, plus benefits associated with reduced consumption of users as a result of monitoring consumption through newly installed meters. EIRR estimates for the distribution component made at the time of appraisal indicated a rate of 25 percent, and for the generation component 30 percent, leading to a fairly robust overall rate of 27 percent. The financial rate of return (FIRR) averaged 29 percent - based on 27 percent for the distribution component and 30 percent for the generation component. The NPV, at a discount rate of 12 percent, was a somewhat lower US$4.25 million - based on the original formulation of the project, i.e. prior to the additional financing.

Taking into account the above, the project's efficiency is rated Substantial.

Efficiency Rating

Substantial

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	✓	27.00	0 ☑Not Applicable
ICR Estimate	✓	16.00	0 ☑Not Applicable

* Refers to percent of total project cost for which ERR/FRR was calculated.

6. Outcome

The project's relevance of objectives was rated as Substantial at inception, and continues to be so. At the same time, its design was found to be substantially relevant. Achievement of the projects objectives was rated Modest for Objective 1, Modest for Objective 2 and Substantial for Objective 3. Project efficiency was overall rated Substantial. Based on these ratings, the overall achievement of objectives can be considered to be Moderately Satisfactory.

a. Outcome Rating
Moderately Satisfactory

7. Rationale for Risk to Development Outcome Rating

At appraisal, the risk analysis identified political commitment to reform, limited institutional capacity and lack of private sector participation in the sector as critical issues. The Government had no credible track record of political commitment to reforms, which raised questions as to its ability to reinvigorate the power sector with a long-term vision. Its limited institutional capacity raised doubts about its ability to expand the project beyond the pilot phase and to absorb larger investments. Finally, the lack of private sector participation raised questions about the ability to sustain improvements in the sector resulting from the project into the longer term. Some of these risks were eventually mitigated during implementation of the project.
At closure, key risks to the projects sustainability include (a) The ability (or lack thereof) of the Government to implement a revenue protection program to ensure that large consumers (10 percent of users, consuming the bulk - 75 percent - of the electricity distributed) pay their full share. This would require that they would be cut off if they were to fall in arrears something that the Government might lack the political will to do; (b) The ability of the power utility to preserve the commercial infrastructure built and rehabilitated under the project so as to preserve the progress made in loss-reduction and collections. This risk could easily materialize as a result of management changes in EDG as a result of Government changes; and (c) Tolerance for corruption among utility staff, which could lead to slippages in bill collections and revenue improvements. This risk could however be mitigated by maintaining and extending the private management contract for some length of time.
The sustainability of greenhouse gas reductions achieved may not constitute a major area of risk in the short to medium term. If the rehabilitated infrastructure were to deteriorate through lack of maintenance, this could lead to higher technical and commercial losses, increased power generation and higher emissions resulting. However, ensuring the continuity of the contractual private management of EDG would go a long way towards mitigating that risk. There is also a risk of lack of availability of the efficient (compact fluorescent) lamps installed during project implementation, which could lead to the adoption of lower cost but less efficient equipment; but this is likely to be small.
Based on the above, the Risk to Development Outcome is rated as High.

a. Risk to Development Outcome Rating
High

8. Assessment of Bank Performance

a. Quality-at-Entry
The design of the project, as originally conceived, was broadly appropriate to the country's needs. Preparatory work took account of the World Banks similar experience in other countries in Africa, such as Nigeria, on the basis of which the earlier-mentioned CREST initiative was incorporated as a key component.

The project also allocated resources to developing the generation business, so that improvements in the distribution segment could be complemented by reliable generation, which was then in a fragile state. As designed, the project was responsive to the primary objective of contributing to more efficient management as well as the GEO objective of reducing emissions. The design of the main distribution and supply component did not require any adjustments during implementation. However, the support for generation, though adequate for the partial rehabilitation of the Tombo plant, lacked sufficient scope to provide for a longer-term and more substantive contribution to the power situation in the Kaloum area, especially before the Kalta hydropower plant came on line.
Project preparation did however underestimate some of the challenges that arose during implementation, especially the unsuccessful rehabilitation of Unit 33 at Tombe, which could be ascribed to an unrealistic visualization of the degree of intervention needed. The project also lacked a feasibility study, as a result of which the project went ahead on an insufficient budget and an unrealistic timeline of only three years.

Quality-at-Entry Rating
Moderately Unsatisfactory

b. Quality of supervision
The Bank team was reasonable diligent in its oversight and implementation support for the project. Regular missions were conducted, leading to timely reports on project progress. The team was responsive to the need for additional resources to make up for funding shortfalls and effectively restructured the operation in order to restart it, following the suspension of disbursements during the period of the coup. The question of incorrect targets in the results framework (the overestimation of Medium Voltage substations and lines suggested in the borrowers ICR) was not specifically addressed through a modification of the project's indicators, which could have been done at the time of the Additional Financing. It is also clear in retrospect that the issue of the underperforming generation component, i.e. the Tombe rehabilitation, should have been addressed earlier. Eighteen Implementation Status & Results Reports (ISRs) were archived during the period 2006 - 2016, implying a reasonable frequency of supervision missions undertaken by the Bank. However, the Bank team failed to file a closing ISR at the time of project closure; the last ISR filed having been archived over five months prior to closing. The ICR does not provide much by way of details of the Bank's supervision effort, including the extent to which this was field-based and the extent and frequency of dialogue with the Government on critical challenges facing the project. However, discussions with the TTL indicate that field-based supervision and dialogue with counterparts was implemented fairly intensively during the last two years of implementation.

Quality of Supervision Rating
Moderately Satisfactory

Overall Bank Performance Rating
Moderately Satisfactory

9. Assessment of Borrower Performance

a. Government Performance

At the time of project preparation the Government appeared committed to the project. It had just undertaken a mix of interventions intended to improve the capacity and viability of the electricity sector, including changing the management team at EDG, supporting EDG's efforts to trim its work force, resolve the dispute with the former private operator and increase tariffs by 74 percent in September 2004 the first such increase since 1996. Unfortunately, one year after project effectiveness, political events in the form of a military coup in 2008 intervened which resulted in the project coming to a complete halt for about two years. Thereafter, the Government showed poor support for the implementation of commercial loss reduction investments under the project. In the Kaloum district, the installation of prepaid electricity meters was supposed to be one of the projects main outputs, intended to facilitate the commercial recovery of the targeted zone. Despite improvements in the network, users in the Kaloum area opposed the installation of meters, whereupon the Government backed down and suspended further efforts to roll out the meters. Only 566 meters were installed and around 13,000 remained in storage, unused, which severely compromised the rehabilitation of EDG's commercial performance.

On the positive side, once the project resumed operations after the period of suspension of disbursements, it was implemented fairly speedily, and almost fully disbursed, including the additional financing. Also, the Government proved amenable to hiring a private operator to run the utility under a management contract, from July 2015 (the contract to run until 2019).

Government Performance Rating

Moderately Unsatisfactory

b. Implementing Agency Performance

Under the project's institutional/implementation arrangements, as specified in the PAD, EDG was given the responsibility for implementing the project. A Project Implementation team was created within EDG for the purpose, working under the supervision of the Director of Planning. A separate Project Implementation Unit (PIU) was not considered necessary, as it was expected that the project team within EDG would be able to coordinate the various activities in terms of identification, implementation and ownership.

EDG performed fairly well during implementation, and maintained staff continuity during the suspension period. The project team was responsive to project demands and proactive in seeking solutions to issues that arose during implementation. The ICR mentions (p.39) that during interviews conducted as part of ICR preparation, staff from the contractual management team (Veolia) acknowledged the quality of the EDG project team. The project team complied with fiduciary, procurement and safeguards responsibilities, following Bank procedures. Its principal failing lay in not implementing a communications strategy during the installation of prepaid meters, which resulted in consumer protests and led to the Government suspending the program.

Implementing Agency Performance Rating

Moderately Satisfactory

Overall Borrower Performance Rating
Moderately Satisfactory

10. M&E Design, Implementation, & Utilization

a. M&E Design
The M&E framework in the PAD was broadly aligned to the PDO. However, some of the Key Performance Indicators (KPI) chosen were relatively global in definition, and too broad to provide adequate attribution to the project. At restructuring, though the PDO remained unchanged, the specification of these indicators was tightened so as to target the Kaloum area and/or the actual generating units being rehabilitated, thereby to improve the attribution of results to the project. Also, several of the KPIs (e.g. launching of a customer care center, improvement in customer satisfaction, training programs on PPP), considered to be of limited relevance or too difficult to monitor accurately, were dropped at that time (described in the ICR, pages 20-22).

b. M&E Implementation
During the initial phase of the project (2007 to 2009), project indicator data were collected through general company statistics. As indicated earlier, during this phase, some of the indicators were relatively global in nature, reflecting EDG's overall performance rather than that of the project. After restructuring, indicators reflected project achievements much more directly an were also monitored more closely. Data for these indicators were collected at EDG's Kaloum agency and through standard data obtained via EDG's production directorate.

c. M&E Utilization
M&E information collected after restructuring was more directly useful in reflecting the progress and achievements of the project, which could be reported in the ISRs. Some of the final results will however become available only after project closure; as in the case of commercial losses and bill collection, where implementing elements such as the prepaid meters were delayed until after closure. M&E arrangements were sustainable beyond the life of the project.

M&E Quality Rating
Substantial

11. Other Issues

a. Safeguards
Environmental: The project was classified as Environmental Category C, thereby not triggering any

safeguard policies. The rating reflected the fact that the project involved pilot initiatives such as rehabilitation of existing distribution infrastructure using the CREST approach, funding goods and services such as HT trivector meters and the introduction of improved billing services. Existing generation facilities were being provided with the spare parts necessary to improve reliability/efficiency of the Garafiri and Tombo plants. The project did however envisage preparation of an environmental audit of these plants in the context of a larger, follow-on operation, and building on a sector-wide environmental and social management framework study that had already been commenced by EDG.

Social: At project preparation, it had been expected that improvements in electricity service delivery, efficiency and billing would have a positive social impact. Evidence from the CREST pilot indicated that increased satisfaction through better management resulted in rising levels of collections, increases in customer connections and reduction in losses. The project was in this way expected to bring better service to customers, who would in turn be willing to pay for the service. However, the extreme poverty under which a large number of consumers were living (50 percent of the population living on less than US$1 per day) meant that there was considerable resistance among the poorest segment to increased tariffs (which derailed efforts under the project to install prepaid meters). The delivery of energy efficient lamps to consumers in the targeted area would on the other hand have helped reduce their costs of consumption.

b. Fiduciary Compliance

A full Financial Management (FM) Assessment was undertaken during project preparation, which noted that the Government's procedures were not adequate to meet the requirements of donor-assisted projects. However, EDG did have the institutional background to provide the assurance that it would be capable of managing the projects funds. The PAD indicated that EDG would put into place a fiduciary team, who would receive training in order to become familiar with World Bank procedures and requirements, and an action plan was proposed, with specific targets, in order to ensure that the team would be ready by effectiveness. Based on this understanding, the PAD indicated that the FM arrangements satisfied the Banks minimum requirements under OP/BP/10.2, and that the overall FM risk rating was deemed to be moderate. During implementation the performance of the FM system was rated satisfactory. Quarterly financial reports were produced on time and were of satisfactory quality. Audit reports, which received unqualified opinions from the auditors, were mostly submitted on time (the report for 2014 was an exception, as it was submitted two months late).

As regards procurement, EDGs staff acquired familiarity (as a result of training) with the Bank's guidelines for contract preparation, bidding and implementation. No major challenges were identified during implementation, and there were no major issues regarding compliance with the Bank's procurement policies during implementation. Main issues arising related to the multiple approvals required for most contracts, from the Ministry and State procurement agency, and the World Bank, which inevitably slowed down project implementation.

c. Unintended impacts (Positive or Negative)

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d. Other

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12. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Moderately Satisfactory	Moderately Satisfactory	---
Risk to Development Outcome	High	High	---
Bank Performance	Moderately Satisfactory	Moderately Satisfactory	---
Borrower Performance	Moderately Satisfactory	Moderately Satisfactory	---
Quality of ICR		Substantial	---

Note
When insufficient information is provided by the Bank for IEG to arrive at a clear rating, IEG will downgrade the relevant ratings as warranted beginning July 1, 2006.
The "Reason for Disagreement/Comments" column could cross-reference other sections of the ICR Review, as appropriate.

13. Lessons

IEG derives the following lessons, drawn from the ICR
- Government commitment and support need to be determined and verified before project initiation. This support needs to be demonstrated through full Government involvement in the undertaking of sensitive installations (like meters) and in promotional campaigns, which are essential to raising public awareness and improving communication between utility and customers.
- Investments in training human resources are critical to ensure the success of operations involving interaction and potential conflict with customers. Capacity buildings in communications and public relations should be included in similar projects.

14. Assessment Recommended?

No

15. Comments on Quality of ICR

The ICR is clearly written, concise and consistent with the guidelines. It provides a good summary of the storyline of the project, especially of its background, implementation and challenges faced. It also provides details of the results matrix and of the various changes made during restructuring. The analysis of project design and implementation issues is generally evidence-based and candid. The ICR is critical (p.29) of the original M&E framework, noting the weak attribution of some of the original indicators, which had to be revised during restructuring. One minor weakness in the analysis is that the discussion of project efficiency provides an economic and financial evaluation of the project at closure, but fails to either reference the similar analysis conducted at appraisal (PAD, Annex 9A) or provide an assessment of the cost effectiveness of the project's activities. Also, the ICR carries out a split evaluation for efficacy in Section 3.2, which is unnecessary.

a. Quality of ICR Rating
Substantial