

1. Name of the Project

Country: Republic of Uganda
 Project: Bujagali Interconnection Project
 Loan Agreement: October 30, 2007
 Loan Amount: 3,484 million yen
 Borrower: The Government of the Republic of Uganda)

2. Necessity and Relevance of JBIC's Assistance

Uganda has relied on the Nalubaale Power Station (180MW) and Kiira Power Station (200MW), both constructed on the Nile River, for most of its power supply. However, the electricity supply capacity in 2005 fell to 273MW due to the impact of drought. Meanwhile, the peak demand for electricity in Uganda during 2005 was 340MW, and frequent rolling blackouts are currently negatively affecting daily life and corporate activities. Furthermore, the peak demand for electricity is anticipated to increase further, reaching 481MW by 2013. Therefore, expanding power supply facilities is vital, and the construction of new power stations has become an issue of urgency. In response to this, the Government of Uganda built a thermal power station (50MW) in 2005, and has plans to construct the Bujagali Hydropower Station (250MW), another thermal power station (100MW), a mini-hydropower station (45MW), and a biomass power station (12MW) starting in 2007. It is anticipated that the total power facility capacity (566MW) in 2011, when the Bujagali Hydropower Station is to be completed, will be able to meet the demand during peaks (419MW).

Meanwhile, Uganda has a total of 10,415km in transmission lines (of which the main transmission lines (132kV or more) account for 1,377km), and 13,000km in distribution lines. The development of a transmission grid (this project) is being planned because the existing electricity transmission grid would not be able to transmit power generated from the newly constructed Bujagali Hydropower Station to areas such as the nation's capital of Kampala. A reliable, high-quality electricity supply system is vital as a foundation for economic growth, and the Government of Uganda has placed a high priority on the development of transmission lines and substations in addition to power stations. At the same time, the number of people in Uganda that are able to access electrical services is less than around 4% of the total national population (2006). This is mainly due to the low incentive for distribution companies to search for potential customers because of power shortages; however, this issue also stems from the fact that the capacity of existing facilities is small, and the scope of their services are limited. A strengthening and expansion of the distribution network is also being planned for after the completion of the Bujagali Hydropower Station in 2011.

In December 2004, the Government of Uganda established its third Poverty Eradication Action Plan (PEAP), which focuses on the five areas of 1) economic growth, 2) productivity, competitiveness, and income improvement 3) security and conflict resolution, 4) strengthening governance, and 5) human development. Additionally, efforts are currently being made for the development of the electricity sector, while maintaining awareness that the development of economic and social infrastructure is necessary for economic growth and improving productivity, competitiveness, and income. More specifically, in order to realize sustainable economic growth that answers the national demand for electricity, the "Energy Sector Strategy," established in September 2002, assigned the following four tasks: 1) development of energy resources, 2) providing low-cost and high-quality electricity services that contribute to reducing poverty, 3) strengthening management structure within the energy sector, and 4) manage energy-related environmental impacts.

JBIC has included “a foundation for sustainable growth” as an area of emphasis within its Basic Strategy of Japan’s ODA Loan (April 2005-March 2008). Specifically, the strategy stipulates that support shall be provided to develop economic and social infrastructure and promote sustainable growth. Moreover, in providing said support, the bottlenecks of network infrastructure improvement as well as the needs of the private sector needs shall be taken into consideration. Furthermore, focus is also placed on Public-Private Partnerships (PPP), where private funds and Japanese ODA loans are mutually complemented. This project is planned to develop an electric power supply system connected to the Bujagali Hydropower Station, which is constructed under a build-operate-transfer (BOT) arrangement by utilizing private funds, and complies with JBIC’s strategy. Furthermore, this strategy stipulates that support provided to regions of Sub-Saharan Africa focuses on the private sector development for countries with relatively good solvency and governance. This project complies with JBIC’s strategy as it mainly benefits private sector businesses within the Ugandan capital, Kampala.

Moreover, with regard to countries that have been acknowledged for reaching the Completion Point (CP) of the enhanced HIPC Initiative and have reduced their debts, , loans will be provided to them with the cooperation of the AfDB by utilizing the Accelerated Co-Financing Scheme for Africa (ACFA) under the Enhanced Private Sector Assistance for Africa (EPSA) if they are recognized as having relatively good solvency and governance. Uganda is a country that the Japanese Government appointed as eligible for ACFA, and it is believed that there is a high standard of necessity and relevance of JBIC assistance in supporting this project as the project is considered to contribute to supporting the private sector development—the policy objective of EPSA. This is the second loan ever to be provided to Uganda (the first was a structural adjustment loan 14 years ago), and the first project loan for infrastructure development.

3. Project Objectives

To increase access to less expensive and more reliable electricity supply by providing adequate transmission capacity for evacuation power from Bujagali Power Station, thereby meeting the energy needs of Uganda’s population for social and economic development.

4. Project Description

(1) Target Area

Southeast Republic of Uganda

(2) Project Outline

The development of a transmission system to link the Bujagali Hydropower Station to the country’s existing transmission network.

- (a) Construction of new transmission lines (Bujagali-Kawanda (220kV, 75km), Bujagali- Nalubaale (132kV, 8km), Bujagali-Tororo (132kV, 5km), Kawanda-Mutundwe (132kV, 15km))
- (b) Construction of a new substation (Kawanda) and expansion of an existing substation (Mutundwe)
- (c) Consulting services (bid assistance, construction supervision, account audits, etc.)

(3) Total Project Cost/ Loan Amount

9,090 million yen (Yen Loan Amount: 3,484 million yen)

(4) Schedule

January 2007 - May 2010 (41 months)

(5) Implementation Structure

- (a) Borrower: The Government of the Republic of Uganda
- (b) Executing Agency: Uganda Electricity Transmission Company Limited: UETCL
- (c) Operation and Maintenance System: Same as (b)

(6) Environmental and Social Considerations

(a) Environmental Effects/ Land Acquisition and Resident Relocation

- (i) Category: Category A
 - (ii) Reason for Categorization: This project falls into the electric power transmission sector, has characteristics that are likely exert impact, and is located in a sensitive areas under the “Japan Bank for International Cooperation Guidelines for Confirmation of Environmental and Social Considerations” (established in April 2002). Thus this project is categorized as Category A.
 - (iii) Environmental Permit: The Environmental and Social Impact Assessment (ESIA) report concerning this project was approved by the National Environment Management Authority (NEMA) in April 2007.
 - (iv) Anti-Pollution Measures: Water will be dispersed as a countermeasure for dust created during construction, and as countermeasures for water quality and soil pollution, a waste management plan will be drafted and waste will be properly processed.
 - (v) Natural Environment: A portion of the transmission lines for this project passes through a part of a forest reserve. However, adverse impact on the natural environment is expected to be minimal as new transmission lines will be constructed adjacent to existing transmission lines, and replacement trees will be planted to cover the same area that is cut down when implementing the project (approx. 60ha).
 - (vi) Social Environment: This project requires the acquisition of approximately 21ha of land, and the resettlement of approximately 120 households. The land acquisition and household resettlements will be conducted according to Ugandan domestic procedures.
 - (vii) Other/ Monitoring: The executing agency for the project will monitor the air quality, noise, water quality, and land acquisition, etc.
- (b) Promotion of Poverty Reduction: None
 - (c) Promotion of Social Development (e.g. Gender Perspective): None

(7) Other Important Issues

None

5. Outcome Targets

(1) Evaluation Indicators (Operation and Effect Indicator)

Indicator	Baseline (2007)	Target (2012: 2 years after completion)
Transmission Line Capacity (MW)	450MW	900MW
Average Cost for Power Generation (US cents / kWh)	22 cents	15 cents
No. of Blackouts (days/year)	365 days	2 days or less

(Note) Established after discussion with AfDB.

(2) Number of Beneficiaries

The approximately 250,000 households connected to the national transmission network (Customers of UMEME, the distribution company)

(3) Internal Rate of Return (Financial and Economic Internal Rate of Return)

Based on the following premises, the Financial Internal Rate of Return (FIRR) for this project is 18.85%, and the Economic Internal Rate of Return (EIRR) is 26.00%.

(FIRR)

- (a) Cost: Project cost, operation and maintenance expenses
- (b) Benefit: Revenue from electricity sales
- (c) Project Life: 40 years

(EIRR)

- (a) Cost: Project cost (excluding tax), operation and maintenance expenses
- (b) Benefit: Reduction of fuel costs for alternate thermal power stations, steady power supply (reduction in supply-demand gap)
- (c) Project Life: 40 years

6. External Risk Factors

An electricity supply shortage due to the belated completion of the Bujagali Hydropower Station.

7. Lessons Learned from Findings of Similar Projects Undertaken in the Past

In the ex-post evaluations of projects in the past, it has been pointed out that it is necessary to request that the executing agency take the initiative themselves in coordinating and supervising the entire project in the event that JBIC assists in co-financing a portion of the project. Effort will be made during this project to share information to a sufficient degree with the executing agency through the AfDB based on the ACFA framework.

8. Plans for Future Evaluation

(1) Indicators for Future Evaluation

- (a) Transmission line capacity (MW)
- (b) Average cost for power generation (US cents / kWh)
- (c) Number of blackouts (days/year)
- (d) Internal rate of return: FIRR, EIRR (%)

(2) Timing of Next Evaluation

2 years after project completion