Report Number: ICRR14654

IEG **ICR Review**
Independent Evaluation Group

1. Project Data:			Date Posted: 06/16/2015	
Country:	Kenya			
Project ID:	P083131		Appraisal	Actual
Project Name:	Energy Sector Recovery Project	Project Costs (US$M):	225.47	375.07
L/C Number:	C3958; C4572	Loan/Credit (US$M):	79.96	157.16
Sector Board:	Energy and Mining	Cofinancing (US$M):	112.10	164.10
Cofinanciers:	European Investment Bank, French Development Agency, Nordic Development Fund	Board Approval Date:		07/13/2004
		Closing Date:	03/31/2010	09/30/2013
Sector(s):	Power (85%); Oil and gas (12%); Central government administration (3%)			
Theme(s):	Urban services and housing for the poor (29% - P); Regulation and competition policy (29% - P); State-owned enterprise restructuring and privatization (14% - S); Infrastructure services for private sector development (14% - S); Corporate governance (14% - S)			

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2. Project Objectives and Components:

a. Objectives:

Original Project Development Objectives (PDOs)
According to Schedule 2, page 23 of the Development Credit Agreement dated August 4, 2004, the original PDOs of the Energy Sector Recovery Project (ESRP) were to: "(a) enhance the policy, institutional and regulatory environment for private sector participation and sector development; (b) support efficient expansion of power generation capacity to meet the Borrower's projected supply deficits by FY2006/07; and (c) increase access to electricity in urban and peri-urban areas, while improving the efficiency, reliability, and quality of service to existing consumers." The Project Appraisal Document (PAD) dated June 10, 2004 had exactly the same statement of the PDOs.

Revised PDOs After the 2009 Restructuring and Additional Financing (AF)
In 2009, as part of the Additional Financing and project restructuring approved by the Board on the basis of a Project Paper dated March 9, 2009, the PDOs were modified to remove one of the original objectives while the other two objectives were maintained. According to Schedule 1, page 7 of the Financing Agreement dated May 8, 2009, the revised PDOs are to: (a) enhance the policy, institutional, and regulatory environment for sector development, including private sector development; and (b) increase access to electricity in urban and peri-urban areas, while improving the efficiency, reliability, and quality of service to customers." The original objective to support the expansion of power generation capacity to meet projected supply deficits by FY2006/07 was changed to an intermediate outcome indicator, because that expansion was considered as a pre-requisite to achieving the objective on increasing electricity access. At the time of restructuring, there were also important delays in achieving that original generation expansion objective, which in turn also delayed the achievement of the increased electricity access objective.

Split Rating

This IEG Review is based on the original and revised objectives with weighted ratings for outcomes, which were also changed during the 2009 restructuring, in line with the harmonized IEG and OPCS Guidelines and the OPCS Guidelines for Implementation Completion & Results Reports dated October 25, 2011.

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

Yes

If yes, did the Board approve the revised objectives/key associated outcome targets?

Yes

Date of Board Approval: 04/02/2009

c. Components:

Key Acronyms:
ERB - Electricity Regulatory Board
GOK - Government of Kenya
IPPs - Independent Power Producers
KenGen - Kenya Electrical Generating Company
KETRACO - Kenya Electricity Transmission Company
KPLC - Kenya Power and Lighting Company
MOE - Ministry of Energy
REA - Rural Electrification Authority

ORIGINAL COMPONENTS:

The original project had four components:

A. Institutional and Capacity-Building Component (US$6.30 million at appraisal)
This component supported activities to: (1) implement a comprehensive Corporate Recovery Program for KPLC; (2) strengthen ERB's capacity to review and set power tariffs, prepare secondary legislation, and enforce regulations; (3) equip the Kenya Bureau of Standards to set and monitor standards for petroleum products; (4) upgrade staff skills in MoE and KenGen; and (5) implement a management and staff development program for KPLC.

B. Feasibility Studies and Engineering Services Component (US$11.75 million at appraisal)
This component included consultancy and/or engineering services for: (1) environmental and social impact assessments (ESIA) for the generation and distribution components and the LPG import handling and storage project; (2) updating of the Kipevu combined-cycle power plant feasibility study and the distribution component; (3) the supervision of the distribution component; (4) a feasibility study for the proposed LPG import handling and storage project; (5) a geothermal reservoir optimization study for the Olkaria I and II sites; (6) a study to establish a geothermal development company and prepare a business plan; (7) preliminary design and supervision of the Olkaria II power plant extension; (8) detailed design and supervision of the Supervisory Control and Data Acquisition/Emergency Management System (SCADA/EMS); and (10) preparation of future energy projects.

C. Generation, Olkaria II Power Plant Extension (US$54.93 million at appraisal)
This component included: (1) civil works for the extension of the powerhouse to accommodate the third 35-MW steam turbine generating unit, control panel and other ancillary equipment, cooling tower, and switchyard for installing a generator transformer, support bus-bar arrangement, and switchgear equipment; (2) a steam-gathering system from Olkaria I and Olkaria II sites and connecting pipes to the third Olkaria II unit; (3) a 35-MW steam turbine generating unit; (4) a 45-medium-voltage (MV), 11/220-kV step-up generator transformer, complete with switchgear equipment; and (5) other electrical and mechanical equipment, including control room equipment, cables, and other ancillary equipment.

D. Distribution Upgrading (US$152.49 million at appraisal)
This component supported the following: (1) upgrading existing and constructing new substations; (2) reinforcing and extending the distribution system; (3) supplying energy meters; (4) upgrading the SCADA/EMS system, including providing a trunked radio system for the Mt. Kenya region.

REVISED COMPONENTS:

During implementation and the 2009 additional financing (AF) operation, some activities were dropped and new ones were added, as indicated below.

A. Institutional and Capacity Building (US$1.1 million from IDA)
The AF supported training of (1) KPLC, MOE and REA on procurement, contract management, ESIAs, the use of geographic information system (GIS)-based electrification modeling to plan and prepare the scaling-up of electricity access; and (2) electrical installation contractors to improve and increase local capacity for installation works.

B. Studies and Engineering Services (US$7.2 million from IDA)
The ESIA for LPG import handling and storage was funded by a private company constructing the facility and was dropped. Added were studies and engineering services for: (1) unbundling KPLC and establishing KETRACO; (2) a Transmission System Master Plan; (3) the technical and economic assessment of systems needed for the access scale-up program; (4) tender documents for the generating plant; (5) assessing the impacts of the access scale-up on KPLC's billing, meter reading, collections, etc.; (6) developing M&E methods; (7) an energy sector environmental assessment; (8) feasibility studies on wind power generation; (9) the management and concessioning of electricity systems outside the national grid; (10) a feasibility study for an LNG regasification plant; (11) biogas pilot plants in collaboration with flower farms; and (12) a study on the national electricity power system.

C. Generation, Olkaria II Power Plant Extension (US$64.2 million, cofinanced by the French Development Agency [AFD] for US$26.0 million, the European Investment Bank [EIB] for US$26.0 million, and KenGen for US$12.2 million). KenGen, AFD, and EIB financed the third unit at the Olkaria II power plant.

D. Distribution (US$77.1 million, of which US$68.9 million from IDA and US$8.2 million from KPLC).
The AF revived items that were trimmed from the original design: (1) reconductoring about 228 km of 11-kV lines and about 270 km of 33-kV lines; (2) installing 11-kV switchgear at various substations and line sections; (3) extensions of the distribution network, transformers, and meters; (5) four to six transformer substations in Nairobi residential areas with high electricity demand growth; (6) underground cables in Mombasa; and (7) spare substation transformers, distribution transformers, conductors, insulators, stay rods, and pole accessories.

d. Comments on Project Cost, Financing, Borrower Contribution, and Dates:

Project Cost

The figures indicated above for the appraisal and Additional Financing (AF) stages are combined in the table below, together with the actual amounts at project closing. These figures were derived from pages 4 to 6 of the ICR. AF was required to address price escalations in the generation component and to significantly expand the distribution component, as shown in the table.

(in US$ million)

Components	Original Project (2004)	Additional Financing (2009)	Total Cost (Actual)	Total IDA Financing (Actual)
A: Institutional and Capacity-Building	6.30	1.10	7.40	7.35
B: Studies and Engineering Services	11.75	7.20	18.95	18.26
C. Generation-Olkaria II Power Plant Extension	54.93	64.20	119.13	24.01
D. Distribution Upgrading	152.49	77.10	229.59	107.54
TOTALS	225.47	149.60	375.07	157.16

Project Financing and Borrower Contribution

The PAD indicated an original IDA credit of US$80 million equivalent, while the AF PP indicated an additional IDA credit also for US$80 million equivalent. As indicated in the table above, total actual IDA financing (original and AF) amounted to a total of US$157.16 million. For Components B, C and D, the cofinancing and KenGen/KPLC financing amounts are shown below:

(in US$ million)

Components	EIB	AFD	Nordic Dev Fund	KenGen	KPLC
B				0.54	
C	50.01	26.00		19.10	
D	51.09	25.00	12.00		33.97
TOTALS	101.10	51.00	12.00	19.64	33.97

Key Dates

The project was approved by the Bank's Board on July 13, 2004. Additional Financing (AF) was approved on April 2, 2009. A midterm review was conducted in November 2011. The two main restructurings of November 2008 and April 2009 for AF involved reallocations to expand the rate of access to new connections and address price escalations. These and 3 other restructurings in October 2007, May 2012, and April 2013 led to an extension of the project closing date by 3 years, from the original date of March 31, 2010 to the actual closing date of September 30, 2013.

3. Relevance of Objectives & Design:

a. Relevance of Objectives:

ORIGINAL OBJECTIVES:

High

The relevance of the PDOs at the time of appraisal and at present is rated high. The original objectives were highly relevant to the Government's 2004 National Energy Policy, which stated the government's long-term vision to reform Kenya's electricity sector. This Policy, in turn, was based on the preceding Energy sector Development Strategy, the Power Market Design and Pre-privatization Study, and the National Energy Policy Workshop, all of which were supported by IDA with funds from the Public-Private Infrastructure Advisory facility (PPIAF). The objectives remain relevant to the goals of the March 2010 Country Partnership Strategy (CPS), which supports continued private sector participation, generation expansion including IPPs, and corresponding growth in transmission and distribution. The Government's long-term strategy -- Vision 2030 -- calls for the expansion of access to electricity, which IDA supports. IDA is also supporting the ongoing Kenya Electricity Expansion Project (KEEP), which seeks to continue the reforms and expand the investments achieved under the ESRP under review.

REVISED OBJECTIVES:

High

The relevance of the revised objectives is high. Revised objectives (a) and (c) were essentially the same as the original ones, except for the minor change of the original wording from *"private sector participation and sector development*" to the revised wording *"sector development, including private sector development."* The original objective (b) was made an intermediate outcome indicator at the 2009 restructuring (which it should be, since additional generation capacity is a physical output indicator, whereas PDOs should be formulated in terms of development outcomes) and was implemented. Hence, there were no major changes in the substance of the objectives and the above assessment of relevance also applies for the objectives as revised during the 2009 restructuring.

b. Relevance of Design:

ORIGINAL OBJECTIVES:

Substantial

The relevance - to the stated PDOs - of the project's components, reform areas, and investments, is substantial. The causal chain between the activities and infrastructure being financed and the outcomes being sought are clear and convincing. Specifically, the engineering services, physical plant for generation expansion, and distribution network extension directly serve the revised PDO of increasing access to electricity. The bulk of project financing was for studies, engineering services and additional electricity generation, which directly served the original PDO of expanding Kenya's power generation capacity to meet forecast supply deficits. The distribution grading investments show clear causal links to the achievement of the PDO related to expanding electricity access and improving the efficiency, reliability, and quality of service. The project's institutional and capacity-building activities are also causally linked to the objective of enhancing the policy and regulatory environment for Kenya's energy sector development.

The PAD's Results Framework was well articulated at a basic level, but could have integrated the key investment activities along the causal chain, such as the completion of incremental generation capacity and distribution networks, together with their specific time frames. Resources as appraised were not sufficient. According to the ICR (page 8), major increases in international prices of input materials between the time of project appraisal in 2004 and the time of

contract awards resulted in significant financing gaps significantly. There were major increases in international prices of materials, such as aluminum and copper, as well as high demand for turbines, contributed to rising costs and to the financing gap in both the generation and the distribution components. Moreover, there were not many bidders for the investment components, often resulting in higher costs and cost overruns. For this reason, the Additional Financing was required.

REVISED OBJECTIVES:

Substantial

The relevance of design remains substantial after the 2009 restructuring, since the PDOs (a) and (c) remained essentially the same, as explained above in Section 3 (a), and the original PDO (b) was made an intermediate outcome indicator.

4. Achievement of Objectives (Efficacy):

ORIGINAL OBJECTIVES

PDO 1: To enhance the policy, institutional and regulatory environment for private sector participation and sector development - **Substantial**

Outputs

- The Energy Act was enacted in 2006, leading to the establishment of ERC and REA in 2007.
- An Management Information System (MIS) was installed at ERC and a cost-of-service study was completed.
- More than 1,200 staff members from the Ministry of Energy (MOE), The Energy Regulatory Commission (ERC), Kenya Electrical Generating Company (KenGen), Kenya Power and Lighting Company (KPLC), Kenya Bureau of Standards (KEBS), Rural Electrification Authority (REA) and the Energy Tribunal received training in planning, modeling, environmental and social impact assessments, GIS, procurement, and contract management.
- A sectoral environmental assessment and a study in unbundling KPLC were completed.

Outcomes

- A national energy policy is in place.
- ERC is fully operational.
- Regulations were issued following the passing of the Energy Act, of which 12 remain to be gazetted at project closing.
- A new, cost-based tariff was introduced in 2008. Further tariff adjustments were made in 2013.
- Based on the KPLC unbundling study, Kenya Electricity Transmission Company (KETRACO) was established in 2009.

PDO 2: To support efficient expansion of power generation capacity to meet the Borrower's projected supply deficits by FY2006/07 - **Substantial**

Outputs

- The study to establish a geothermal development company was completed in 2007, and the Geothermal Development Company was incorporated in December 2008.
- The geothermal reservoir optimization study was completed in 2009.
- Environmental and social impact assessments were completed in 2009.
- Engineering services for the design and supervision of Olkaria II power plant extension were completed in 2010.
- Completion of the following were delayed beyond the original closing date and were achieved by the final closing date: civil works, steam-gathering system; steam turbine generating unit; step-up generation transformer and switchgear equipment; and other electrical and mechanical equipment.

(This original PDO outcome indicator was reformulated as an intermediate outcome indicator during the 2009 restructuring.)

- Albeit with much delay, the third unit of Olkaria II (35 MW) came online in May 2010, hence the additional generation capacity was achieved and operational after the 2009 restructuring and closing date extension..

Outcomes

(A new PDO indicator related to GWh of electricity added under the project was introduced at the 2009 restructuring.)

- While much delayed, the target of 276 GWh generated was exceeded in FY2011, when 296 GWh was generated. However, this dipped in FY2012 (280 GWh) and FY2013 (255 GWh) due to maintenance work on the Olkaria plant.

PDO 3: To increase access to electricity in urban and peri-urban areas, while improving the efficiency, reliability, and

quality of service to existing consumers - **Modest**

Outputs

- New substations; reinforcement and extension of the distribution system; energy meters, upgrading of the SCADA/EMS system
- Engineering services for the SCADA/EMS contract were completed in 2010.
- A transmission master plan was undertaken covering medium- (2012-2017) and long-term (2018-2030) reinforcements that will be needed to accommodate network developments in Kenya.
- 230,000 energy meters were installed.

Outcomes

(The reduction of system losses, availability of transmission lines, and reduction in monthly outages - which were originally PDO outcome indicators - were reformulated to intermediate outcome indicators during the 2009 restructuring.)

- At the time of restructuring, system loss reduction was partially achieved. From the 2003/2004 baseline of 18.7%, system losses were reduced to 16.3 % by June 2009, compared to the original target of 14.5%.
- Availability of 200-kV and 132-kV transmission lines was achieved, at a level of about 99% by the time of the 2009 project restructuring, thus exceeding the target of 97%. (This indicator was replaced in 2009 by a new indicator on the number of distribution line interruptions - see PDO 2 under Revised Objectives below.)
- By the 2009 restructuring, the reduction in the number of monthly outages was partially achieved, at a level of 5.771 outages per month, better than the 2004 baseline of 11,000 per month, but still short of the target of 4,000 per month. (This indicator was also replaced in 2009 by the new indicator on the number of distribution line interruptions - see PDO 2 under Revised Objectives below.)

REVISED OBJECTIVES

PDO 1: To enhance the policy, institutional and regulatory environment for sector development, including private sector participation - **Substantial**

Outputs

Same as the outputs outlined above under Original Objectives.

Outcomes

(New PDO outcome indicators were added at the 2009 restructuring, related to the number of Independent Power Producers or IPPs, % of disputes resolved, households connected, and number of distribution line interruptions.)

- The number of IPPs increased, from a baseline of 2 in 2004 to 7 by the closing date. Compared to the target of 8 IPPs, this indicator was substantially achieved.
- The target of 95% of disputes and complaints resolved annually by ERC was partially achieved. By project closing, ERC achieved a 76% resolution rate, but it should be positively noted that ERC did not even exist in 2004, and the rate varies each year; for instance, 85% were resolved in 2012.

Drafting of all the relevant legislation was completed before project closing, and only the gazetting process is pending. The Energy Act has been enforced, and the sector institutions are operational.

PDO 2: To increase access to electricity in urban and peri-urban areas, while improving the efficiency, reliability, and quality of service to existing consumers - **Modest**

Outputs

(New intermediate outcome indicators on incremental distribution lines and number of substations were added at the 2009 restructuring.)

- The target of 1,775 km of distribution lines constructed or rehabilitated under the project was exceeded; the actual level was 2,114 km at project closing.
- By project closing, 48 substations were added, compared to the target of 45.

Outcomes

(New PDO outcome indicators were added at the 2009 restructuring, related to the number of households connected, and number of distribution line interruptions.)

- The target on household connections was exceeded: 526,000 were connected by project closing, compared to a target of 450,000.
- Compared to a baseline of 4.7 distribution line interruptions (per 100 km, for 66-kV and 33-kV lines) in 2004, the target of 2 interruptions was achieved in 2012; however, due to the rapid expansion of connections, the level rose to 2.92 by the time of project closing.
- While recognizing year-to-year variations, transmission and distribution losses were at 18.6 % in September 2013, compared to the baseline of 18.7 % in 2004, and was therefore not achieved at project closing. Initially, however, there was a trend toward achieving the target of 15.2%, but this was reversed by the government's aggressive grid expansion into rural areas starting in 2012.

5. Efficiency:

Modest

Although economic efficiency is substantial based on the project's EIRR, its implementation and administrative efficiency is modest given the long implementation delays -- leading to an overall efficiency rating of modest.

Economic Efficiency
The ICR updated the EIRR based on the same methodologies as in the PAD. The updated ex-post EIRR for the generation component is 22%, compared to 20% at appraisal. In terms of cost-effectiveness, the estimated life-cycle cost of the plant is at US$0.077 per kWh, which indicates a clear cost advantage compared to other generation options. The updated EIRR for the distribution upgrading component is 32%, compared to 30% at appraisal. The EIRR indicated below is for Distribution Upgrading, which is the largest investment component in the project, accounting for 61% of total actual costs.

Implementation and Administrative Efficiency
Many implementation delays resulted in an almost doubling of the implementation time period to 9 years. Despite measures to strengthen the Project Implementation Teams (PITs), their capacity to conduct procurement and manage contracts remained weak, which delayed key studies, procurement of generation and distribution equipment, and contracts management. MOE, for example, interfered with the day-to-day operations of its PIT, and staff turnover was high. Another example is the Kenya Power and Lighting Company (KPLC), whose performance was a project focus. The implementation of KPLC's Management Services Contract during FY2007-08 was too short to fully instill a culture of performance. More generally, implementation was also slowed down by weak coordination and unfamiliarity with Bank procedures. This was worsened by the crude packaging of contracts across differing activities or geographic areas.

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

	Rate Available?	Point Value	Coverage/Scope*
Appraisal	Yes	30%	90%
ICR estimate	Yes	32%	90%

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

6. Outcome:

Under the original project objectives, relevance of objectives is **high** and relevance of design is **substantial**. Efficacy is **substantial** for PDO1 related to energy sector development, **substantial** for PDO2 on the expansion of generation capacity, and **modest** for increasing access and improving efficiency, reliability and quality of service. Efficiency is **modest**.

Under the revised project objectives following the 2009 restructuring, relevance of objectives remained **high** and relevance of design is **substantial**. Efficacy is **substantial** for PDO1 related to energy sector development and private sector participation, leading to improved investors' perception of the Kenyan electricity market, and **modest** for PDO2 since at project closing the network reliability and service quality goals were not fully met.

Taking the pre- and -post-2009 restructuring split in disbursements of 15% pre/85% post into account, the overall project outcome is **moderately satisfactory**.

a. Outcome Rating: Moderately Satisfactory

7. Rationale for Risk to Development Outcome Rating:

The risks to the project's development outcomes are significant, mainly because the sustainability of the reform measures is doubtful. Inadequacies in the institutional capacity of the government and utilities remain. Sector and system planning is incoherent and prospective investments are inadequately coordinated with the Least-Cost Power Development Plan. Sector governance remains weak, since utilities are not yet permitted to be managed and operated on sound commercial principles. Political interference and lack of consumer support result in irregular and

insufficient tariff adjustments. This, in turn, jeopardizes the financial viability of the energy utilities. Connection costs continue to increase, while a sustainable subsidy mechanism to help finance new connections has not been put in place. Distribution system investments are inadequate, thus hindering the pace of increasing electricity access.

a. Risk to Development Outcome Rating : Significant

8. Assessment of Bank Performance:

a. Quality at entry:

Previous energy sector operations and the Bank team's senior experience and sector knowledge helped to enhance quality at entry. As indicated in Section 3 above, the project's objectives were highly congruent with the Government and IDA strategies for the energy sector. Lessons from other energy operations were adequately taken into account. Cofinancing was effectively mobilized from AFD, EIB, and NDF. There was a clear recognition that policy, regulatory and institutional capacity-building activities need to complement the physical expansion of generation and distribution capacity, and the Bank team helped to ensure Government counterpart financing for both. According to the ICR, the Bank team engaged with the clients for the long-term, through "persistence with making the reform happen; provision of necessary inputs, including analytical work and convening of consensus-building workshops; and in-depth knowledge of the political economy surrounding the reform." One minor shortcoming was related procurement, for which the ICR notes that "packaging of the geothermal EPC contract may have excluded some prospective bidders, limiting competition, and later leading to delays in implementation" while recognizing that "the contract was designed based on the previous project's experience and on recommendations by the consultant employed by KenGen."

Quality-at-Entry Rating: Satisfactory

b. Quality of supervision:

The ICR indicates that the Bank task team conducted implementation support missions regularly, during which it proactively addressed implementation issues. For example, the Bank team processed the Additional financing when a funding gap was identified by country clients and cofinancing partners. The team persevered through the difficult reform processes and showed flexibility in adjusting milestones. Supportive inputs were provided based on government requests, including the studies to establish KETRACO, a biogas pilot, and feasibility studies. According to the ICR, "extension of the project closing date as part of project restructuring and frequent reallocations of credit proceeds also reflected the Bank's flexibility in responding to changing circumstances."

However, slow procurement and disbursement hampered implementation, particularly for the generation and distribution components. Some of the issues - such as worldwide inflation - were outside the control of the task team. However, the sub-optimal EPC contract packaging at entry (see Section 8-a above) and the failure to find a pragmatic solution led to a three-year delay in implementation. The ICR indicates that "this was a Bank institutional shortcoming that adversely affected the implementation of a key project component" and refers to the Government's own ICR, which refers additionally to procurement difficulties when there are multiple financiers for the same contract.

Quality of Supervision Rating : Moderately Satisfactory

Overall Bank Performance Rating : Moderately Satisfactory

9. Assessment of Borrower Performance:

a. Government Performance:

The ICR indicates that: "The governments that came into power in 2002 and 2007 were both strongly committed to the policy of providing reliable electricity to the people and businesses to improve their quality of life and to lower the cost of doing business. It is remarkable that the bold decisions in implementing the ambitious sector reform were made and sustained throughout the process." Consequently, the Government's sustained efforts to improve

the sector's governance and the viability of the utilities had resulted in better sector performance by 2011. However, as recognized in the ICR, there were significant shortcomings in obtaining timely approval by (i) the National Treasury and MOE for counterpart funds and disbursement, and (ii) the local governments for right of way and access to construction sites, which resulted in long implementation delays.

Government Performance Rating	Moderately Unsatisfactory

b. Implementing Agency Performance:

The ICR individually rated the performance of the various implementing agencies as follows:
MOE: moderately satisfactory. MOE promoted and coordinated the ambitious reform measures implemented as part of the project. For a period of project implementation, MOE's financial statements received qualified opinions from the auditor, reflecting chronic weaknesses in fiduciary management.

KenGen: satisfactory. Once construction started, contract management eventually led to commissioning of the generation plant in time. However, before construction, the low quality of the procurement documents prepared, the considerable time it took during iterations of the documents, and the delay in opening the LOCs (triggered by unavailability of funds from other development partners) in part contributed to the delay.

KPLC: moderately unsatisfactory. The initial outcome targets for system reliability were not fully achieved, the impact of the Management Services Contract was not fully sustained, and management of distribution contracts and contractors encountered challenges. However, the company performed well in terms of exceeding the original target of 400,000 additional connections..

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 system was designed to monitor the corporate- as well as project-level performance of the three implementing agencies, as follows:
Corporate level: the three agencies (MOE, KenGen, KPLC)monitored their performance contracts as agreed with the GoK. In addition, eight legal covenants with the GoK were closely linked to the policy reform agenda.
Project level: MOE monitored its capacity building and regulatory subcomponents; KenGen monitored its capacity-building and the generation subcomponents; and KPLC monitored its Corporate Recovery Program (CRP) and the distribution component.

b. M&E Implementation:

The ICR indicates that the three agencies reported quarterly on the seven indicators that measured their performance on policy, institutional, and regulatory reforms; generation capacity; and access to reliable electricity. MOE combined their individual progress reports into one Quarterly Progress Report for submission to the Bank. The Progress Reports included tables on the status of contracts, implementation schedules, and procurement plans. The ICR states that the Bank and the implementing agencies regularly took stock of the compliance status with the covenants on key sector reform measures. Moreover, the eight policy covenants were also used to monitor implementation progress.

c. M&E Utilization:

The Progress Reports enabled the Government and the Bank to oversee KPLC's Corporate Recovery Program and performance contracts, modify the ESRP, provide Additional Financing, and thereby address the financing gap. The monitoring of covenants on financial vaibility for KPLC and KenGen (i.e., current ratios, debt-service coverage ratios, self-financing ratios, and number of days in accounts receivables for KPLC) allowed the Bank and the utilities to identify remedies when both KPLC and KenGen breached some of the financial ratio covenants in FY2012 and FY2013. KenGen, for example, obtained shareholder approval in December 2013 to increase its authorized share

capital, which was expected to restore its self-financing ratio.

Despite the (revised) PDO that focused on increasing electricity access and improving the efficiency, reliability and quality of service to consumers, no impact evaluation or similar effort was carried out, hence no welfare improvement and development impact measurements were available for the urban and peri-urban areas that were served. While the M&E system was strong on monitoring, it was weak on evaluation.

M&E Quality Rating: Modest

11. Other Issues

a. Safeguards:

The ICR indicated that the ESRP "followed and complied with all the safeguards' policies and procedures" and "no major safeguards issues encountered during project implementation." The project was rated a Category B, which triggered the safeguard policies for environmental assessment (OP/BP/GP 4.01) and involuntary resettlement (OP/BP 4.12). According to the ICR, "the potential impact was analyzed in ESIAs, and mitigation was addressed in the Environmental and Social Management Plan (ESMP) and Resettlement Policy Framework. In addition, KPLC prepared a Resettlement Action Plan (RAP) and environmental impact assessment (EIA) for the distribution component–overhead lines and substations." The ICR reported on the RAP and ESMP implementation, and is quoted in the paragraphs below:

RAP. The mitigation provisions in the RAP have been invoked only for the 66-kV transmission line from Nairobi North Substation to Westland. Commencing in August 2011, KPLC paid compensation to 113 eligible owners of structures/houses along the right of way for this transmission line, in accordance with the RAP. The project-affected people (PAPs) who suffered loss of land, crops, trees, structures, or dwellings were satisfied with the RAP implementation and payments, which was witnessed by the Chief of the Karura location, whose office had verified ownership and maintained the census list of PAPs.

ESMP. The ESMP mitigation measures for the Olkaria II geothermal plant included injecting cooling water below the water level, mitigating the effect on wildlife by rerouting pipelines to avoid wildlife corridors, and providing water troughs for wildlife. Experts determined that the amount of water drawn from Lake Naivasha for drilling and cooling was inconsequential, compared with that used by the neighboring flower farms. Moreover, most of the water drawn will be recycled after removal of brine, toxics, and non-biodegradable substances, which were encased in concrete and buried.

Inspection Panel - Lavington Substation Case. On May 10, 2012, the Inspection Panel received a Request for an inspection relating to the ESRP, which was sent by an individual on behalf of the Njumbi Road Residents' Association. The requesters were concerned about the construction of an electric power substation located in Lavington, Nairobi, which was being financed under the ESRP's distribution component. The Inspection Panel registered the Request for Inspection on May 24, 2012. On June 25, 2012, the Bank's management team submitted its Response to the Request for Inspection, along with several recommended measures to mitigate the potential impact of the construction. On July 25, 2012, the panel submitted its Report and Recommendation on the case, which did not recommend an investigation.

b. Fiduciary Compliance:

The ICR indicates that "compliance with fiduciary controls for financial management (FM) by KenGen and KPLC was satisfactory throughout the ESRP." MoE's FM, however, was only moderately satisfactory for most of 2011 and 2012, since both financial statements were given qualified opinions by the auditor, due in part to rotation of MOE accounting staff in 2011. In response, the Bank's FM specialist provided FM training for MoE's accountants in early 2011, which was followed by an in-depth review of MoE's FM in September 2011. In 2012, an FM action plan was prepared by MoE with inputs from the Bank, which also supported FM specialists at MoE in July 2013 before the ESRP's closing.

c. Unintended Impacts (positive or negative):

d. Other:

12. Ratings:	ICR	IEG Review	Reason for Disagreement/Comments
Outcome:	Moderately Satisfactory	Moderately Satisfactory	
Risk to Development Outcome:	Significant	Significant	
Bank Performance:	Moderately Satisfactory	Moderately Satisfactory	
Borrower Performance:	Moderately Satisfactory	Moderately Satisfactory	
Quality of ICR:		Satisfactory	

NOTES:
- 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:

The ICR provides the following lessons (abbreviated in this ICR Review form):

Sector Reform. Sustaining sector reforms requires continuous government commitment through different administrations as well as strong stakeholder engagement. The ESRP benefited from the strong country commitment, broad-based ownership and stakeholders' buy-ins, the presence of strong reform champions, a clear road map embodied in the 2004 National Energy Policy, a combination of quick-wins, various inputs in the form of studies and workshops, and follow-up investment closely tailored to support reform. Given that sector reform is a long-term endeavor with many factors outside the Bank's control, the following additional aspects need to be taken into consideration to ensure its sustainability: (1) persistence, patience, and flexibility in adjusting the course; (2) a long-term approach to succession management in the sector (development of a cadre of next-generation leaders and managers); (3) improvement of corporate governance of the utilities to ensure that the reform initiated is institutionalized; (4) standardization of business processes to ensure institutional memory and to free up time for strategic decision making; and (5) strong engagement of stakeholders—especially consumers and trade unions.

Geothermal EPC Procurement Process. In light of the fundamentally different views between the Kenya Electrical Generating Company (KenGen) and the Bank regarding the costs, benefits, and risks associated with the procurement method to be followed, it would be useful in the future to consider the following aspects: (1) agree among project stakeholders early on to hire independent consultant(s), with experience in geothermal business and technology, and assess up front the costs, benefits, and risks of the procurement method, including direct contracting; (2) carefully design the package of EPC contracts so that a particular way of packaging does not hamper competition, and give consideration also to concerns raised by prospective bidders, separating out where possible contracts for the geothermal steam field, power plant, and transmission lines; (3) enhance coordination among co-financiers if joint cofinancing is unavoidable, especially on funding coverage of contract costs as well as conditions precedent for financing, since opening LOCs entails significant risks and costs for implementing agencies; and (4) encourage informed risk taking in procurement decision making, taking into consideration timing factors.

Implementation Capacity. Several lessons can be learned from the capacity building experience with the implementing agencies: (1) continuous engagement with the implementing agencies makes a difference in project implementation. (2) continuous capacity building throughout project implementation was important for improving project performance. (3) KPLC's Management Services Contract was a timely and effective intervention that helped to turn around the company's performance. (4) turnover of fiduciary management staff at MoE, whose job rotation is managed by the National Treasury, had a detrimental impact on the quality of financial reporting.

Other Operational Lessons. These include the importance of (1) government intervention whenever issues arise with local governments (permits, urban planning) or with its own procedures (tax exemption clearances, delays with

humerous clearances for release of funds); (2) allowing time for land and right-of-way acquisition; (3) retaining a substantial portion of the contractual amounts for installation to address the often weak capacity of local subcontractors; and (4) keeping a good record of interactions with stakeholders (including consultations on environmental and social safeguards and contractual issues with contractors).

14. Assessment Recommended? ○ Yes ● No

15. Comments on Quality of ICR:

The ICR was candid and analytical in assessing the project's achievements and shortcomings. It was keyed to evidence on outcomes and internally consistent. The lessons were well thought through and formulated, based on sound and adequate evidence, and of broad applicability. It complied with OPCS guidelines on the preparation of ICRs. There were some minor shortcomings, however. The Additional Financing amounts were not shown in the cost tables in Annex 1. There were also inconsistencies in the presentation of costs between Annex 1, the Data Sheets and the main text. Page 2, para 16 also indicated that Board approval for Additional Financing was on February 2009, but the final ISR showed a date of April 2, 2009.

a.Quality of ICR Rating: Satisfactory