



1. Project Data

Project ID P119737	Project Name UG-Electricity Sector Development Proj	
Country Uganda	Practice Area(Lead) Energy & Extractives	
L/C/TF Number(s) IDA-49880	Closing Date (Original) 28-Feb-2017	Total Project Cost (USD) 60,555,064.25
Bank Approval Date 30-Jun-2011	Closing Date (Actual) 31-Jan-2019	
	IBRD/IDA (USD)	Grants (USD)
Original Commitment	120,000,000.00	0.00
Revised Commitment	76,040,785.49	0.00
Actual	60,555,064.25	0.00

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2. Project Objectives and Components

a. Objectives

The objective of the Project is to improve the reliability of, and increase access to, electricity supply in the southwest region of Uganda. (Schedule 1 of the Financing Agreement dated September 2, 2011).

The Project Appraisal Document (PAD) defined the project development objective (PDO) as above.



Although three restructurings were undertaken during implementation, the PDO remained unchanged. The restructurings resulted in an increase in the ambition of the project with associated changes in some PDO and intermediate results indicators (IRIs). Therefore, a split evaluation is not carried out in the ICRR.

For the ICRR, the PDO are parsed as follows:

Objective 1: To improve the reliability of electricity supply in the southwest region of Uganda.

Objective 2: To improve access to electricity supply in the southwest region of Uganda.

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

24-May-2017

c. Will a split evaluation be undertaken?

No

d. Components

(Reference PAD paras. 17 to 20)

Component A. Construction of a 220 kV Kawanda-Masaka transmission line and associated substation works: (estimated cost US\$128.3 million; revised cost US\$109.9 million; actual cost US\$60.8 million).

Subcomponent A.1: Completing and replacing the unreliable 132 kV transmission line between Mutundwe substation and Masaka West substation with 137 km of a new double circuit 220 kV transmission line between Kawanda and Masaka substations.

Subcomponent A.2: Upgrading of the existing 132 kV substation at Kawanda to 220 kV to accommodate both incoming transmission lines from Bujagali and the two outgoing transmission lines to Masaka.

Subcomponent A.3: New 220 kV substation to be constructed at Masaka.

Subcomponent A.4: Addition of shunt reactors for Mbarara substation.

Component B: Technical assistance to UETCL (Uganda Electricity Transmission Company Ltd.): (estimated cost US\$7.6 million; revised cost US\$6.7 million; actual cost US\$6.5 million).



Subcomponent B.1: Financing of feasibility and other preparatory studies for other essential segments of the transmission network requiring expansion/reinforcement (including the 132 kV Lira-Gulu-Nebbi-Arua transmission line).

Subcomponent B.2: Financing of consultancy services for procurement and construction supervision for works under the project.

Subcomponent B.3: Financing of capacity building and institutional strengthening in UETCL.

Component C: Financing of community support projects and technical assistance support to MEMD (Ministry of Energy and Mineral Development): (estimated cost US\$11.7 million; revised cost US\$11.7 million; actual cost 9.5 million).

Subcomponent C.1: Carrying out of community support projects.

Subcomponent C.2: Providing lighting for selected streets and market places in Masaka municipality.

Subcomponent C.3: Enabling peri-urban electrification along the transmission line route and affected areas of Kawanda and Masaka.

Subcomponent C.4: Establishment of a Power Sector Information Center (PSIC) in the MEMD.

Subcomponent C.5: Provision of technical assistance to MEMD for (i) review of Power Sector Reform Program, (ii) consultancy support for development and implementation of the investment subcomponents, (iii) support to the Sector Working Group, and (iv) other capacity building and training for MEMD staff.

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

Project Cost: The estimated cost at appraisal was US\$153.20 million. The cost was revised at the second restructuring (May 2017) to US\$109.24 million. The actual cost at completion was US\$81.75 million (ICR Annex 4). There are some discrepancies in the project cost as reported in the ICR Data Sheet (estimated US\$153.20 million, actual US\$79.16 million) and Annex 4 (US\$147.60 million and US\$81.75 million).

Financing: The project was financed by an IDA loan of US\$120 million. At completion, US\$60.55 million was disbursed and the balance of US\$59.45 million was cancelled.

Borrower's Contribution: The planned contribution of the Government of Uganda (GoU) was US\$33.20 million. The amount contributed was US\$18.60 million.

Dates: The project was approved by the IDA Board on June 30, 2011. The planned effectiveness date was November 30, 2011; the actual effectiveness date was October 23, 2012. The original closing date was February 28, 2017. It was extended twice - the final closing date was January 31, 2019. The ICR for the project was posted in February 2021 (i.e. 25 months after closing). The project TTL informed IEG that the period of submission was extended to allow for resolution of some ongoing RAP-related issues that were not resolved as of the date of project closing.



Mid-Term Review (MTR): A MTR was carried out in October 2015.

Restructurings: The project underwent three restructurings. All were Level 2 restructurings. There were no changes in the original PDO. Reflecting the use of cost savings realized during implementation, activities were added and associated revisions made in some PDO and IR indicators and targets, including addition of new indicators. The closing date was extended twice.

First Restructuring (February 14, 2017 - disbursed amount US\$43.47 million). The closing date was extended by 11 months from February 28, 2017 to January 31, 2018 to allow time for completion activities under Components A and C which were affected by delays resulting from a slow start of implementation and issues related to land acquisition and compensation to Project Affected Persons (PAPs).

Second Restructuring (May 24, 2017 - disbursed amount US\$43.92 million). The restructuring was made to respond to a GoU request to utilize the funds made available by cost savings in the amount of about US\$41 million realized during implementation of Component A. The cost savings resulted mainly from a reduction in international prices of steel and aluminum which were the principal materials used in the construction of the transmission towers and lines (Restructuring Paper, Section on Proposed Changes).

Components were expanded to include new activities (consistent with the original objective of the project) as follows:

- Under Component A: (i) Construction of two 220 kV transmission line bays at at Bujagali substation (estimated cost US\$5.7 million) and (ii) upgrade of the UETCL SCADA (Supervisory Control and Data Acquisition System) network (estimated cost US\$9.18 million).
- Under Component B: Feasibility study and design review for the proposed Hoima-Kinyara transmission line and upgrade for the Nikenda substation (estimated cost US\$2.0 million).
- A new Component D was added: Social Risk Management Safeguards to enhance the GoU's capacity to deal with Gender Based Violence (GBV) and Violence Against Children (VAC) issues that had been seen to occur in other (non-energy) projects in the World bank's portfolio in Uganda. (estimated cost US\$0.9 million).

Changes in indicators and in the Results Framework (RF) were made as follows:

- The core indicator "Direct project beneficiaries, of which female" was dropped and replaced by a new corporate results indicator "People provided with new and improved electricity service" which was judged to be a more relevant indicator of the project's outcome.
- For the new Component D, indicators were added in regard to completion of activities (surveys and Policy and Code of Conduct) related to helping address GBV and VAC related issues.
- Targets were revised upwards for the number of resettlement packages to be provided to PAPs under the project.

The loan closing date was extended by 12 months to January 31, 2019.

Third Restructuring (July 18, 2018 - disbursed amount US\$49.23 million). At the request of the GoU, some activities that had been added under the Second Restructuring were dropped along with a cancellation of SDR 25.37 million (US\$41.07 million) from the IDA grant. The activities dropped were:

- Supply and installation of upgrading equipment for the SCADA system.



- Funding of the proposed Hoima-Kinyara transmission line and upgrade of the Nikenda substation.

Some reallocations were made within existing disbursement categories.

3. Relevance of Objectives

Rationale

Country and Sector Context: (PAD paras. 1 to 11 and ICR paras. 1 to 11): During the decade 2000-2010 preceding the project, Uganda experienced strong economic growth. The discovery of oil resources added to Uganda's possibilities to further accelerate and consolidate the economic gains. However, capacity to provide reliable and cost effective electricity supply lagged significantly behind the demands of a growing economy. In the 1990s, the GoU had implemented a power sector reform program that had included placing the power sector under private management on commercial principles. This included unbundling of the integrated utility, with the main generation and distribution assets turned over to the private sector under long term concession contracts. The transmission system continued to be operated by a state sector company. Although some gains were realized as a result of these reform measures, it was acknowledged at appraisal that some significant issues remained that included: (i) lack of adequate and reliable power supply; (ii) poor operating performance and unsustainable operations; (iii) weak sector finances; (iv) lack of adequate institutional capacity to deal with issues such as integrated least-cost planning, increased access, and sustainability of hydro-electric resources; (v) high distribution system losses of more than 30 percent; (vi) insufficient reliability of the power system with high rates of technical and non-technical losses; and (vii) low levels of access to electricity - with access available to less than 10 percent of the total population.

The GoU's strategy to address the sector issues included: (i) attempting to strengthen both public and private sector institutions involved in the sector; (ii) increasing electricity supply through developing a more diversified generation mix, including renewable energy sources; (iii) strengthening the national transmission grid, including links to neighboring countries, to ensure security of supply; (iv) promoting energy efficiency in production and consumption; and (v) implementing a Rural Electrification Strategy to increase access to electricity outside major urban areas.

The IDA-financed Electricity Sector Development Project (ESDP) was developed to support the GoU's strategy by helping to address issues related to the reliability and capacity of the transmission system by::

- helping to improve reliability and service quality to existing customers by replacing poorly functioning segments of the existing transmission system.
- helping to expand capacity of the transmission system to meet growing regional power demand.
- reducing system losses.
- supporting community projects through provision of low-cost electricity connections to poorer sections of society living in the project area.

Alignment with the Country Partnership Framework (CPF): The project objectives were consistent with the priorities under the CPF (FY2011-2015) that was in effect at the time of appraisal, and continue to remain substantially relevant under the CPF (FY2016-FY2021) that is currently in effect. The CPF acknowledges that increased availability and quality of electricity supply and increased access are



important contributors to each of the three focus areas under the CPF: (A) strengthening governance, accountability, and service supply; (B) raising incomes in rural areas; and (C) improving access in urban areas. The CPF (para. 69) indicates that the GoU has continued, or increased, its demand for World Bank Group (WBG) support to some sectors including power transmission, and the CPF (para. 80) confirms that the WBG will support infrastructure investments in urban development and in energy transmission and distribution. The CPF (paras. 87 and 88) acknowledges under its Sixth Objective - improving access to urban services - that Uganda needs to improve electricity access and ICT services to be able to accelerate urbanization and to improve living standards in urban areas. The CPF confirms that provision of public goods and services such as electricity access will remain priority areas for WBG support. IDA's Indicative Program for FY2016 to FY2021 includes a Grid Expansion and Reinforcement Project (planned IDA financing of US\$100 million).

Alignment with National Priorities: The ESDP was consistent with the national priorities under the National Development Plan (NDP) for 2010/2011 to 2014/2015 prevailing at the time of appraisal and remains so with the national priorities reflected in the GoU's NDP for the period 2015/16 to 2019/20. These priorities include: (i) increasing stock and quality of strategic infrastructure to accelerate the country's competitiveness and (ii) strengthening mechanisms for providing quality, and efficient and effective service delivery. Under Uganda's Vision 2040, the GoU has recognized that the country must be propelled by electricity to drive the industry and service sectors. The GoU has also set targets of increasing electricity access levels to 60% by 2027 and 80% 2040.

Prior IDA Experience: IDA has been involved in Uganda's electricity sector since the 1960s. Prior to 2010, IDA had financed investments in thermal power generation, hydropower generation, transmission and distribution. Post-2010, IDA-financed projects have included the Power Sector Development Project and the Energy for Rural Transformation APL (in three phases). Experience under these projects contributed to the design of the ESDP.

Rating

Substantial

4. Achievement of Objectives (Efficacy)

OBJECTIVE 1

Objective

To improve the reliability of electricity supply in the southwest region of Uganda.

Rationale

The overall theory of change (TOC) was that provision of sufficient and reliable power to existing customers, and increasing access to new customers, including in peri-urban and rural areas, in the southwest region of Uganda was constrained by operational deficiencies and lack of transmission capacity in the existing



transmission lines and associated substations. The project would provide inputs to finance (i) construction of new/upgraded transmission lines and associated facilities including substations and bays; (ii) community subprojects including lighting of selected streets and market places; (iii) technical assistance to UETCL for capacity building and institutional strengthening; and (iv) technical assistance to MEMD for carrying out community subprojects, planning for future strengthening of critical segments of the transmission system in other parts of Uganda, and selected capacity building and training in MEMD. The outputs would be (i) construction of a new 220kV double circuit transmission line linking the Kawanda and Masaka substations; (ii) construction of a new 220 kV substation at Masaka; (iii) upgrading of three existing substations at Kawanda, Masaka and Mbarara; (iv) increase in peri-urban access to electricity; and (v) strengthened planning and implementation related capacities within UETCL and MEMD. The outcomes would be increased reliability and transmission capacity, and increased access, thereby contributing to improved quality of electricity supply to the southwest region of Uganda. The higher level outcome would be an improvement in living standards and well-being of benefiting population in the project area.

The PDO indicators for Objective 1 were the average number of outages, average duration of outages, and volume of unmet demand. These indicators were relevant and measurable for assessing the efficacy under Objective 1.

Outputs (ICR Annex 1 - Results Framework and ICR paras. 42 to 43).

The original closing date for the project was February 28, 2017. Outputs were completed with some delay as indicated below:

- A 137 km long new double circuit 220 kV transmission line linking the Kawanda and Masaka substations was constructed and became operational as of December 2018. Target achieved with delay.
- A new substation was constructed at Masaka and became operational as of June 2018. Target achieved with delay.
- Upgrades were made to associated substations at Bujagali, Mbarara North and Kawanda. All were operational as of June 2018. Target achieved with delay.
- Two transmission line bays were installed at Bujagali and were operational as of August 2019. Target achieved with delay.
- Transmission lines operated at 220 kV as a result of the project (baseline 0; original target 220 km; actual 220 km; achievement level 100%).
- Resettlement packages provided to PAPs under the project (baseline 0; original target 13,642; revised target 14,452; actual 11,197; achievement level 77%).

Outcomes (ICR Results Framework and ICR paras.44 to 45).

The PDO indicators for increased reliability and transmission capacity improvement were:

- Frequency (number) of average transmission line outages (baseline 35, target 10; actual zero; target overachieved).
- Unmet demand of existing customers (baseline 2.34 MWh; target 0.20 MWh; actual 0.00 MWh; target overachieved)
- Average outage time (baseline 5.70 hours; target 2.60 hours; actual 0.00 hours; target overachieved).



- Increased flow of electricity through the Masaka substation (baseline 381 GWh; target 617.4 GWh; actual 606.0 GWh; achievement level 98%).
- Households provided with new or improved electricity services (baseline 0; target 16,500, revised target 16,500; actual 52,084; achievement level 316%)

Assessment: In regard to increased reliability and transmission capacity, the targeted outcomes were achieved albeit with some delay in completion of the works due to a slow start of implementation, procurement issues, and in particular, issues in regard to land acquisition and compensation under the Resettlement Action Plan (RAP) under the project. The PDO indicators for the originally included activities were met in full. The additional activities that were included under Component A at the Second Restructuring were dropped as the GoU assessed that these could not be completed by the revised closing date of January 31, 2019 and requested cancellation of a substantial part (US\$41 million) of the IDA grant amount. However, these additional activities represented an increase in the ambition of the project and the changes did not affect the achievement of the originally planned outputs and outcomes. The ICRR rates the overall efficacy for Objective 1 as Substantial.

Rating

Substantial

OBJECTIVE 2

Objective

To improve access to electricity supply in the southwest region of Uganda.

Rationale

The overall theory of change (TOC), relevant for both Objective 1 and Objective 2, has been provided under Objective 1 above. However, in regard to Objective 2, there were some weaknesses in the estimation of the PDO indicator adopted which referred to the number of people provided with electricity under the project. The indicator was measured by the number of households connected under the peri-urban electrification part of the community support projects under Component C. However, the number did not include other beneficiaries from increased access provided by the increased transmission capacity through the upgrading of the Masaka substation. These beneficiaries were included under a separate indicator "households provided with new or improved electricity service" but no separate figures were provided for increased access. The access indicator also lacked clarity in estimation of the number of secondary beneficiaries under the project.

Outputs: (ICR Annex 1- Results Framework and paras. 44 to 45).

The original closing date for the project was February 28, 2017. Outputs were achieved with some delay as follows:

- Increased capacity at the newly constructed Masaka 220/132 kV substation that is linked to the Kawanda substation by the Kawanda-Masaka 220 kV double circuit line. The substation became operational in 2018. Target achieved with delay.
- Community electricity household connections established under the project (baseline 0; original target 8,000; actual 5,447; achievement level 68%).



- Social development projects completed as follows:

1. number of streets lit (baseline 0; original target 3; actual 3; achievement level 100%)
2. number of market places lit (baseline 0; original target 3; actual 3; achievement level 100%).

Outcomes (ICR Annex 1 - Results Framework and ICR para. 46).

- Households provided with new or improved electricity services (baseline 0; target 16,500, actual 52,084; achievement level 316%)
- Number of people provided access to electricity under the project (baseline 0; target 50,000; actual 34,044; achievement level 68%).

Assessment: The output targets related to increased access were substantially met albeit with delay as compared to the original targets. With regard to the single PDO indicator "number of people provided access to electricity under the project", the ICR reports an achievement level of 68% starting from a baseline of zero. The beneficiaries of increased access included those under the community support peri-urban electrification projects (ICR para. 46). The ICR notes that there was some lack of clarity in the design as to computation of the number of beneficiaries. In addition to the increased access provided under this indicator, the ICR also reports (para. 46) that the increase in transformation capacity at the Masaka substation enabled an increase in provision of electricity through new connections as well as improved supply to existing customers. The impacts were measured through the Intermediate Results Indicator "households provided with new or improved electricity service under the project". This indicator included beneficiaries of increased access but did not specify the number of beneficiaries from such increased access. On balance, taking into account the increased access reported under the PDO indicator, and taking into account other (non-quantified) increases in access, the ICRR rates the efficacy under Objective 2 as Substantial.

Rating
Substantial

OVERALL EFFICACY

Rationale

As discussed above in Section 4, with regard to Objective 1, the originally planned outcome targets for improved reliability and increased capacity of electricity supply in the southwest region of Uganda were substantially achieved with some delay as compared to the original targets. Although new activities subsequently added to utilize the cost savings (U\$41 million) realized during implementation were later dropped at the request of the GoU (given the lack of time remaining before project closing for their completion), they represented an increase in the ambition of the original project, and their exclusion did not affect the achievement of the originally targeted outputs and outcomes. With regard to Objective 2, the achievement level (with some delay) for the originally planned outcome target of increased access was 68%, but this did not capture in full the extent of the increased access as discussed above. The ICRR therefore



rates efficacy for Objectives 1 and 2 as Substantial, notwithstanding the moderate shortcomings for Objective 2 noted above.

Based on the above, the ICRR rates overall efficacy as Substantial.

Overall Efficacy Rating

Substantial

5. Efficiency

Economic Efficiency

(Reference ICR Annex 5 and paras. 52 to 55).

At appraisal, a cost-benefit analysis was carried out for Component A (accounting for 83% of the project cost). The indicators used were the Economic Internal rate of Return (EIRR) and Economic Net Present Value (ENPV) at a discount rate of 12%. Monetized benefits included:

- reduction in unmet demand in the Masaka region service area.
- increased capacity to meet existing and future demand in the region.
- savings in repairs and maintenance costs enabled by the Kawanda-Masaka 220 kV transmission line construction.

The appraisal estimates were: EIRR 22.2%; ENPV US\$ 133.3 million at a discount rate of 12%.

At completion, the economic cost-benefit indicators for Component A (accounting for 79% of project cost) were re-estimated based on actual results during project implementation. The methodology was similar to that used at appraisal but with some changes in valuation bases. The Willingness to Pay (WTP) was replaced by the Avoided Cost of Regeneration as this was judged to be a more representative figure. The Long Run Marginal Cost (LRMC) was used to compute annual savings in losses. Other bases remained the same, including demand projections (MW), incremental sales projections (GWh), annual savings (GWh), and reduction in unmet demand (GWh).

The post-completion estimates are: EIRR 32.6%; ENPV US\$108.3 million at discount rate of 12%.

No estimates were prepared in regard to the financial efficiency of the project.

Administrative and Operational Efficiency

Project duration: The planned implementation period of the project was 5 years and 8 months (68 months) (from June 30, 2011 to February 28, 2017). A slow start of project implementation, with delays in recruitment of key PMU staff and specialized consultants (ICR para. 56), and subsequent delays due to procurement-related and



land acquisition/compensation issues, led to extension of the closing date to January 31, 2019. The actual implementation period was 91.5 months (23.5 months longer than originally planned).

Project cost: The estimated project cost at appraisal was US\$153.16 million. This was revised downwards to US\$109.24 million at the Second Restructuring in May 2017 reflecting cost savings realized during implementation. The actual cost at completion was US\$81.8 million.

Assessment: Regarding economic efficiency, although the post-completion EIRR (32.6%) is significantly higher than the appraisal estimate (22.2%), the post-completion ENPV (US\$108.3 million) is lower than the appraisal ENPV (US\$133.3 million). The ICR points out that the increase in EIRR has been significantly influenced by the substantial reduction in the overall project cost (US\$81.8 million compared to the appraisal estimate of US\$147.6 million) However, a large part of the cost savings was fortuitous - due to steep declines in international prices of steel and aluminum. Had the project cost remained at appraisal levels, the EIRR would likely have been lower than the appraisal estimate given the significant delays in project implementation resulting in completion being delayed by nearly two years. Regarding administrative and operational efficiency, the project took nearly two years longer to implement which delayed realization of the planned benefits. The ICRR therefore concurs with the ICR rating and rates the efficiency of the project as 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	✓	22.20	83.00 <input type="checkbox"/> Not Applicable
ICR Estimate	✓	32.60	79.00 <input type="checkbox"/> Not Applicable

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

6. Outcome

The project objectives were substantially relevant to the World Bank Group's Country Partnership Framework (CPF) for FY2016-2021 (the latest available at project closing) under which improved availability and quality of electricity services and increased access to electricity were recognized as important contributors to each of the focus areas under the CPF. Overall efficacy was Substantial based on underlying ratings of Substantial for



Objective 1 (to improve reliability of electricity) and Substantial for Objective 2 (to increase access to electricity supply). Efficiency was assessed to be Modest since the cost savings realized during implementation were, to a large extent, fortuitous as they resulted from unplanned substantial declines in international prices of steel and aluminum, whereas realization of project benefits was lowered by the substantial delays in completion of project implementation. Based on the foregoing, the overall project outcome is rated Moderately Satisfactory.

a. Outcome Rating
Moderately Satisfactory

7. Risk to Development Outcome

(Reference ICR paras. 137 to 138).

Technical and operational risk: The technical risk is assessed as low given that UETCL has considerable experience in operating the Ugandan transmission system. The operational risk is assessed as moderate given that reliable and efficient operation of the system will depend upon timely and adequate upkeep including repairs and maintenance. UETCL's ability to undertake this will depend upon availability of timely and sufficient resources to achieve this responsibility. The degree to which UETCL is able to utilize the increased capacity of the transmission system will also depend upon the extent of electricity supplied to it by generating plants.

Financial risk: This risk is considered substantial. UETCL's revenues depend upon the levels of the Bulk Supply Tariff (BST) that is subject to approval by the GoU and the Energy Regulatory Authority. The GoU has been setting the levels of the BST at below full cost recovery levels on socio-economic considerations for the population, and compensating UETCL by way of subsidies which have not always been timely or sufficient.

Policy risk: This risk is considered moderate. The GoU policies regarding electricity generation and distribution and trade in electricity, will impact the extent to which the capacity of the transmission system will be utilized. While the GoU is giving priority to electricity availability and access issues in its national strategies and plans, its ability to follow through on its intentions will depend upon sustained political will and adequacy of resources to devote to attainment of these objectives. Past experience has shown that the gains from intended reforms have lagged behind targets.

8. Assessment of Bank Performance

a. Quality-at-Entry

The strategic relevance and approach were well-considered and consistent with the national and CPF priorities at the time. The project components were reasonable in relation to the objective of increased reliability and capacity of the transmission system but the components in regard to increased access



were relatively modest in relation to the overall needs for increased access. There was also a lack of clarity in specifying how the number of beneficiaries from increased access were to be estimated (ICR para. 105). The institutional strengthening components were adequate in scope but their impact was affected by significant delays in appointment of key implementation staff and specialist consultants in the PMUs (ICR para. 132). Technical aspects were well-considered. Environmental and social safeguards aspects were well-considered with special attention to resettlement issues. This included the preparation of an Environmental and Social Impact Assessment (ESIA), Environmental and Social Management Plan (ESMP) and Resettlement Action Plan (RAP), supported by a dedicated escrow account, as a condition of effectiveness (ICR para. 125). However, the ICR reports (para. 101) that the M&E design could have been stronger in regard to monitoring of environmental aspects. The main risks associated with implementation, including resettlement, were well identified and mitigation measures provided. The Results Framework (RF) was adequately defined, and the PDO and Intermediate Result indicators were generally appropriate and measurable, except as mentioned above. While the need for adequate implementation capacity in the key implementing agencies (UETCL and MEMD) was recognized, including the creation of a Power Sector Working Group, adequate staffing of the PMUs, including appointment of key PMU staff, was not in place at the start of project implementation. This, together early weaknesses in project supervision, contributed significantly to the delays of over two years in an adequate start of implementation.

Quality-at-Entry Rating Moderately Satisfactory

b. Quality of supervision

Supervision during the early stage of implementation (2013 and 2014) was weak as reflected in the time taken to address key weaknesses in the counterpart agencies that significantly hampered project implementation (ICR para. 128). These included (i) capacity constraints in the PMUs including lack of key staff and specialized consultants, including a full-time project manager in UETCL (appointed only in January 2014), and MEMD recruitment of consultants for procurement, resettlement issues, and community projects (only in mid-2014). The ICR reports (para. 93) that only two supervision missions were carried out during this period and Implementation Status Reports (ISRs) were not filed regularly.

Supervision during implementation picked up beginning in 2015. A Mid Term Review (MTR) mission was carried out in October 2015 and the project was restructured in May 2017 to utilize cost savings realized during implementation (see Section 2). Between 2015 and 2019, supervision missions were carried out, on average, twice a year. The project team was engaged more proactively with the counterparts, particularly in regard to resolution of RAP-related issues that were seriously hindering implementation. Nevertheless, due to the multiplicity of issues related to land acquisition and compensation, this remained a significant constraint even at project closing. The project team also monitored adherence with the WBG's guidelines and policies on health and safety issues, including through monitoring the development and approval of contractor and social management action plans to ensure adherence to good practice. When a case of contractor and PIA non-compliance emerged that involved a fatality (see section on Unintended Impacts), the project team reacted quickly to ensure that corrective actions and measures were strengthened and monitored by the PMUs. The project team was also proactive in modifying some shortcomings in specification of some indicators, including the inclusion of a new "corporate results indicator" to estimate the number of beneficiaries under the project. ISRs were filed regularly. The reporting was candid, in



particular, in acknowledging the persistence of the land acquisition/compensation issues. As a result, the ratings for Development Objectives (DO) and Implementation Progress (IP) were assessed at Unsatisfactory or Moderately Unsatisfactory for a number of years.

The project had three Task Team Leaders (TTLs), supported by Co-TTLs, during the implementation period. Regarding the quality of supervision by the Bank team, the Borrower's Report (Annex 6 of the ICR, para. 3.2.2) observes that the quality of supervision inputs and processes was Moderately Unsatisfactory since changes in TTLs created many delays during the transitions.

On balance, the ICRR rates the quality of supervision 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

The project's theory of change (TOC) in relation to key activities, outputs and outcomes was adequately reflected in the design of the Results Framework (RF). The PDO and Intermediate Result indicators were relevant and measurable, and most output targets well-defined. Baseline values were provided in all cases. Monitoring and reporting requirements in regard to resettlement-related issues were adequately developed. The data collection was based on periodic data to be submitted by UETCL and MEMD to their respective PMUs. There were, however, some weaknesses in specifying how the indicators were to be calculated. For example, as discussed in the ICR (para. 97), no clear basis was provided for computation of the number of beneficiaries under the urban electrification component. The ICR (para. 101) also indicates that design could have been stronger in regard to monitoring of environmental aspects.

b. M&E Implementation

The M&E system relied upon timely reporting of data by UETCL and MEMD. During implementation, some of the indicators were found to be not suitable and were replaced by others judged to be more relevant e.g. replacement of the indicator "direct beneficiaries supported by the project" by a new corporate results indicator "people provided with new and improved electricity service" which was assessed to be more appropriate in the project circumstances. The M&E paid particular attention to gathering and reporting data in regard to resettlement issues (land acquisition/compensation of PAPs) that was used by the project team for proactive dialogue with the GoU agencies concerned.



c. M&E Utilization

The results from the M&E system were used by the project team to assess implementation progress, identify emerging issues, and discuss remedial actions with the GOU counterparts. In regard to RAP-related issues, the M&E system provided an ongoing means for tracking progress (or lack thereof) and provided a basis for the project team to engage in extensive discussions with the Government counterparts for remedial actions. Regular tracking of project costs by the M&E system enabled an early identification of potential cost savings during implementation which was used to scale up activities at the time of the project restructuring in 2017. Implementation progress tracking under the M&E system was also used by the project team for candid reporting of Development Objectives (DO) and Implementation Progress (IP) ratings in the ISRs. The M&E system adequately tracked progress in project implementation aspects including procurement, project costs, and achievement of project targets.

On balance, the ICRR rates M&E quality as Substantial.

M&E Quality Rating

Substantial

10. Other Issues

a. Safeguards

(Reference ICR para. 116 to 118).

Environmental and Social Safeguards: The project was assigned Category A (full assessment). The project triggered the following safeguards:

- EA - Environmental Assessment (OP/BP 4.01)
- NH - Natural Habitats (OP/BP 4.04)
- PCR - Physical Cultural Resources (OP/BP 4.11)
- IR - Involuntary Resettlement (OP/BP 4.12)
- Forests (OP/BP 4.36)

Environmental safeguards: Key issues were air and water pollution; disturbance and degradation of forests and wetlands ecosystems; solid and liquid waste management; and alteration of landscapes. Environmental and Social Impact Assessments (ESIAs) were carried out covering EA, NH, PCR and Forests requirements. Potential impacts and mitigation measures were identified and agreed. Environmental and Social Management Plans (ESMPs) and Construction Environment and Social Management Plans (CESMPS) were prepared and implemented was monitored. The ICR reports (para. 90) that there were a number of non-compliance issues:

- Under the Grievance Redress Mechanisms, no Grievance Redress Committees were formed and the project lacked proper grievance handling procedures such as a data base for records regarding complaints, response times, and resolutions.



- Regarding Community Health and Safety, there was a case of fatality of a 17 year old boy which was ascribed to the PIU's lack in supervision. The ICR reports corrective actions were taken subsequently.
- The transmission line was energized on June 1, 2018 without informing the Bank and without consulting the PAPs still under the line. When informed, the Bank intervened and the line was de-energized on Jul 23, 2018 to allow for safe relocation of the PAPs.
- There were a number of instances of non-compliance with national environmental regulations.

The ICR reports (para. 90) that an Environmental and Social Audit was carried out to ensure compliance and the report was issued in January 2019. The ICR reports (para. 90) that UETCL was found to have partially complied with the requirements, but does not elaborate further on the specifics of non-compliance or partial compliance as well as on the remedial actions agreed with UETCL.

Social safeguards: A RAP was prepared and disclosed for the Kawanda to Masaka 220 kV transmission line. It outlined principles and procedures for resettlement and compensation of Project Affected Persons (PAPs) under the project. The RAP was supported by a dedicated escrow account established by the GoU to fund compensation payments to PAPs. Nevertheless, during implementation, a number of issues hampered progress:

- disputes with landowners in regard to compensation offered
- delays in mutation of land titles establishing legitimacy of ownership
- inadequate replenishment of the escrow account by the GoU
- lengthy delays in processing of payment claims made by PAPs

As a result, at project closing, 280 (out of a total of 2,542) cases were still unresolved. By November 2020, the number of unresolved cases had decreased to 197.

b. Fiduciary Compliance

(Reference ICR paras. 80 to 86)

Procurement: In the early stages of implementation (2013 and 2014), there were significant weaknesses in procurement management that resulted in significant delays in implementation. The deficiencies included:

- capacity and staffing weaknesses in the PMUs.
- delays in hiring key staff including specialized consultants (some of the required consultants were hired only in 2014)
- delay in appointing a full-time project manager at the UETCL MPU (done only in June 2014)
- lengthy procurement processes in UETCL
- although a procurement monitoring and contact management system was installed in 2012, utilization initially was low
- lengthy payment processes in UETCL



The ICR does not provide information on the progress in Procurement ratings over time, and particularly at project closing. It also does not indicate any issues of non-compliance or ineligible expenditures.

Financial Management (FM): The ICR does not include any substantial discussion of FM aspects including identification and resolution of any issues that may have been encountered. It does not provide an indication of the progress in FM ratings over time, including mentioning the FM rating at project closing.

The ICR does not include a discussion of the compliance with applicable financial covenants by UETCL. The Financing Agreement had specified two financial covenants, namely, UETCL to maintain (i) a debt service coverage ratio (DSCR) of not less than 1.0 and (ii) an EBITDA margin of at least 1.0% in FY11, 1.5% in FY12 and FY13, 2% in FY14, and 3% thereafter. It is not clear whether or not UETCL complied with these covenants.

c. Unintended impacts (Positive or Negative)

The ICR (para. 90) mentions that, under the community projects subcomponent, one case of asbestos roofing was discovered under the market place subcomponent. The ICR confirms that steps were taken to resolve the issue.

During the construction of the 220 kV Kawanda to Masaka transmission line, the ICR reports (para. 90) that there was one fatality involving a 17 year old boy. This was determined to be due to negligence on the part of the contractor. The ICR reports that steps were taken to prevent such non-compliance during construction.

d. Other

Gender: (ICR paras. 63 and 64): Although the project did not specifically target women as beneficiaries, significant measures were introduced under the Second Restructuring in May 2017 to address issues of Gender Based Violence (GBV) and Violence Against Children (VAC) that had been observed to occur in other (non-energy) projects in the WBG portfolio in Uganda. A new component (Component D) was added to the project - Social Safeguards Risk Management (SSRM). The GoU recognized the need to develop an institutional structure. The ESDP was selected as a pilot. The SSRM includes (i) mechanisms to prevent and respond to GBV and VAC issues, including guidelines and toolkits; (ii) strengthening GRMs to address GBV and VAC issues; and (iii) implementing social awareness campaigns to prevent GBV and VAC. The RAPs prepared under the project include features that require spousal consent.

Institutional Strengthening: (ICR paras. 66 and 67): Capacity building and institutional strengthening was an area of significant focus under the project. In UETCL, a total of 55 staff received training in various aspects related to project design and implementation including:

- Safety, health, environment, and quality management
- Design and construction of High Voltage transmission lines and substations
- Advanced GIS



- Procurement
- Financial Management
- Contract management and disbursement monitoring
- Monitoring & evaluation
- Land acquisition, resettlement and rehabilitation

For MEMD, a total of 38 staff received training in aspects that included:

- advanced issues in regulating electricity utilities and energy networks
- energy management and planning
- monitoring & evaluation
- data management and statistical analysis
- feasibility study preparation and analysis
- land acquisition, resettlement and rehabilitation
- GBV related training

Other important contributions under the project included:

- A review of the GoU's power sector reforms program. The review was completed in July 2017 but the ICR does not discuss the outcome. (ICR para. 49).
- Preparation of an SSRM plan, and ESIA's and RAPs that could serve as models for other projects in future.

Poverty Reduction and Shared Prosperity: (ICR paras. 69 and 70): The project provided new and improved electricity service to an estimated 244,494 electricity consumers in the Masaka area. This included beneficiaries in the rural areas along the Kawanda-Masaka transmission line corridor, estimated at about 5,447 households, enabling increased access to an estimated 34,047 people. The street and market place lighting provided under the project enhanced livelihoods by enabling an increase in economic activity from longer business hours.

11. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Moderately Satisfactory	Moderately Satisfactory	
Bank Performance	Moderately Satisfactory	Moderately Satisfactory	



Quality of M&E	Substantial	Substantial
Quality of ICR	---	Substantial

12. Lessons

IEG derives the following lessons, based on the ICR:

1. In estimating the benefits of increased access under electric power projects, estimates of the number of project beneficiaries should include both primary as well as secondary beneficiaries, and a clear methodology should be provided in regard to estimation of the beneficiaries. In the case of the project, there was no clear methodology during project design to estimate the number of secondary beneficiaries. This led the ICR team to make assumptions that may not have been fully consistent with those used in the appraisal analysis.

2. Projects that include social electrification aspects should also include design and implementation of appropriate social economic assessments to assess the benefits of the adopted initiatives in improving the well-being and livelihoods of the direct beneficiaries. In the case of the project, the lack of such surveys and assessments prevented an assessment of the impact of the project interventions as perceived by the targeted beneficiaries.

3. Appointment of key project implementation staff in the PMUs, supported by specialized consultants as appropriate, should be ensured at early stages of project preparation, including through project preparation advances where possible. The project was adversely affected by significant capacity related constraints, including delays in appointment of key managerial and technical staff, and specialized consultants' in the project PMUs which resulted in substantial delays in the earlier parts of project implementation.

4.. Social safeguard activities, particularly for Category A projects as in the case of this project, require substantial lead times for preparation. This includes mechanisms for compensation of Project Affected Persons (PAPs) and land title mutation. In the case of the project, resettlement related issues were determined to be the main reason which delayed the schedule for activation of the Kawanda-Masaka transmission line by nearly three years.

5. In the case of the project, effectiveness was significantly delayed in part by the need for Parliamentary approvals. In such cases, preparation of the necessary documents and internal approvals by the GoU agencies concerned need to be assessed at an early stage, and required actions on the part of the Government counterparts be appropriately structured as conditions of appraisal or negotiations.

13. Assessment Recommended?

No



14. Comments on Quality of ICR

The ICR is well-written, candid, and outcome-focused. It generally follows the OPCS guidelines for preparation of ICRs except for length (being 50 pages long against the prescribed length of 15 days). The ICR provides a clear theory of change, and the analysis is evidence-based although constrained to some extent by the delay in completion of the project. This resulted in shortening the time available to observe and evaluate the impacts of the completed activities. In particular, there were not enough surveys to assess beneficiary perceptions of the project's impacts on their well-being and economic improvement. While the ICR refers to completion of important institutional strengthening outputs, e.g. a review of Power Sector Reforms, preparation and implementation of a SSRM plan, and establishment of a Power Sector Information Center, it does not elaborate further on the outcomes of these actions. One significant area that was not touched upon was the compliance with financial covenants by UETCL (discussed in Section 5 above). The ICR has some minor inconsistencies, e.g. in reporting project cost (differences between the Data Sheet and Annex 4), but these do not affect the analysis or conclusions in a significant way.

a. Quality of ICR Rating Substantial