

**BANK MANAGEMENT RESPONSE TO  
REQUEST FOR INSPECTION PANEL REVIEW OF THE  
UGANDA: PRIVATE POWER GENERATION PROJECT (PROPOSED)**

Management has reviewed the Request for Inspection of the proposed Uganda: Private Power Generation (Bujagali) Project (FY07), received by the Inspection Panel on March 5, 2007 and registered on March 7, 2007 (RQ07/1). Management has prepared the following response.



## CONTENTS

<b>Abbreviations and Acronyms .....</b>	<b>iv</b>
<b>I. INTRODUCTION.....</b>	<b>1</b>
<b>II. THE REQUEST .....</b>	<b>1</b>
<b>III. PROJECT BACKGROUND.....</b>	<b>2</b>
<b>IV. SPECIAL ISSUES .....</b>	<b>8</b>
<b>V. CONCLUSION.....</b>	<b>14</b>

### Annexes

Annex 1.	Claims and Responses
Annex 2.	Bujagali II – Economic and Financial Evaluation Study – Summary
Annex 3.	Lake Victoria Hydrology
Annex 4.	Consultations to Date on the Private Power Generation (Bujagali) Project
Annex 5.	Issues Identified during Consultations for the Private Power Generation (Bujagali) Project
Annex 6.	Review of Geothermal Prospects, Executive Summary of Appendix D of the Economic Study
Annex 7.	Photographs of Resettlement Community
Annex 8.	Public Notice by the ERA concerning the Bujagali Project

### Map

Map 1.	IBRD No. 35423, Uganda: Private Power Generation (Bujagali) Project
Map 2.	IBRD No. 35424, Uganda: Private Power Development Project

## **ABBREVIATIONS AND ACRONYMS**

ADO	Automotive Diesel Oil
AfDB	African Development Bank
APL	Adaptable Program Loan
APRAP	Assessment of Past Resettlement Activities and Action Plan
BEL	Bujagali Energy Limited
BIU	Bujagali Implementation Unit
BP	Bank Procedures
CDAP	Community Development Action Plan
CFL	Compact Fluorescent Light
DSP	Dam Safety Panel
DWD	Directorate of Water Development
EA	Environmental Assessment
EAP	Environmental Action Plan
EIB	European Investment Bank
EIRR	Economic Internal Rate of Return
EPC	Engineering, Procurement and Construction
EPRP	Emergency Preparedness and Response Plan
ERA	Electricity Regulatory Authority
ERT	Energy for Rural Transformation
FIRRI	Fisheries Resources Research Institute
GCM	General Circulation Models
GoU	Government of Uganda
GWh	Gigawatt hour
HFO	Heavy Fuel Oil
IDA	International Development Association
IFC	International Finance Corporation
IPN	Inspection Panel
kWh	Kilowatt hour
MIGA	Multilateral Investment Guarantee Agency
MSW	Municipal Solid Waste
MW	Megawatt
NAFIRRI	National Fisheries Resources Research Institute
NAPE	National Association of Professional Environmentalists
NBI	Nile Basin Initiative
NELSAP	Nile Equatorial Lakes Subsidiary Action Program
NGO	Nongovernmental organization
NPV	Net Present Value
OP	Operational Policy
PCDP	Public Consultation and Disclosure Plan
PEAP	Poverty Eradication Action Plan
PPA	Power Planning Associates
RAP	Resettlement Action Plan
RCDAP	Resettlement and Community Development Action Plan
SEA	Social and Environmental Assessment
SEAP	Social and Environmental Action Plan
SSEA	Strategic/Sectoral Social and Environmental Assessment
TOR	Terms of Reference
UETCL	Uganda Electricity Transmission Company Limited

UJAS  
UMEME  
WASP

Uganda Joint Assistance Strategy  
Electricity distribution company  
Wien Automatic System Planning

**Currency Equivalents**  
(Exchange Rate Effective (March 19, 2007))  
Currency Unit = Uganda Shilling (USh)  
1,759 = US\$1



## I. INTRODUCTION

1. On March 7, 2007, the Inspection Panel registered a Request for Inspection, IPN Request RQ 07/01 (hereafter referred to as the “Request”), concerning the proposed Uganda: Private Power Generation (Bujagali) Project for which the International Development Association (IDA) is providing a Partial Risk Guarantee, the International Finance Corporation (IFC) is providing loans, and the Multilateral Investment Guarantee Agency (MIGA) is providing a guarantee. The project is scheduled for presentation to the Executive Directors on April 26, 2007.

2. **Structure of the Text.** This document is the Management Response to the Request for Inspection, and it contains the following sections: Section I is the introduction; Section II outlines the Request for Inspection; Section III provides sector and project background; Section IV discusses special issues, and Section V contains the conclusion. Annex 1 presents the Requesters’ claims, together with Management’s detailed responses, in table format. Annexes 2 to 8 include additional supporting documents on the Economic and Financial Evaluation Study, public consultations, a review of geothermal prospects, photographs, and a current notice about the Bujagali project.

## II. THE REQUEST

3. The Request for Inspection was submitted by the Ugandan National Association of Professional Environmentalists (NAPE) and other local organizations and individuals (hereafter referred to as the “Requestors”).

4. Attached to the Request is a letter from the resettlers of the Naminya Resettlement Area. No further materials were received by Management in support of the Request.

5. The Request contains claims that the Panel has indicated may constitute violations by the Bank of various provisions of its policies and procedures, including the following:

- OP/BP 4.01 Environmental Assessment, January 1999 (revised August 2004)
- OP/BP 4.02 Environmental Action Plans, February 2000
- OP/BP 4.04 Natural Habitats, June 2001 (revised August 2004)
- OP 4.07 Water Resources Management, February 2000
- OP/BP 4.10 Indigenous Peoples, July 2005
- OP/BP 4.11 Physical Cultural Resources, July 2006
- OP/BP 4.12 Involuntary Resettlement, December 2001 (revised August 2004)
- OP/BP 4.37 Safety of Dams, October 2001
- OP/BP 7.50 Project on International Waterways, June 2001 (revised August 2004)

- OP/BP 10.04 Economic Evaluation of Investment Operations, September/April 1994
- OP 1.00 Poverty Reduction, August 2004
- World Bank Policy on Disclosure of Information, June 2002 (revised March 2005)

### III. PROJECT BACKGROUND

6. Over the last three years, Uganda has suffered serious power shortages<sup>1</sup> arising from a combination of: (a) delays in developing additional generation capacity, particularly the World Bank Group supported Bujagali private hydroelectric plant, which was to have been in service by now, but is currently expected to be in service in 2011; (b) a prolonged drought in the region, which has, in turn, reduced the generation output of the existing hydropower plants (i.e., Nalubaale and Kiira); (c) the high level of technical losses in the distribution system; and (d) annual demand growth of about 8 percent, which has put additional pressure on the power system. The proposed Bujagali project is aimed at providing the capacity needed to overcome the supply constraints in a least-cost and environmentally and socially sustainable manner.

7. ***Uganda's Poverty Eradication Action Plan (PEAP).*** Uganda's development objectives are articulated in the 2004 PEAP, the third version of its poverty eradication action plan. The 2004 PEAP restates the country's ambitions of eradicating mass poverty and of becoming a middle income country in the next twenty years. It promotes a shift of policy focus from recovery to sustainable growth and structural transformation. The PEAP presents specific policies and measures to achieve its objectives, grouped under five pillars: (a) economic management; (b) enhanced competitiveness, production and incomes; (c) security, conflict resolution, and disaster management; (d) governance; and (e) human resources development.

8. ***Uganda Joint Assistance Strategy (UJAS).*** The UJAS was approved by IDA's Board of Executive Directors in January 2006 as the country assistance strategy, which was jointly prepared with seven other development partners. The UJAS lays out the strategy for supporting the implementation of the third PEAP and achievement of the Millennium Development Goals. It promotes strong collaboration and harmonization among development partners and with the Government, as well as a stronger focus on results and outcomes. As part of the UJAS harmonization agenda, an exercise to ensure effective division of labor among development partners has been launched.

9. ***Power Crisis Impacts on Economic Growth.*** Although economic growth and Uganda's external position were largely consistent with the Government's program for 2005/2006, the ongoing electricity crisis has placed a significant strain on growth over the medium term. In particular, businesses and consumers have been forced to endure

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<sup>1</sup> The amount of load shed in 2006 is estimated at 364 Gigawatt hours (GWh) compared to 98 GWh in 2005.



service cuts extending over hours or even days, with some shifting production to times when power is available, and many larger businesses relying on high-cost back up generators. Manufacturing, high-value agriculture (e.g., flowers), and processing industries (e.g., fish) are most affected by power cuts, and profits in these industries are being squeezed. Other macroeconomic consequences from the current power crisis are inflation of about 0.5% above projections through September 2006 due to higher energy costs, a widening trade deficit due to higher oil prices, and increases in diesel fuel import volumes for thermal power plants that have been installed to partially fill the supply gap left by the reduced hydropower production. The country loses about \$6 million with each month of delay beyond the commissioning date of the first effort to develop the Bujagali project. The present situation, with extensive load-shedding blackouts, is not sustainable and further delays in augmenting Uganda's electricity generation capacity could undermine the economy. The economic cost of unserved energy in 2006 is estimated at about US¢39.4/kWh.<sup>2</sup>

10. **Power Sector Strategy.** The power sector strategy of the Government of Uganda (GoU) has been to: (a) maintain the legal, regulatory and structural sector reforms that are in place; (b) leverage the role of the private sector in investment operations and future sector development; (c) provide adequate, reliable and least-cost power generation with the goal to meet urban and industrial demand and increase access; and (d) scale up rural access to underpin broad based development.

11. Since 1999, the GoU has implemented a comprehensive power sector reform program and enacted a new Electricity Act; established an independent Electricity Regulatory Authority (ERA); and unbundled the State-owned Uganda Electricity Board into separate entities responsible for generation, transmission and distribution. The GoU has promoted the efficient operation of the power sector, in part by increasing the role of the private sector through offers of concessions for generation and distribution facilities. The number of urban and rural households with direct access to electricity has grown and the GoU is addressing the need to provide adequate, reliable and least-cost power generation capacity to meet demand and pursuing regional power interconnections with the countries of the East African Community.

12. Uganda's bold reforms notwithstanding, it has been challenged by power shortages, as stated above. The increased cost of shifting from a primarily hydro-based system in 2005, to a situation in which 45 percent of generation is being supplied through expensive thermal plants in 2007, has been met through a combination of higher tariffs and subsidies. The hope for the country is that the Bujagali project once commissioned, will provide longer term, lower cost power supply, mitigating the present crisis.

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<sup>2</sup> Source: "Bujagali II – Economic and Financial Evaluation Study" (hereafter called the Economic Study), Power Planning Associates Ltd., February 2007. The cost of unserved energy is estimated based on the cost of self-generation using diesel generators (for commercial and industrial customers) and the consumer 'willingness to pay' for residential customers.

13. **Project Objectives.** The project's main objective is to provide least-cost power generation capacity that is expected to eliminate power shortages in 2011 when the plant is commissioned. The proposed project would represent an increase of 250MW of generation capacity on the national grid. In addition to mobilizing private investment and commercial bank lending, World Bank Group involvement in the proposed project is expected to provide: (a) comfort to first-time investors in the sector (including sponsors, commercial lenders and development finance institutions); (b) access to long term financing, leading to more affordable tariffs for the proposed project; and (c) project structuring advice, based on international experience, to ensure project bankability.

14. **Project Description.** The proposed Private Power Generation (Bujagali) Project is a 250MW run of the river power plant with an adequate reservoir for daily storage, an intake powerhouse complex, and an earth filled dam with a maximum height of about 30 meters, together with spillway and other associated works. The proposed project will be constructed on the Nile River, approximately 8 kilometers north of the existing Nalubaale and Kiira power plants<sup>3</sup>. The powerhouse will be constructed to house 5x50MW Kaplan turbines. The small reservoir will have an estimated surface area of 388 hectares, extending back to the tailrace areas of the Nalubaale and Kiira dam complex. The proposed project will require 238 hectares of land take for the project facilities, of which 80 hectares will be for new inundated areas adjacent to the Nile River. The land take includes 113 hectares for temporary and ancillary facilities, including temporary haul roads, coffer dams, storage and quarries. The proposed project will require the construction of about 100 kilometers of transmission line, as well as the construction of a substation at Kawanda, and extension of the Mutundwe substation (these activities are grouped under a separate Interconnection Project). The proposed project is located downstream of the Nalubaale/Kiira dam complex, and therefore would re-use water released from the lake. The improved efficiency of water use would reduce pressure for releasing water above the Agreed Curve<sup>4</sup>. The proposed project is structured as an independent power producer which will sell electricity to the Uganda Electricity Transmission Company Ltd. (UETCL) under a 30-year Power Purchase Agreement, signed on December 13, 2005. The proposed World Bank Group support consists of: an IDA Partial Risk Guarantee of up to US\$115 million, IFC 'A' and 'C' Loans of up to US\$130 million, and a MIGA political risk Guarantee of up to US\$115 million.

15. **Previous Bujagali and Other Energy Projects and the 2001/2002 Inspection Panel Investigation.** On August 7, 2001, the Inspection Panel registered for inspection IPN Request RQ01/3 concerning the SDR 86.9 million (US\$125 million) Third Power Project (Power III) financed by IDA, the SDR 24 million (US\$33 million) Supplemental Credit for Power III, the SDR 48 million (US\$62 million) Fourth Power Project (Power IV), and the proposed Bujagali Hydropower Project for which IDA was providing a US\$115 million Partial Risk Guarantee. The Request was submitted by NAPE, the same

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<sup>3</sup> See maps provided after the Annexes.

<sup>4</sup> The Agreed Curve functions as an operating rule for water discharges through the Nalubaale and Kiira dam complex, in which the volume of water released remains consistent with what would have occurred under natural conditions, thereby ensuring no change in downstream discharge (water releases are a function of the lake level at any given time).

group that has submitted the current Request, as well as another group, Uganda Save Bujagali Crusade, and other local institutions and individuals.

16. At that time, the Requesters stated that the failures and omissions of IDA in the design, appraisal, and implementation of the above-referenced projects materially affected the rights and interests of the Requesters and were likely to jeopardize their future social, cultural, and environmental security. More specifically, the Requesters stated that the Owen Falls Dam Extension<sup>5</sup> and the construction of the proposed Bujagali Hydropower Project had resulted, or could have resulted, in social, economic and environmental harm to the local population. The Requesters also stated that they had been harmed or were likely to be harmed as a result of failure to undertake an Environmental Assessment (EA) of the Owen Falls Extension; the lack of a cumulative environmental assessment related to the dams already built, under construction and in the final stages of design; inadequate involuntary resettlement (including compensation arrangements); inadequate consultation, participation and disclosure of information; and lack of economic and technical analysis, including lack of alternative economic analysis, especially in the case of the Owen Falls Extension.

17. The Inspection Panel recommended to the Board in October 2001 that it investigate the Request and the Board authorized the investigation. The Panel's findings were sent to the Board on May 23, 2002. Key findings focused on the Bujagali Project and concerned: disclosure of information about the project; preparation of a Sectoral Environmental Assessment; an assessment of the cumulative impacts of constructing multiple dams on the Nile River in Uganda; use and adequacy of an environmental offset (at Kalagala Falls); economic evaluation (including demand forecast and institutional, tariff and affordability risks); examination of power generation alternatives; issues surrounding the power purchase agreement (i.e., transmission, strategic risks, and affordability); social compliance (use of socio-economic surveys, community development action plans, compensation), and management of cultural property.

18. In its June 1, 2002 document entitled "Management Report and Recommendation in Response to the Inspection Panel Investigation report (Uganda – Third Power Project, Fourth Power Project and Bujagali Hydropower Project)," Management recommended a nine-point action plan, which was endorsed by the Board of Executive Directors on June 17, 2002. Below is a list that includes the nine points noted in Management's Action Plan, along with an additional point regarding disclosure issues in the Power IV project; this list explains how the various issues raised by the Inspection Panel are being addressed in the context of the design of any new hydropower project at the Bujagali site involving the World Bank Group.

Inspection Panel Findings	Status
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<sup>5</sup> The Owen Falls Dam, financed by the United Kingdom and constructed in the 1950s, is now called Nalubaale, and the Owen Falls Extension is now called Kiira. IDA financed emergency repairs to the Nalubaale Dam in the early 1980s and the construction of Kiira in 1991. The 2001 Power IV Project provided financing for Units 14 and 15 at the Kiira powerhouse.

Inspection Panel Findings	Status
<b>POWER IV PROJECT</b>	
Disclosure of Information: Environment	Full and comprehensive discussions of the Power III and Power IV Projects and their relationship to the reconfigured Bujagali Hydropower Project have been undertaken in connection with the design of the new project. The Government has been actively involved with the East African Community in discussions surrounding Lake Victoria, as well as current and future hydropower generation prospects. Moreover, stakeholder consultations concerning the proposed Private Power Generation (Bujagali) Project have encompassed such topics as hydrology, hydropower shortages from the existing Ugandan hydropower plants, the leasing of emergency thermal power generation, as well as other generation expansion projects, including geothermal, bagasse based cogeneration, and other hydro and thermal options.
<b>BUJAGALI PROJECT</b>	
1. Sectoral EA	As an element of the work program for the Nile Basin Initiative (NBI), an inclusive, participatory and riparian-owned Strategic/Sectoral Social and Environmental Assessment (SSEA) has been completed, with IDA's involvement in the Nile Equatorial Lakes Subsidiary Action Program (NELSAP). The SSEA evaluates power generation options and associated transmission interconnections to meet the following multiple objectives: transboundary, economic and political cooperation; sub-regional integration; poverty reduction; dispute resolution; environmental sustainability; energy substitutions to reduce depletion of forestry resources; and sharing of mutual benefits in the context of multi-purpose projects. The outcome of the process features a power strategy that describes the power options, including their economic and engineering feasibility as well as environmental and social impacts, to facilitate informed and transparent decision-making in the selection of power investments by the Nile Basin riparian countries. The final SSEA report was disclosed in the InfoShop on February 23, 2007.
2. Cumulative Impacts	<p>The NBI has made considerable progress in bringing the Nile riparian countries together to identify potential power investments as well as investments in water resources management, agriculture, fisheries, and water hyacinth control. This initiative recognizes the need for early and upstream consideration of environmental and social impacts and public involvement in a program of collaborative action to promote cooperative management of the Nile River Basin. This includes a participatory SSEA, discussed above, which was supported as part of the strategic planning for the NELSAP. The SSEA analyzes and ranks potential future power options, based upon multiple criteria. These are: assessment of direct, indirect/induced and cumulative impacts of multiple activities; additional costs and benefits through multi-purpose use of storage reservoirs; risk of rainfall variability; and sharing of benefits at the local and regional level. The studies previously performed in order to make the decision in December 2001 to proceed with the Bujagali Hydropower Project served as part of the information base for the SSEA.</p> <p>Cumulative impacts of the currently proposed Bujagali project are also addressed as part of the project's Social and Environmental Assessment (SEA), disclosed in the InfoShop and in-country in December 2006.</p>
3. Kalagala Offset	The GoU has indicated that it will continue to honor its agreement to set aside the Kalagala Falls site exclusively to protect its natural habitat and environmental and spiritual values and to develop tourism, and will not develop the site for power generation. For more information, see Item 7 of Annex 1.
4. Load Forecast Scenarios	Three load forecasts were prepared for the current project, taking into account actual data over the past several years and the comments made by the Inspec-

Inspection Panel Findings	Status
	tion Panel with regard to ensuring an adequate range between the high and low load forecasts (see the Economic Study). By 2011, the base case generation requirement for the domestic market would be 2,208 GWh, with a spread around the base case of about 14 percent above (high case) and 18 percent below (low case). By 2015, the base case demand would be 2,959 GWh, with a spread around the base case of about 24 percent above (high case) and 30 percent below (low case).
5. Institutional, Tariff and Affordability Risks	These risks have been reassessed for the current project. In particular, it was estimated that despite higher tariff levels, electricity expenditures will be 5-6 percent of total household expenditures in 2011, which is within the affordable range. The concessioning of Uganda's distribution facilities to a private operator, and a strong track record of the Electricity Regulatory Authority (ERA) are helping to mitigate what had hitherto been perceived as public sector institutional, efficiency and performance risks. (See the Economic Study)
6. Examination of Power Generation Alternatives	The Economic Study reviews all power generation options, including alternative hydropower, oil-based thermal power, small-scale renewable energy, and geothermal potential. Since other sources of funding for geothermal exploration and drilling have not been forthcoming, at the request of the GoU, IDA included additional studies and shallow drilling under the ongoing Power IV Project. These studies will assist the GoU to assess geothermal prospects at several sites in Western Uganda. A key conclusion of the Economic Study is that, based on available analytical data, geothermal potential in Uganda for commercial development is about 40MW, far less than the previously estimated potential of 450MW. (See the Economic Study)
7. Social Compliance (RAP-Socio-economic Survey)	The proposed project incorporates the recommendations of the Inspection Panel investigation report with regard to the design, implementation and monitoring of relevant components of the Community Development Action Plan (CDAP). IDA supervision missions will closely monitor project implementation.
8. Social Compliance (CDAP)	The new project sponsors have reassessed the CDAPs in the context of the Bank's safeguard policies and progress that has been made on the ground, and have prepared an Assessment of Past Resettlement Activities and Action Plan (APRAP). In addition, a new CDAP has been prepared which focuses on "supporting communities' needs based on culturally appropriate means of consultations." This document contains provisions to address the measures required under the APRAP and to address impacts on the eight project-affected communities, but also goes beyond these requirements to provide other benefits. According to the APRAP, US\$497,000 will be needed to finance the programs to complete resettlement and income restoration. Bujagali Energy Limited (BEL), the project developer, is committed to providing US\$2.4 million for community development over a five-year period following the start of construction. These commitments cover health care facilities; employment opportunities; water supply and sanitation; fisheries; education; small-scale tourism; training and financial services.
9. Compensation for Tourism	The SEA for the Bujagali project discusses the potential impacts on tourism, recreational activities, and the mitigation measures in detail. As part of the separate Tourism Impact Study that was undertaken by BEL, key affected businesses were consulted through individual interviews. Subsequent discussions between the tourist operators, employees, and BEL regarding mitigation/compensation measures have also been carried out. Compensation measures were proposed, including measures such as offering to assist the companies in moving their operations farther down river to Kalagala Falls. To assist the local villages that will be affected by the relocation of the rafting enterprises, BEL is proposing to develop a cultural center near the site of the Bujagali Falls,

Inspection Panel Findings	Status
	as well as a visitor center at the dam. These centers will provide opportunities for small businesses similar to those near the current Bujagali Falls site. The tourism and services related operators noted in the consultations that they are satisfied with the proposed alternative of moving their businesses downstream to the offset site at Kalagala Falls.

19. The World Bank and IFC's Board of Directors approved the Bujagali project being developed by AES Corporation, a United States power company, on December 18, 2001. Delays in the implementation of the project and AES' weakening financial position as the result of a downturn in the United States market eventually led to AES' withdrawal from the previous project and to a termination by the GoU in September 2003. The GoU then initiated a transparent bidding process in adherence with the Government's procurement guidelines, to seek a new project sponsor to develop the Bujagali project.

20. In September 2003, the GoU began to pursue selection of new sponsors for the development of the hydropower project at Bujagali, with private sector participation and World Bank Group support. The feasibility of the proposed new power sector operation has been reassessed in the context of Uganda's power needs and its alternatives for power supply. There have been extensive national and regional analyses of the project's environmental, social, and economic impact, and a detailed examination of generation alternatives, accompanied by numerous public consultations and disclosure of project documents. Bujagali will be the largest private investment in Uganda and among the largest in the power sector in Sub-Saharan Africa, with potential long-term benefits for future private sector investment as well as economic development in the country. It can also serve to establish a standard that can be replicated by other countries and investors in the region.

#### IV. SPECIAL ISSUES

##### Current Context and Future Vision

21. Uganda's power supply situation has deteriorated significantly in recent years. The power crisis has slowed industrial production. The failure of the previous effort to develop Bujagali has exacted a very high price from the country. It is noteworthy that if the previous Bujagali project had been successfully financed in 2002, Uganda would have been able to avoid, or, at the very least, minimize the high cost of thermal generation and load shedding. Moreover, the reductions in Lake Victoria water levels from over-abstraction for hydropower production may not have occurred. This is because the Bujagali project is downstream of the current Nalubaale/Kiira dam complex, and would have re-used the upstream water releases. If commissioned, the project would have produced power at a significantly lower cost than what Uganda is now paying for the supply from thermal power plants running on imported fuel. Indeed, repeated extensive economic analysis has verified that the Bujagali project remains the least-cost supply option for Uganda.

22. The failure of the first attempt at developing the Bujagali project, while unfortunate, did provide valuable lessons to the GoU in shaping the current proposed project. It also afforded an opportunity for institutions such as the World Bank Group to evaluate lessons of experience, including the outcomes and recommendations of the Inspection Panel review, and better understand and appreciate the various concerns of the stakeholders within and outside Uganda.

23. The GoU has carefully followed a transparent and open, competitive process for the selection of the project's private sector sponsors. The selection was based on four criteria: (a) the internal rate of return on the equity to be invested by the sponsor in the project; (b) a cap on the development costs that the sponsor would be allowed to include in the project tariff; (c) sponsor acceptance of responsibility for the UETCL transmission line construction management; and (d) the monthly operation and maintenance fee that the project company (to be formed by the selected sponsor) will earn as part of the project tariff, to the extent the plant's target availability is achieved. Furthermore, the selected project sponsors have conducted an open and competitive selection process for the project's engineering, procurement, and construction (EPC) contractors, in compliance with European Investment Bank (EIB) procurement rules.

24. Learning from the past, the GoU committed to and implemented a stronger program of public disclosure. This project's Power Purchase and Implementation Agreements have been disclosed by the GoU, and the World Bank Group has disclosed the project's Economic Study, BEL's SEA, the NELSAP Strategic/Sectoral Social and Environmental Assessment (SSEA), and other environmental and social documents. Tools and means for outreach have included internet websites (where the public can read the Social and Environmental Assessment and the Economic Study, for example), in-country disclosure (advertised in local media), proactive consultations, and dissemination events to ensure that this information is widely available. Many of the information-related questions of the current Request are addressed within the body of information and analysis made available to the public.

25. The economic cost of the delayed development of the Bujagali hydropower project is conservatively estimated during 2006-2010 to be at least US\$700 million. When the proposed Bujagali project is commissioned in 2011, it will generate at least 60 percent more annual energy than the thermal (diesel) plants would produce in 2010. This is an indication of the economic penalty that the long delay of the proposed project implementation will have imposed on Uganda. Furthermore, the environmental toll, nationally and globally, from oil-based thermal generation (i.e., increased carbon and other pollutants), as well as the less efficient use of the Nile River waters, is significant. Most importantly, continued uncertainty about the project affects economic expectations and thus deters investments across the spectrum of Uganda's industrial, commercial and agricultural sub-sectors. The result is a lowering of standards of living for all citizens, particularly the poor, and loss of job and wealth creation.

## Issues Raised by the Requesters

26. Management shares some of the Requesters' concerns, which largely stem from the project's earlier cancellation. Going forward with this new project, these issues are being addressed in several ways, as discussed in the following paragraphs.

27. **Kalagala Offset<sup>6</sup>.** The GoU has reiterated the commitment to the Kalagala offset that it made under the previous effort to develop Bujagali, as presented in the Management Report and Recommendation in response to the Inspection Panel's investigation of Power III, Power IV, and the Bujagali Hydropower projects. This offset commitment is consistent with the mitigation provision for Kalagala Falls, and also recommended in the BEL Social and Environmental Assessment (SEA) Report that has been reviewed and disclosed by the World Bank. As well, the commitment to maintain the Kalagala Offset is strengthened in practice, not only by GoU's commitment to identify sustainable investment programs to facilitate tourism, with appropriate mitigation measures, but also by the enhanced role that Kalagala Falls will play, as (a) rafting companies, once relocated, will locate some of their facilities around the offset area, and (b) other tourism operators, such as small arts and crafts shops, restaurants, four wheeler rentals, and locally owned enterprises are also expected to move their businesses nearer to Kalagala Falls.

28. The offset provision for Kalagala Falls and the adjacent natural habitat will be included as a GoU obligation in the IDA Indemnity Agreement for the Bujagali project, and will be binding throughout the life of the Indemnity. Management notes that the Bank's legal recourse to enforce Government's commitment to maintain the Kalagala Falls offset will not be available after the termination of the Indemnity Agreement. Hence, the draft Indemnity Agreement, discussed with the GoU, includes a provision that, prior to the termination of the Indemnity Agreement, the World Bank and the GoU will pursue discussions to identify mechanisms or instruments to enable the continuation of the GoU obligation to set aside the Kalagala Falls site.

29. **Safety of Dams.** Management agrees that dam safety concerns are an integral part of the review of any hydropower development. A Dam Safety Panel (DSP) has been established, which includes two of the three members of the previous panel set up under the earlier effort to develop the Bujagali project. The DSP will provide advice through final design, construction, initial filling, and the start-up of the dam, including any design or operational precautions, to ensure that the project is consistent with Bank policies. The financing agreements also require the preparation of an Emergency Preparedness and Response Plan (EPRP) that includes failure scenarios for both Nalubaale/Kiira and Bujagali. Recent assessment of the Nalubaale/Kiira dam complex (financed under the Power IV Project) has confirmed their structural integrity.

30. **Bujagali Resettlement.** Management agrees with the Requesters' contention that past resettlement is incomplete. This is largely because the project was terminated in 2003 and the sponsor responsible for resettlement withdrew. The new conditions are ad-

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<sup>6</sup> See Map 35423 inset for location of Kalagala falls.



addressed in the Assessment of Past Resettlement Activities and Action Plan (APRAP) and Community Development Action Plans (CDAP). BEL and the Bujagali Implementation Unit (BIU)<sup>7</sup> are now resolving all outstanding issues, and have committed to:

- Completing the process of titling;
- Upgrading the existing Naminya School, and building a kindergarten (nursery);
- Improving health services at the Wakisi and Bodondo Health Centers;
- Restoring boreholes already drilled, drilling ten more, replacing taps, and providing maintenance training;
- Evaluating sanitation conditions and addressing outstanding problems;
- Conducting a feasibility study for electrical distribution to the resettlement community; and
- Implementing longer-term community development programs.

31. ***Interconnection Project Resettlement.*** Although their displacement has not yet occurred, Management notes that people who will be affected by the transmission line—part of the project’s associated Interconnection Project that is expected to be financed by the African Development Bank (AfDB)—must be compensated and resettled satisfactorily. The draft Resettlement Action Plan (RAP) for the Interconnection Project was disclosed in the InfoShop and in-country on December 21, 2006 and land evaluations for the line were completed in early 2007. These will form the basis for the final RAP.

### **Project Preparation: Key Issues**

32. Management is acutely aware of the importance of this project not only in the Ugandan economic, social, and environmental context, but also as an example of the result of a successful implementation of power sector reforms. Therefore, Management has been diligent in committing seasoned, experienced World Bank Group staff, as well as high caliber consultants to work with the GoU, stakeholders, and the project sponsor in preparing the project. Management believes that this has resulted in analyses of the project’s merits which provide solid underpinnings that incorporate views of key project stakeholders.

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<sup>7</sup> The BIU was established in Jinja in 1999, to collaborate with the villagers concerning the status of the project. The BIU strengthened relations with affected groups through community development activities undertaken by the previous sponsor. Following the departure of the previous sponsor, the GoU maintained the BIU, which continued to liaise with the project affected people. These ongoing consultations by the BIU have proven to be critical for strengthening the villagers’ trust, especially during the transition period with BEL. BIU staff also completed surveys of households affected by the associated Interconnection Project.

33. In particular, Management considers that the economic, financial, safeguard, technical, governance, and other required analyses to date are compliant with relevant World Bank Group policies and were undertaken to high professional standards. Moreover, the overall project due diligence adequately accounts for best practice as well as the findings of the previous Bujagali Inspection Panel report. In this regard, Management notes that the analyses:

- Assessed a wide range of supply options, including alternative hydropower sources, such as geothermal power and thermal power (e.g., oil based); small-scale renewable options (e.g., mini-hydro and biomass); oil imports; and other supply options;
- Tested a wide range of demand scenarios derived using the most recent data on the Ugandan economy and the electricity sub-sector, including a low-growth scenario which reflects minimal economic growth; and
- Assessed the impacts of both low and high hydrology scenarios, and separately determined that climate change is not predicted to have a negative impact on water availability.

34. The economic and hydrological work and preliminary results were discussed and agreed with the GoU and other industry stakeholders at participatory workshops in January and March 2006, as well as during a review of the pre-final results in Kampala in January 2007.

35. Management is aware of the financial and economic penalties that Uganda has endured due to the previous sponsor's inability to mobilize financing for the former Bujagali project. Management also is mindful of the higher cost of this proposed project. For this reason, the World Bank Group is supporting the GoU and the project sponsors to proceed as quickly as possible, while at the same time ensuring compliance with World Bank Group requirements. The project sponsor and the EPC contractor were both selected through a transparent and competitive process.

36. Management believes that the environmental and social preparation work to date has appropriately accounted for the legacy issues from the previous project as well as new issues, and that it takes appropriate account of World Bank Group policies. In particular:

- A new Social and Environmental Assessment was prepared which is compliant with IFC, MIGA, and IDA policies;
- An assessment of the status of the resettlement actions under the previous project, and a plan for remediation and completion were prepared and disclosed;
- The Government has re-committed to offsetting of the Kalagala Falls site in compensation for inundation of Bujagali Falls;

- Consultations with affected communities have been undertaken and their concerns have been integrated into the planning; and
- Assessment of cumulative impacts has been undertaken.

37. Finally, Management would like to highlight the disclosure of information undertaken during the preparation of the project. Not only were the standard environmental and social documents publicly disclosed on December 21, 2006, but the World Bank Group has also disclosed the economic and financial analysis in its entirety (February 26, 2007). This document was provided to the Requesters on February 28, 2007, the day before the Request was submitted to the Inspection Panel. For its part, the Government has publicly disclosed the full text of both the Power Purchase Agreement and the Implementation Agreement not just for the legally required 30 day period, but for an open-ended period of time. This is highly unusual for a private sector transaction of this nature.

### **Project Benefits**

38. The project will: (a) displace about 738 GWh of expensive fossil thermal production (about 35 percent of Uganda's total 2010 generation needs) when it is commissioned in 2011; (b) relieve any residual load shedding; and (c) meet incremental base load demand with least-cost power generation. This should lead to a decrease of up to 10 percent in end user tariffs (in 2006 real terms). Also, in view of the current very low 5% access rate, the provision of adequate, reliable least-cost power is expected to facilitate a substantial increase in the number of connections of residential users per year to the power grid, including in rural areas. It will also allow industrial and commercial users to increase their output and efficiency, and therefore their profits, thereby enhancing economic growth. Availability of cost effective electricity could also increase the attractiveness of Uganda as an investment destination. These developments are expected to have positive impacts on poverty alleviation in Uganda, directly through the availability of power to newly connected households and indirectly through employment creation. The proposed project will also have a positive impact on Uganda's balance of payments situation.

39. **Public Finance.** The Government will be relieved of the necessity to provide a general subsidy for electricity tariffs and will benefit from net tax revenues from the project that can be diverted to social programs. The fact that the project is financed through the private sector will enable the Government to focus its scarce financial resources on other priority sectors in the fight against poverty.

40. **The Environment.** Since the project is located downstream from the Nalubaale/Kiira dam complex, it will use the same water that has already been released through Nalubaale/Kiira and, given the project's higher head, will allow Uganda's generation output to more than double without any additional release of water. Therefore, the project is expected to reduce the pressure to over-abstact water from Lake Victoria, thereby helping to preserve lake levels and facilitate the GoU's compliance with the Agreed Curve. Through the displacement of oil-based thermal power that would otherwise be needed, the project will also reduce carbon and other pollutant emissions.

41. ***Employment and Local Communities.*** During the construction phase of the dam, the project is expected to create 600-1,500 temporary jobs for Ugandan nationals, 10 percent of whom are likely to be hired from local communities. As mentioned earlier, the Kalagala offset will also provide opportunities for employment in the tourism sector. Finally, during operation of the dam, project affected people under the hydropower plant and associated Interconnection Project will benefit through the CDAPs from increased economic activities in and around the site (e.g. dam maintenance and tourism). The CDAPs will also provide employment enhancing measures indirectly through improved educational and health services, provision of clean water, and renewable energy systems, all of which improve the country's progress toward achieving the Millennium Development Goals.

42. ***Demonstration Effects.*** The project will be Uganda's first large scale Independent Power Producer project and one of the largest mobilizations of private financing for such a project in Sub-Saharan Africa. As stated earlier, the project will provide economic and commercial benefits to Uganda, drawing from a comprehensive set of reforms in the power sector, which started in 1999 with support from the World Bank Group. As such, it will facilitate further private sector investment in Uganda and have important demonstration effects in the region. On the other hand, failure to implement the project would be very costly for the country, as power sector reforms may be jeopardized; it could also send a negative signal to other countries in the region regarding the effectiveness of power sector reforms.

### **Next Steps**

43. Looking forward, the project is scheduled for Board presentation on April 26, 2007. Other financiers also are seeking approval from their boards in the April/May timeframe, and financial closure is expected in mid-2007. Beyond Board presentation, key issues that Management will emphasize during the supervision phase, are: (a) follow-through on environment and social mitigation plans; and (b) continuation of the DSP's ongoing assignment as well as engineering oversight by World Bank Group staff, assisted by the Lenders' Engineer.

## **V. CONCLUSION**

44. The Bujagali project is the least-cost expansion option for Uganda, where the ongoing deterioration in power supply has already slowed development (see paragraph 25) and contributed to the lower water levels in Lake Victoria. The project's benefits can also be seen with a more human face: Uganda's young population, and high population growth point to the fundamental importance of off-farm, energy intensive economic expansion to absorb the building wave of new workers. While short-term financing of this key infrastructure sector is critical to maintain its stability, Government funding to this otherwise commercial sector diverts funds from other high priority, non-revenue-generating budget areas.

45. The Bujagali project is overdue, and Uganda continues to pay a high price for the delay imposed by the failure of the first attempt. This price can be counted in economic terms: Uganda has lost about US\$6 million with each month of delay beyond the commissioning date of the first project, while the current unreliable power supply undermines economic growth.

46. The World Bank Group's support to this project is pivotal to its success: IDA's long-term advisory and assistance role in the power sector gives confidence to the private sector and lenders; IDA and IFC have taken a leadership role in the project's due diligence, particularly on economic, environmental, and social issues; the proposed IDA Partial Risk Guarantee will provide the backing required for commercial lenders to fill the remaining financing gap; and MIGA's political risk insurance provides the backing needed for the participation of an experienced power developer as one of the project sponsors.

47. Recognizing the importance of the project, and the critical nature of IDA's participation, Management takes seriously the Requesters' concerns. Management firmly believes that the project adheres closely to Bank policies and more importantly, that the project developers and financiers have been conscientious in pursuing the welfare of project affected persons as well as Uganda as a whole.

48. The Request identifies project risks, including climate change and affordability. Management agrees with the Requesters that these must be addressed. Management believes these aspects have been studied carefully and thoroughly and properly addressed, not only in accordance with Bank policies, but also in light of the previous Inspection Panel review as well as international best practice. The Request also questions the adequacy of analysis, including hydrology, economics, financial issues, environmental and social impact, and engineering. Management considers that the analysis was undertaken to high professional standards, accounts for a broad range of alternatives, and adopts a conservative demand growth and base case for hydrology and the other factors. Based on these, the project has acceptable rates of return overall.

49. The Request expresses concerns regarding transparency. Management considers that the level of public disclosure meets, and even extends beyond Bank requirements. In addition to the disclosure of the environmental and social safeguard documents, the full economic analysis, including the hydrology analysis, has been disclosed by the Bank. Moreover, a SSEA has also been disclosed, which views the project in a regional context, and the GoU has publicly disclosed both the Power Purchase Agreement and the Implementation Agreement, a commendable and unusual step for a private sector transaction.

50. Management shares the Requesters' concerns about resettlement to date. The previous project sponsor's withdrawal left some of the social aspects unfinished, although the BIU has maintained an active presence on the ground. In addition, the time lag before entry of the new project sponsor has tested the patience of local populations. The RAPs prepared by the new sponsor are designed to ensure that local populations are fairly treated and their livelihoods improved.

51. In summary, Management firmly believes that this project has been well prepared in accordance with Bank policies, and that it will significantly benefit Uganda's development and drive for poverty alleviation.

## ANNEX 1

### CLAIMS AND RESPONSES

No	Claim/Issue	Response
<b>Environment – SEA</b>		
1.	<p><b>Hydrological Risk.</b> BEL's SEA does not adequately address the outstanding questions about hydrological changes on power production at the Nalubaale, Kiira and the proposed Bujagali facilities, especially now when Lake Victoria water levels have declined.</p> <p>Without doubt, Kiira has contributed substantially to the over-draining of Lake Victoria, causing a lot of misery and economic loss to Uganda and neighboring countries. This has not been properly addressed in the documents we have seen.</p> <p>According to the SEA, BEL has little or no control on the manner in which Nalubaale and Kiira will be operated by Government of Uganda (GoU) ... and therefore cannot under the circumstances dictate the outflow rates through upstream power stations to ensure sufficient water for Bujagali's power production, implying that Bujagali's operation will be highly dependent on the operations of Kiira and Nalubaale. Now that BEL cannot control the outflow of water from power stations upstream and did not obtain commitment from GoU to ensure sufficient outflow rates through Nalubaale and Kiira, what guarantees does BEL have that the projects will have enough water and generate the projected capacity? This issue is a lynchpin in the project's economic viability.</p> <p><b>Lake Victoria Levels.</b> BEL's SEA deliberately projects Lake Victoria as being capable of providing adequate water for the project even in its current diminished hydrological state, which is not possible. Where is the additional water going to come from? It is acknowledged by Engineer Elimu Esimu of Eskom that "currently the facilities (Nalubaale &amp; Kiira) are not running at full capacity, because of limitations from tail water and the need to main live storage" ..., implying hydrology is still a major limitation. It is now clear that the Agreed Curve is no longer being respected and the Victoria Nile flow regime has changed; consequently the original long-term energy output assessment for Bujagali is no longer valid.... Experts reported that although Bujagali dam was designed for 234-290MW, in reality, this is not possible under the current hydrological regime. Inde-</p>	<p>BEL's SEA,<sup>1</sup> which focuses on the social and environmental aspects of the project, states that the proposed 250MW project is not expected to significantly alter or affect the hydrology of Lake Victoria or the Victoria Nile. The quantity of water released from Lake Victoria as well as the timing of releases will continue to be controlled by the operation of the Nalubaale and Kiira facilities. The proposed project's energy output is based on the flow released from Lake Victoria through the Nalubaale/Kiira dam complex and power stations, in accordance with the Agreed Curve.<sup>2</sup> The reservoir for the proposed project is small and can only hold back a few hours of flow; this means that it will essentially pass through whatever flows are released by Nalubaale and Kiira.</p> <p>Given the importance of understanding Lake Victoria's hydrology—as suggested in the Requesters' question—a comprehensive analysis of the lake's hydrology and its impact on power generation at Nalubaale, Kiira and Bujagali is included in the study prepared by Power Planning Associates Ltd. (PPA), "Bujagali II – Economic and Financial Evaluation Study" (Section 2: Hydrology and Energy Generation of Hydropower Plants), hereafter called the Economic Study. (See Annex 2, Summary of the Economic Study) This analysis complements the SEA. It was carried out by experts from Coyne et Bellier, as part of the PPA team and peer reviewed by an independent hydrologist, Professor Juan Valdes of the University of Arizona. The study was made public on February 26, 2007 at <a href="http://www.worldbank.org/Bujagali">www.worldbank.org/Bujagali</a>. (See Annex 3, Lake Victoria Hydrology).</p> <p>The hydrology of the Victoria Nile is complex due to meteorological influences, the rainfall-runoff process, the scale of the evaporation losses, and the interaction between rainfall and evaporation within the watershed. The available reservoir inflow record comprises 106 years of data. It includes several significant hydrological cycles, among which the seasonal and ten year cycles are the most apparent. Given the length of the hydrological record at this site and studies on climate impacts, the hydrological risk for energy generation is considered to be definable from the available data set. Based on these data, the Economic Study estimated the probability of a low</p>

<sup>1</sup> Bujagali Hydropower Project, Uganda; Social and Environmental Assessment; prepared for BEL by R.J. Burnside International Limited; December 2006.

<sup>2</sup> The Agreed Curve functions as an operating rule for water discharges through the Nalubaale and Kiira dam complex, in which the volume of water released remains consistent with what would have occurred under natural conditions, thereby ensuring no change in downstream discharge (water releases are a function of the lake level at any given time).

No	Claim/Issue	Response
	<p>pendent experts projected the output to be a maximum of 172MW. BEL's SEA does not address the overall issue of Lake Victoria's long-term health, other than to assert that Bujagali Dam could lead to more sustainable flows out of the lake as it will "make use of the same water" released by the existing dams. Neither the SEA nor the documents it is based on explore the opposite scenario (i.e. that a new dam will provide more incentive to release higher flows, in order to maximize electricity sales).</p>	<p>flow regime (or a firm release of 687m<sup>3</sup>/s) occurring during Bujagali's first 20 years of operation at about 79% and a high flow regime (or about 1,245m<sup>3</sup>/s) at about 21%. This is a conservative projection of water flows and, hence, energy output from the Bujagali Dam.</p> <p>Management acknowledges that because of the regional drought over the past several years, coupled with the lack of needed generation investments and a growth in demand of about 8%, since 2003 the GoU over-abstracted water for power generation. An analysis of Lake Victoria water levels during the 2003-2005 period concluded that the main origin of the drop in the lake level during this timeframe is an exceptionally dry period, during which the mean net inflow was only 46% of the long term average net inflow, and only 60% of the mean net inflow of the low hydrology scenario. The consequence of this low inflow, combined with the over-release of water for power generation, exacerbated the reduction in Lake Victoria's water levels. Since the end of 2005, the GoU has steadily decreased hydropower generation in an effort to return to the Agreed Curve operating regime. Water flows for power production are being scheduled so as to return to the Agreed Curve as soon as reasonably possible.</p> <p>Were the Bujagali power plant currently in operation, the consequence of this exceptionally dry period, in terms of over-abstractation for power generation, could have been substantially eliminated: the Bujagali site is located downstream of the existing Nalubaale and Kiira dam complex, and the same water release could have been used a second time at Bujagali and would have generated 1.2 times the power already generated by the turbines of Nalubaale/Kiira (the ratio is 1.2 due to the higher head available at Bujagali). Hence, with the joint operation of the existing hydropower and the proposed project, generation of the same energy output as currently generated by Nalubaale and Kiira would only require 45% of the current water release from Lake Victoria. Management acknowledges that BEL will not control the release of water from Lake Victoria, but is of the view that it is in the interest of the GoU to ensure that Bujagali and the Nalubaale/Kiira dams are operated efficiently. Bujagali is downstream of the Nalubaale/Kiira dam complex. There is no feasible scenario where water available will not be used for power generation at Nalubaale/Kiira, thus ensuring water releases for the proposed project. Finally, since the UETCL has to pay BEL a capacity charge whenever the Bujagali plant is available to generate power (based on the project's contractual capacity), there should be no incentive for the GoU to withhold water.</p>
3.	<p><b>AESNP Project Flow Rates.</b> The Ombudsman of the IFC and the World Bank Inspection Panel stressed the need to address the hydrological flow rates in the previous AESNP Bujagali Project and</p>	<p>The impact of hydrological flow rates on the planned Bujagali dam has been addressed extensively in the Economic Study. As noted in Item 1 above, the Bujagali dam and its energy output are based on water releases from</p>



No	Claim/Issue	Response
	they considered hydrology critical for Bujagali dam. BEL does not address this concern.	Lake Victoria consistent with the Agreed Curve and on the assumption of a low flow regime occurring during the first 20 years of the powerhouse's operation.
4.	<p><b>Climate Change.</b> BEL's SEA reports do not address climate change and its possible impact on power production at Bujagali. Current and future climate models indicate hotter, drier conditions, lower lake levels and lower downstream river flows ... It is unknown whether Lake Victoria will recharge to the high levels and outflow experienced during the 1961-2000 period. It is also not known whether such a recharge will occur in the next few years or in the next 100 years. A 2005 report ... predicts that climate change could dramatically reduce the lake's levels and therefore outflow to the Nile.</p>	<p>The SEA addressed social and environmental issues related to the project; the broader climate change (and hydrology) aspects were addressed in different studies which have also been publicly disclosed.</p> <p>The SSEA analyzed in detail the impacts of climate change on power development options in the Nile Equatorial Region, including Bujagali. The analysis, using the best available General Circulation Models (GCM), examined the impacts of a range of changes in temperature on precipitation and, in turn, on runoff and net water yield in Eastern Africa in 2050 and 2100 relative to 2000. The results, based on 16 GCMs that best simulate East African climate, show that with rising temperatures, precipitation and net runoff will both increase, as will the losses due to evaporation and evapotranspiration. In addition, seasonal variability in runoff will also increase, with the wet seasons providing most of the increased runoff. By contract, dry seasons are likely to be less affected.</p> <p>In the northern and central west regions covered by the study, which include Bujagali, there is a high probability of increasing runoff and, hence, a higher potential for power generation than in the past.<sup>3</sup> Taking into account the uncertainties associated with such forecasts, Management considers the analysis to be satisfactory.</p>
5.	<p><b>Technical Report.</b> A recent (2006) technical report of Directorate of Water Development (DWD), a lead agency, is missing in BEL's SEA. This could probably address the issues of hydrology, climate change, declining water levels in Lake Victoria and River Nile. No study released to date analyses the risks to Bujagali performance from climate change-induced drought and other hydrological changes.</p>	<p>Management believes that the technical report referenced here is the Technical Note entitled "Dropping Water Levels of Lake Victoria," which was produced for DWD in 2005. The objectives of the study that led to the report were: "(i) to establish and highlight the causes of lake drop; and (ii) to identify policy implications of the lake drop and determine remedial action for the future management of Lake Victoria." The study noted that the Nalubaale/Kiira operation contributed to the current lake level drop, and concluded that, "in the short term, it is in the interests of the Lake Victoria stakeholders that the release operations at Nalubaale/Kiira are gradually trimmed to eventually restore the natural regime of the lake." It also recommends that an Integrated Water Resources Management Planning approach be adopted for Lake Victoria Watershed management, and that Uganda install thermal power generation to reduce reliance on the lake for power production.</p> <p>Management notes that Uganda is adopting these recommendations, and is fully supportive of its efforts. Moreover, these actions (return to Agreed Curve operation and installation of thermal power) are consistent with</p>

<sup>3</sup> Nonetheless, the consultants, following a conservative approach, did not incorporate this potential upside as part of the base case for the Economic Study.

No	Claim/Issue	Response
		<p>the analysis carried in the Economic Study. In fact, the data (i.e., the hydrological record) used for the DWD report is the same as was used by the Economic Study team in analyzing the hydrology for the purposes of project analysis. Please see Item 3 for a discussion of incorporation of climate change.</p>
6.	<p><b>Cumulative Effects.</b> The last Inspection Panel report stated: <i>“The Panel consequently concludes that the issue of cumulative effects, addressed by Management and raised by the Requesters, is of real significance and is deserving of greater attention.”</i> Although much time has passed since the Bujagali project was first proposed at the World Bank, to date the cumulative impacts issue remains unresolved. There was no deliberate attempt by BEL to identify cumulative impacts. There are no Cumulative Impact studies on Building a Cascade of Dams along the river Nile, including Bujagali. The SEA also does not discuss what changes to the existing dam complex would be required to begin to restore the Lake's level, and how such changes would affect Bujagali. The World Bank and IFC also echoed that lack of a comprehensive management plan gives rise to long-term management challenges of the river Nile. It remains to be seen if other analyses for the project will properly address these concerns. Generally, the ongoing debate over the existing dams' role in the draining of Lake Victoria should be settled in a transparent, participatory way. This requires the timely release of relevant data about releases through the dams, information about hydrological assumptions and commitments from the Government on future dam operation and water releases... There is need in the economic analyses for an analysis of these dams' legacy of environmental damage and disruption to the livelihoods of lakeside dwellers and businesses. It is also critical to involve stakeholders from other countries sharing Lake Victoria in addressing the problems caused by the over-releases of water, and to come up with workable solutions for the long-term. An analysis of the risks of climate change on Uganda's energy sector and its economy should also be undertaken and publicly released.</p>	<p>The 2002 reports of the Panel and Management discussed in detail the issue of cumulative impacts and a suitable scope and level of analysis required to address the concern that additional dams along the Nile River could have unacceptable social and environmental consequences. In this regard, Management takes note of the Panel's recommendation that <i>“To be consistent with IDA policies, a further assessment of the cumulative effects of existing and potential hydropower development on the Victoria Nile as a freestanding Sectoral Environmental Assessment, or as an important component of the Regional Management Plan for the Upper Nile Basin, may need to be undertaken.”</i></p> <p>The SSEA for the Nile Equatorial Lakes (see Item 3 above) describes the criteria for assessing the social and environmental appropriateness of future hydropower developments on the Nile River in Uganda and in the entire East Africa region. Section 14 of the SSEA analyzes the cumulative impacts of several hydropower development alternatives under differing scenarios of regional grid integration. It concludes that developing Bujagali and other sites in the Victoria Nile Basin (excluding Kalagala) will not have significant cumulative environmental impacts.</p> <p>BEL's SEA examines the cumulative impacts of Bujagali, the hydropower plants at Nalubaale, Kiira and Karuma along with the transmission facilities therewith on the Victoria Nile in Uganda. It focuses specifically on the reach of the river between Lake Victoria and Lake Albert and takes into account other initiatives such as environmental offsets, natural areas, parks, reserves etc (Sections 7.6 and 7.7 of the SEA). The potential cumulative environmental impacts examined include: possible changes in flow regime, likelihood of sedimentation, erosion and degradation of water quality; possible proliferation of invasive aquatic vegetation; and loss of natural habitats and resources. Although not required, BEL's SEA takes the two existing dams—Nalubaale/Kiira—and the proposed Bujagali plant as the baseline and compares this to the baseline that predates the construction of the N/K complex to analyze the cumulative impacts (Section 7.7.2).</p> <p>The SEA concludes that the socioeconomic impacts of Bujagali, generally, would be local because the existing Nalubaale/Kiira power plants and Bujagali are separated by Lake Kyoga from Karuma Falls and other potential hydropower sites downstream on the Nile River. Lake Albert is located downstream of any identified hydropower options in Uganda and, therefore, will minimize the impact of</p>

No	Claim/Issue	Response
		<p>any changes in flow regimes at the border with Sudan. The impacts of Bujagali's daily peaking are likely to be minimal, especially 5 kilometers downstream of the Bujagali tailrace. The sediment load in the Victoria Nile River is limited, as most sediment is retained upstream in Lake Victoria. Water hyacinths are trapped upstream from Nalubaale dam in Lake Victoria and will not create cumulative impacts downstream. However, there is the risk that changes in urban population densities and in agricultural practices in the Lake Victoria Basin could have an impact on the quality of the water flowing into the Victoria Nile which, together with effects induced by the power plants could lead to possible cumulative impacts.</p> <p>The development of Kalagala, located downstream of Bujagali on the same stretch of the river, could have an adverse impact on aesthetic value of the Kalagala Falls, existing and potential tourism and biodiversity as well as on people who would have to be resettled. For these reasons, long term protection of Kalagala Falls by ensuring that its hydropower potential is not exploited is a necessary condition of World Bank Group participation in the Bujagali project.</p> <p>Legacy issues stemming from the development of the N/K dam complex and the earlier attempt to develop Bujagali are not the responsibility of BEL. Nevertheless, any issues identified during consultations for Bujagali were considered by BEL in preparing the Bujagali project's community development program. The program is designed to meet the needs of the eight communities affected by the Bujagali project through culturally appropriate means, including consultations. Specifically, it provides for health care facilities, employment opportunities, water supply and sanitation, fisheries, education, small-scale tourism, training and financial services.</p> <p>Issues related to the operation of the Nalubaale/Kiira dam complex and its effect on Lake Victoria levels, and the means to develop a comprehensive management plan for the Lake and the Nile River are addressed in responses to Items 1 and 2 above. The effects of climate change are addressed in the response to Item 3 above.</p>
7.	<p><b>Kalagala Offset.</b> Paragraph 1 of the agreement between World Bank and GoU states that "Government of Uganda undertakes that any future proposal which contemplates a hydropower development at Kalagala will be conditional upon satisfactory EIA being carried out which will meet the World Bank Safeguard Policies as complied with in the Bujagali project. Government and the World Bank will jointly review and jointly clear such an EIA." This, however, is not a guarantee that Kalagala Falls would never be developed for hydropower. The commitment on Kalagala Falls as an "Off-set" by GoU is not binding. It does not completely remove Kalagala as a future dam site. Legal interpretation of the agreement by</p>	<p>The pertinent provisions related to the offsets are contained in the safeguard policy, OP 4.04, on Natural Habitats. The policy states that: "If the environmental assessment indicates that a project would significantly convert or degrade natural habitats, the project includes mitigation measures acceptable to the Bank. Such mitigation measures include, ... establishing and maintaining an ecologically similar protected area."</p> <p>To conform with this requirement, the GoU has agreed to reconfirm its commitment to the Kalagala offset that it made under the previous effort to develop the Bujagali project, per the terms reflected in the "Management Report and Recommendation in Response to the Inspection Panel Investigation Report (Uganda: Third Power</p>

No	Claim/Issue	Response
	<p>the Inspection Panel also confirmed that there was no guarantee for Kalagala as an offset for Bujagali...</p>	<p>Project, Fourth Power Project, and Bujagali Hydropower Project).” This offset commitment is consistent with the mitigation provision for Kalagala Falls, and also recommended in BEL’s SEA Report.</p> <p>As well, the commitment to maintain the Kalagala Offset is strengthened in practice, not only by GoU’s commitment to identify sustainable investment programs to facilitate tourism, with appropriate mitigation measures, but also by the enhanced role that Kalagala Falls will play, as (a) rafting companies, once relocated, will locate some of their facilities around the offset area, and (b) other tourism operators, such as small arts and crafts shops, restaurants, four wheeler rentals, and locally owned enterprises are also expected to move their businesses nearer to Kalagala Falls.</p> <p>The offset provision for Kalagala Falls and the adjacent natural habitat will be included as a GoU obligation in the IDA Indemnity Agreement for the Bujagali project, and will be binding throughout the life of the Indemnity. Management notes that the Bank’s legal recourse to enforce Government’s commitment to maintain the Kalagala Falls offset will not be available after the termination of the Indemnity Agreement. Hence, the draft Indemnity Agreement, discussed with the GoU, includes a provision that, prior to the termination of the Indemnity Agreement, the World Bank and the GoU will pursue discussions to identify mechanisms or instruments to enable the continuation of the GoU obligation to set aside the Kalagala Falls site.</p>
8.	<p><b>Old and Inconsistent Data.</b> BEL’s Social and Environmental Studies (SEA) are based on old data that has little or no bearing to current situation. For example, sections 7.4.1.3 p336, water quality data, climate, air-borne particulate data, among others were done almost ten years ago and do not reflect the current environmental realities, e.g., declining lake and river water levels degradation of wetlands and forests, increased silting, climate change, etc. that have impacts of hydropower production. Fish species that were found to be endemic in the previous AESNP studies were mysteriously not discovered in BEL’s SEA, raising doubt on the fish report in BEL’s studies. Was it a deliberate attempt on the part of the consultants to manipulate information? Or is it that now the endemic fish species have become extinct?</p>	<p>The proposed Private Power Generation (Bujagali) Project is a new operation. As such, there has been a fresh assessment of the social and environmental aspects of the project, which has also required drawing upon former studies, where relevant. BEL conducted consultations in January, March and May 2006 related to development of the Terms of Reference (TOR) for the Bujagali project’s social and environmental analysis. Participants included government agencies (several with technical input to the SEA scope), other stakeholders, such as tourism operators and local businesses, and NGOs, including NAPE and Save the Bujagali Crusade. These consultation efforts resulted in the final TOR of June 2006. (See Annexes 4 and 5 that, respectively, list the public consultations and the issues raised in the consultations)</p> <p>The proposed project benefits from the significant social and environmental due diligence that had been performed for the previous project under AES. The current project has also retained its original environmental footprint. Building on the relevant work conducted to date, BEL’s consultants conducted further field studies and analyses where the need for updated information had been identified, such as water quality, fisheries, terrestrial ecology, resettlement and compensation, and cultural resources. Other recent information compiled by other specialists on hydrology and river flow was incorporated</p>

No	Claim/Issue	Response
		<p>in the December 2006 SEA. Existing baseline information in such areas as climate, ambient noise, and air-borne particulates is not expected to have changed significantly, and those data are considered representative of current conditions.</p> <p>The Fisheries Resources Research Institute (FIRRI) completed four quarterly surveys during 2000 for AES, to assess seasonal conditions during Uganda's short and long rainy seasons, and the short and long dry seasons. Additional fisheries studies for the project were conducted for BEL by the National Fisheries Resources Research Institute (NAFIRRI), based in Jinja, Uganda. The same institute, then called FIRRI, also conducted the studies for AES. For both studies, NAFIRRI/FIRRI's scope of work consisted of compiling baseline data of the water quality and ecology (invertebrate, fish, and macrophyte surveys) of the reach of the Nile River that includes the proposed hydropower plant. NAFIRRI's survey for BEL in April 2006 corresponds seasonally to the survey conducted for AES and was conducted at the same locations.</p> <p>In its 2000 surveys, FIRRI concluded that there are six keystone species of importance to fisheries; the same keystone species were found by NAFIRRI in the 2006 survey. A total of 35 fish species were found in the study area during the four surveys in 2000, and 21 were found in the second quarter 2000 survey. The April 2006 survey conducted for BEL found 18 species. Such a level of variability (18 vs. 21) is to be expected and is not necessarily indicative of species loss or extinction, but rather variations in data collection, migration and location of species, etc. The reach of the Victoria Nile that will be affected by Bujagali is not considered to be critical habitat for any fish species of conservation importance.</p>
9.	<p><b>Fauna (Terrestrial &amp; Aquatic).</b> BEL's EIA studies on animals, birds and aquatic life were carried out for very short periods of 1 to 2 months that do not give the variations in species distribution and diversity that usually occur over a period of one year. <i>The failure to adequately conduct environmental assessments violates the World Bank Policies on Environmental Assessment (OP/BP 4.01), Natural Habitats (OP/BP 4.04), Environmental Action Plans (OP/BP 4.02), Water Resources Management (OP/BP 4.07), OP/BP 4.00, etc.</i></p>	<p>As noted in Item 7 above, the Bujagali project benefits from the considerable baseline social and environmental data gathering for the previous project under AES. Work conducted for BEL was designed to build upon those data and additional studies were undertaken as needed, to confirm or update that baseline. For example, the Terrestrial Ecological Assessment (Plants, Birds and Mammals) was prepared by Makerere University Institute of Environment and Natural Resources in May 2006, based on fieldwork conducted during March 2006. The earlier work for AES was conducted in July and August of 1998. The survey of aquatic life was conducted by NAFIRRI in April 2006 and complements the four quarterly surveys during 2000.</p> <p>The extent and duration of baseline sampling is determined by specialists and can range from a one-time survey to multi-season or multi-year studies. Management considers that the baseline data gathering was satisfactory.</p>
10.	<p><b>Policies.</b> The lack of up-to-date and adequate in-</p>	<p>Management considers that the World Bank Group's</p>

No	Claim/Issue	Response
	<p>formation on hydrology, climate change, cumulative impacts assessments and commitment on Kalagala "Off Set" in BEL's SEA <i>violates the World Bank's Policies on Environmental Assessment (OP 4.01), Environmental Action Plans (OP 4.02), Natural Habitats (OP 4.04) and Water Resources Management (OP 4.07).</i></p>	<p>analysis of the Bujagali hydropower project is in full compliance with relevant OPs. In particular:</p> <ul style="list-style-type: none"> <li>• <b>OP 4.01</b> – This OP states that: "The Bank requires environmental assessment (EA) of projects proposed for Bank financing to help ensure that they are environmentally sound and sustainable, and thus to improve decision making." The World Bank Group has reviewed and is satisfied with the EA conducted for this project. With regard to the Requesters' particular concerns, Management would like to point out that the project analysis accounts for the complete available 106 year hydrological record. Thus, a fully adequate hydrological information base was used. Climate change predictions given in the SSEA indicate a likelihood of hotter weather (greater evaporation) but also more rainfall (greater inflows to the lake). Thus, climate change is not predicted to result in lower net basin supply of water in the future. Bujagali's location – upstream from Lake Kyoga – and its run-of-river design, mean that its contribution to cumulative impacts is limited and is restricted to the stretch of water between Bujagali and Lake Kyoga.</li> <li>• <b>OP 4.02</b> – This OP states that "The Bank encourages and supports the efforts of borrowing governments to prepare and implement an appropriate Environmental Action Plan (EAP) and to revise it periodically as necessary. Although the Bank may provide advice, responsibility for preparing and implementing the EAP rests with the Borrower, and the EAP is the country's plan." The World Bank Group has reviewed the Social and Environmental Actions Plans (SEAPs) provided for the project, as well as for the associated Interconnection Project, and found that they meet World Bank Group requirements. The SEAPs were publicly disclosed in late December 2006.</li> <li>• <b>OP 4.04</b> – This OP states that: "If the environmental assessment indicates that a project would significantly convert or degrade natural habitats, the project includes mitigation measures acceptable to the Bank. Such mitigation measures include, ... establishing and maintaining an ecologically similar protected area." To conform with this requirement, the GoU has agreed to reconfirm its commitment to the Kalagala offset which it made under the previous attempt to develop the Bujagali project (and included in the Management Report and Recommendation in response to the Inspection Panel Investigation). The World Bank Group is seeking ways to strengthen that commitment. (See Item 6.)</li> <li>• <b>OP 4.07</b> – This OP states that "Bank involvement in water resources management entails support for providing potable water, sanitation facilities, flood control, and water for productive activities in a manner that is economically viable, environmentally sustainable, and</li> </ul>

No	Claim/Issue	Response
		socially equitable.” Management considers that the proposed project meets the requirements of this OP.
<b>Economic, Comprehensive Options and Affordability Assessment</b>		
11.	<p><b>Economic Analysis.</b> The Bank assesses the robustness of the project with respect to economic, financial, institutional and environmental risks. “The Bank’s economic evaluation considers the sources, magnitude and effects of the risk associated with the project, by taking into account the possible range in values of the basic variables and assessing the robustness of the project’s outcome with respect to changes in these values.” There is sufficient evidence that the Bujagali dam project was not subject to this kind of analysis at the World Bank Group.</p> <p>There is no evidence in the SEA report that a comprehensive economic analysis for Bujagali HPP was done. What has been released on the World Bank website ...is not comprehensive and therefore cannot be used as a basis for determining the economic viability of the project. Therefore, it is difficult to determine the economic viability of the project. Both the World Bank Inspection Panel and IFC Compliance Advisor/Ombudsman echoed similar concerns in the previous AESNP Bujagali dam project. The Inspection Panel recommended that comprehensive assessments be carried out before any further damming of the Nile could be done.</p>	<p>The Economic Study, rather than the SEA, addresses the economic viability and risk analysis of the Bujagali project. The Economic Study was made public on February 26, 2007 (on <a href="http://www.worldbank.org/Bujagali">www.worldbank.org/Bujagali</a>) and a copy was handed over to NAPE on February 28, 2007. The key elements assessed in the economic analysis include: (i) the impact of the current power crisis conditions on the sector and the need for emergency thermal power; (ii) the demand forecast, which is mainly influenced by new customer connection programs, commercial and industrial GDP growth, loss reduction and the tightening of commercial discipline over billings and collections; (iii) the level of electricity tariffs; (iv) the hydrology of Lake Victoria and its impact on hydropower generation; (v) the supply alternatives and their costs; (vi) the environmental and social costs of Bujagali and its main alternative; and (vii) the economic value of electricity to consumers, the end-user tariff path and its affordability. Risks arising from varying degrees of future uncertainty regarding these variables have also been evaluated. The Economic Study projects three electricity demand scenarios in Uganda (base, low and high), two hydrology scenarios (low and high) as described in Item 1 above, three oil price scenarios (base, low and high) and three project cost scenarios (base, low and high).</p> <p>Economic evaluation of Bujagali takes into consideration environmental and social costs associated with the project. The largest such cost is for implementation of the resettlement and community development action plans related to the dam and the associated Interconnection Project. The Economic Study also analyses the financial sustainability of the power sector after Bujagali’s commissioning.</p> <p>Using WASP<sup>4</sup> software, the Economic Study derives a set of 54 least-cost expansion plans for Uganda, including Bujagali and other generation options as candidates, using all the permutations of the scenarios described above. It also derives a set of 18 alternative expansion plans excluding Bujagali, but including all other candidate plants.</p> <p>Expansion plans that include Bujagali are compared to their counterpart “without Bujagali” and found to be less costly on a net present value (NPV) basis. The only exceptions are cases where low electricity demand is combined with high hydrology. Under those cases, which</p>

<sup>4</sup> Wien Automatic System Planning (WASP) Package, Version IV, for carrying out power generation expansion planning, developed by the International Atomic Energy Agency.

No	Claim/Issue	Response
		<p>have a total probability of occurrence of 6%, Bujagali is not needed in period 2011-2020. On a probability weighted average basis, generation expansion plans including Bujagali commissioning in 2011, compared to alternatives, represent an economic gain of US\$184 million on an NPV basis.</p> <p>Another 13 expansion plans are derived to test for the impact of delaying Bujagali construction to 2012, lowering Bujagali's capacity to 200MW, building Karuma before Bujagali, and excluding both Bujagali and Karuma from Uganda's least-cost expansion plan. In all cases, the corresponding expansion plan with Bujagali in 2011 and with 250MW capacity is found to be less costly.</p> <p>The project Economic Internal Rate of Return (EIRR) is calculated at 22% for the base case; it is also calculated for other combinations of scenarios described above and remains in all cases above 12.5%. In addition, a probabilistic analysis of ERR value was conducted using a <i>Monte Carlo</i> simulation software,<sup>5</sup> subjecting key project parameters to a probabilistic range of outcomes. This further confirmed the robustness of the project: there is a 50% probability that the ERR is greater than 22.7% and a 100% probability that the ERR is above 11.7%.</p>
12.	<p><b>Energy Alternatives</b> BEL's SEA report ...states that <i>"if Bujagali were not to be built, then either lack of electricity will persist or more expensive alternatives will be needed to be built."</i> Yet, alternative energy options have not been adequately studied to provide evidence that Bujagali dam project is the least-cost option. Again, the recently released economic analysis does not adequately address the issues of assessing the alternatives. In recent years, various efforts to analyze Uganda's renewable energy potential have been discussed or begun. There is therefore evidence that energy alternatives were not adequately addressed in BEL's SEA. In addition, efforts to implement these alternatives have not been taken seriously by government. For instance:</p>	<p>Management is firmly convinced of the appropriateness and breadth of analysis undertaken to identify and assess alternatives for expansion of Uganda's power sector. The overall scope, analytical rigor, quality control and review of these analyses is described in Sections III and IV of the main text.</p> <p>The primary vehicle for assessing alternatives is the Economic Study. OP/BP 10.04 requires that the economic analysis explore alternative, mutually exclusive, designs to ensure that the project maximizes expected NPV, subject to financial, institutional, and other constraints.</p> <p>The economic analyses considered options that had realistic potential for availability in a timeframe similar to the Bujagali project, and which, therefore, could be considered as alternatives. All options that could compete with the proposed Bujagali project in providing power to the main grid network were considered. However, Uganda's Renewable Energy Policy and Plan<sup>6</sup> provides for "off-grid" electricity options such as solar PV and micro-hydro, as well as biofuels for cooking and industrial applications. The Bank and other donors are actively supporting these programs as well.</p> <p>In keeping with this requirement, the short-term options considered were:</p> <ul style="list-style-type: none"> <li>• 150MW of diesel generation, fired with relatively expensive, but readily available Automotive Diesel Oil</li> </ul>

<sup>5</sup> Crystal Ball risk analysis software, developed by Decisioneering, Inc.

<sup>6</sup> MEMD, 2001



No	Claim/Issue	Response
		<p>(ADO), based on a short-term Power Purchase Agreement,<sup>7</sup> 100MW of which is currently in operation, and the 50MW balance of which is in advanced stages of procurement.</p> <ul style="list-style-type: none"> <li>• 50MW of diesel generation, fired with more cost effective Heavy Fuel Oil (HFO), which requires a longer lead-time than an ADO plant in order to develop supply logistics, based on a longer-term Power Purchase Agreement.</li> <li>• Mini-hydro power stations currently under active development (see below).</li> <li>• Bagasse-based cogeneration which will provide 15MW of power to the national grid (see below). Options included in the analysis with longer lead-times were:</li> <li>• Geothermal, for which an assessment of current exploration concluded that the potential of the resource may be much lower than previously estimated – 40MW instead of the previous estimate of 450MW (see below).</li> <li>• Karuma Falls hydropower station, which is considered to be the most promising large-hydro alternative to the Bujagali project (and the only other large hydro-power project in Uganda currently studied beyond its feasibility stage). The Economic Study included an updated cost estimate for Karuma based on the most recent unit costs for Bujagali, since the Bujagali costs were the result of an international competitive bidding process. This analysis concluded that Bujagali costs are lower than those for Karuma (see below).</li> <li>• Additional fossil-fueled thermal power stations (HFO fueled medium- and low-speed diesels, simple and combined cycle gas turbines using ADO, steam plants fired either by HFO or coal).</li> </ul> <p>The options analysis utilized the WASP model, as explained in Item 10 above.</p> <p>In determining the options to include in the Economic Study, the most recent information on the various domestic and imported power generation sources was considered, including the projects below:</p> <ul style="list-style-type: none"> <li>• <b>Energy for Rural Transformation (ERT) Project (FY02)</b> is designed as a 10-year, 3-phase Adaptable Program Loan (APL) (US\$49 million for Phase 1, and US\$165 million for the full program). The program has supported preparation of a renewable energy resource database and capacity building plan<sup>8</sup>. ERT is also supporting investments in renewable energy</li> </ul>

<sup>7</sup> A Power Purchase Agreement defines the terms of sale between a power producer and a purchaser. In this case, the Power Purchase Agreement is between an Independent Power Producer and the Uganda Electricity Transmission Company Limited.

<sup>8</sup> Most recent report: Fourth Interim Report for Renewable Energy Resource Information Development and Capacity Building Assessment, Kamfor Company Ltd. April 2006.

No	Claim/Issue	Response
		<p>power generation, including bagasse based cogeneration, mini-hydro, and micro-hydro.</p> <ul style="list-style-type: none"> <li>• <b>Fourth Power Project (FY08)</b> is supporting geothermal exploration in western Uganda (Kibiro and Katwe), including shallow-well drilling which is required to assess the resource.</li> <li>• <b>ARGE0 Project (FY08)</b>, this proposed GEF-supported regional project will support participating countries, including Uganda, in developing commercial geothermal power generation plants.</li> </ul>
	<ul style="list-style-type: none"> <li>• <b>Bagasse:</b> Although it has been discussed for years, the country has developed only a few megawatts of its currently estimated 40MW potential.</li> </ul>	<p>Bagasse is the biomass which remains after sugar cane is crushed to extract its juice. It is standard sugar industry practice to burn the bagasse to produce electricity for the sugar mill, and also to produce steam for the thermal processes in the mill. This dual use of the energy is termed cogeneration.</p> <p>Uganda has three sugar mills, two of which have expressed interest in expanding their existing bagasse based cogeneration system in order to export power to the national grid. With support from the ERT Project, Kakira Sugar Works is in the process of expanding its bagasse cogeneration in connection with an overall sugar mill expansion program. Kakira has signed a Power Purchase Agreement with UETCL to export 6MW of power to the grid during peak load periods. This does not represent the full power available for the proposed power station design. Moreover, the power station itself was not at the time designed to utilize the full bagasse stock available. However, in view of the increasing power shortages in Uganda, the GoU sought to extend the power purchase arrangements with Kakira to more fully utilize the bagasse resource. These negotiations are not yet concluded. At the time of economic modeling, negotiations centered around a revised agreement that would provide 12MW to the national grid. Hence the WASP model runs provided for a firm 12MW from Kakira beginning in June 2007.</p> <p>The other sugar mill, SCOUT, is also developing plans for selling 3MW of power under an arrangement similar to Kakira's. The details of the transaction have not been concluded. However the WASP model runs assumed a firm 3MW addition in January 2009.</p> <p>The third mill, Kinyara, has no firm plans for a similar Power Purchase Agreement.</p>
	<ul style="list-style-type: none"> <li>• <b>Small hydro (less than 10MW):</b> Of at least 46MW at 16 sites that has been identified, only 13MW have been developed.</li> <li>• <b>Micro-hydro (less than 100 kilowatts):</b> A limited number of sites have been developed, despite there being at least 40MW of potential.</li> </ul>	<p>The Bank is providing considerable support to Uganda in development of its hydropower potential. This includes large-scale hydro (for example, through the ongoing Fourth Power Project and the proposed Private Power Generation Project (Bujagali)) and also through the ongoing ERT Project, which is supporting mini-hydro development for grid-connected and off-grid applications. In any case, whether on-grid or off-grid, each such investment is evaluated on its merits with regard to economic and other factors, and includes an assessment of alternatives.</p>

No	Claim/Issue	Response
		<p>The Bujagali Economic Study included all hydro projects that are either currently providing power to the grid, or suitable for grid connection and which are actively under development and thus suitable for consideration in the planning timeframe. The mini-hydro sites considered were: Kilembe Mines (3MW), Bugoye (13MW), Waki (6MW), Buseruka (9MW), Kikagat (10MW), and Ishasa (5.5MW). None of these options are in the "micro-hydro" range as defined by the Requesters. The primary reason for this is that micro-hydro systems are generally "off-grid" and therefore not "alternative" to Bujagali. All mini-hydro sites were considered as "committed" options in the analysis, which means that WASP always included them in the generation plan.</p> <p>It is noteworthy that the Renewable Energy Assessment and Capacity Building Program recently estimated the construction costs of micro-hydropower development at US\$3,000 per installed kilowatt, plus another US\$2,500 per kilowatt for the associated transmission line.<sup>9</sup> This does not account for financing costs. The comparable costs for Bujagali are about US\$2,044 per installed kilowatt, plus about \$200 per kilowatt for the associated transmission line.<sup>10</sup> This simple comparison suggests the reason why such micro-hydro applications are typically not considered suitable for grid connection. However, despite these costs, in off-grid situations where diesel power is frequently the next best option, such micro-hydro plants can be the least-cost option.</p>
	<ul style="list-style-type: none"> <li>• <b>Karuma Dam (150MW)</b> is considered to be less socially and environmentally destructive than Bujagali (and in fact than all currently proposed large dams in Uganda). It would have the added benefit of bringing electricity to the northern part of the country, whose development has been marred by continued rebel conflict. It was previously compared directly to Bujagali, but lost-out over economics. Later, Karuma's project sponsors in Norway discovered that the economic analysis used to justify Bujagali was based on greatly inflated costs for building Karuma.</li> </ul>	<p>The proposed hydropower project at Karuma is the most likely alternative to the proposed Bujagali project. Karuma is therefore included as a candidate in all the WASP model scenarios for both the "with" and "without" Bujagali case. The description of the various components of the Karuma Falls Hydropower Project is available in the Project Definition Report (March 1999) issued by Norpak. The scheme is a run-of-the-river type, with no active storage, using the natural head created by the Karuma Falls and adjacent rapids, immediately upstream of the bridge across the Victoria Nile. The developer of Karuma HPP, Norpak, was invited to negotiate a Power Purchase Agreement by the GoU in 2004. Norpak has been promoting the project since the 1990s and recently confirmed to the GoU its interest in developing the project. Norpak's initial proposal was to implement the project with an installed capacity of either 150 or 200MW, generated by 3 or 4 units of 50MW capacity each. As 3 units would be able to use only about 600 m<sup>3</sup>/s from the inflow of the Victoria Nile system planning studies will most probably show that at least 4 units should be installed. The design</p>

<sup>9</sup> See Fourth Interim Report for Renewable Energy Resource Information Development and Capacity Building Assessment, Kamfor Company Ltd., April 2006, page 31.

<sup>10</sup> With financing costs included, the cost is US\$3,200 per installed kilowatt.

No	Claim/Issue	Response
		<p>calls for less concrete than would be required for Bujagali, but also calls for a large volume of underground excavation. This includes, for each of the four units, one surge chamber approximately 500 m long, and one tailrace tunnel approximately 2 km long.</p> <p>The costs of the Karuma project were estimated based on the March 1999 Project Definition Report, with additional information provided by Norpak showing the main volumes of works, and using the unit cost estimates provided in the competitively tendered Bujagali EPC<sup>11</sup> contract. In this manner the Karuma costs were updated to current market conditions. Construction costs for the 200MW Karuma plant were estimated at US\$588 million compared to the Bujagali construction costs of US\$491 million for a 200MW design and US\$511 million for a 250MW design. This analysis shows that Bujagali has a lower construction cost, which has resulted in its being the least-cost option when the two plants are compared in the WASP analysis.</p>
	<ul style="list-style-type: none"> <li>• <b>Geothermal:</b> Uganda has significant potential, with estimates ranging up to 450MW, but studies have lagged behind hydroelectric analysis. Although the Bujagali EIA by Burnside International Ltd. states that only 45MW is feasible, this seems premature and pessimistic as some of the sites they refer to as having a poor chance of commercial development are still being studied. Experts we have talked with who are working directly on such studies say that the potential for specific sites is much greater than the project SEA indicates.</li> </ul>	<p>Geothermal development requires a multi-year program, which begins with surface assessments of resource potential, then moves progressively to shallow well exploratory drilling and finally to deep well drilling. In view of the expense of deep well drilling<sup>12</sup> – estimated at US\$9 million – it is important to ensure that the previous studies show a strong likelihood of proving an exploitable reserve. The initial shallow well drilling is ongoing, with financing from the Fourth Power Project (US\$510,000).</p> <p>A detailed review of geothermal prospects was conducted as part of the project analysis of alternatives.<sup>13</sup> (See Annex 6, Review of Geothermal Prospects, Executive Summary of Appendix D of the Economic Study.) The analysis concludes that historical estimates of the geothermal potential of Uganda being as much as 450MW are substantially over-stated. The true potential is likely to be in the order of only 10% of this figure. The key findings of the review are summarized below. These findings led to the inclusion of a 40MW geothermal power plant, to be commissioned in mid-2011, in the least-cost analysis.</p> <p>There are three principal geothermal resource areas in Uganda. Two of these, at Katwe and Buranga, are low grade resources with reservoir temperatures of only some 100°C and consequently with nil potential for commercial scale power generation. The third prospect, at Kibiro, is more promising and appears to be a medium grade geothermal resource with reservoir temperatures of about 220°C. Kibiro is therefore considered to be the only geothermal resource in Uganda with clear potential for power development. The size of a geothermal power plant that</p>

<sup>11</sup> Engineering, Procurement and Construction.

<sup>12</sup> Specifically, the cost of bringing in the specialized drilling rigs, drilling and lining the holes, etc.

<sup>13</sup> See PPA Report, Appendix D.

No	Claim/Issue	Response
		<p>could be developed at Kibiro will depend on actual re-source conditions that have yet to be proven by exploration drilling. Nonetheless, deep geothermal resource conditions can be inferred from the results of surface exploration surveys undertaken to date. By this means, it is assessed that the Kibiro resource may prove to be suitable for the future development of either a 20MW condensing steam power plant or a 40MW organic Rankin cycle binary plant, both with an operational life of at least 25 years.</p>
	<ul style="list-style-type: none"> <li>• <b>Municipal Solid Waste:</b> Uganda has an estimated 10-30MW potential.</li> </ul>	<p>The Bank's Carbon Finance Unit is currently assisting the Kampala City Council in assessing the prospects for methane production from Kampala's municipal solid waste (MSW). While the assessment is not complete, current indications are that the available methane is very modest, and may not be sufficient for the purposes of power generation. The other alternative under consideration for methane destruction is flaring.</p> <p>Power production may also be possible through gasification or combustion of Kampala's municipal solid waste. However, there are considerable hurdles which must be overcome to realize such a project. These include the rather formidable requirement for Kampala to establish an organized refuse collection program to ensure that an MSW-fueled power plant has a reliable fuel source. There are no firm proposals for MSW-fueled facilities. Therefore, this alternative was not considered in the options analysis.</p>
	<ul style="list-style-type: none"> <li>• <b>Solar:</b> ...Energy used for water heating is a significant contributor to the electricity demand, accounting for almost 50MW. Experts estimate that 10MW of peak power could be saved immediately (and more in future) with solar water heaters for grid-connected customers.</li> <li>• <b>Efficient Lighting:</b> The bulk of Uganda's peak demand is used for lighting, which consumes up to 92MW, according to a World Bank study. If all lights were replaced with energy-efficient light bulbs, the country's peak demand could be cut to below 20MW.</li> <li>• <b>Transmission Losses:</b> According to the 2006 Bujagali EIA by Burnside International Ltd., "Another option to reduce demand is to reduce technical losses, which for Uganda is high at 21%. Acres (1999) estimated that improvements to the country's failing distribution infrastructure could eliminate as much as 30MW of losses from the grid." On 3 October 2006, the East African reported that Uganda was applying for a US\$180 million loan from the World Bank to cover a variety of investments in the energy sector; only US\$10 million from the project is expected to go toward demand-side management</li> </ul>	<p>Management agrees that energy efficiency in general, and demand side management in particular, are important tools in improving the efficiency of energy distribution and consumption in Uganda. The World Bank Group is fully supportive of programs in this area. This support includes:</p> <ul style="list-style-type: none"> <li>• UMEME – The Bank has supported Uganda in restructuring the power sector, including unbundling the former Uganda Electricity Board into generation, transmission, and distribution companies. From the perspective of energy efficiency, the key actor in Uganda is now UMEME, the private electricity distribution concessionaire.</li> <li>• With respect to distribution losses (which NAPE has referred to as transmission losses), over the past year, system technical and non-technical losses have been reduced by UMEME, to about 34% (from 38%) and the billing collection ratio has improved to about 92% (from 80%), although the rate dropped again to 82% in December 2006 following the June and November tariff increases. UMEME's investments to the end of 2006 were US\$13.6 million, and there are plans to invest a further US\$65 million by 2011. In addition, IDA is providing US\$12 million (through Power IV) for new poles and transformers,</li> </ul>

No	Claim/Issue	Response
	and energy efficiency measures.	<p>and for 13,500 new customer connections. These investments will help reduce technical losses significantly over the medium term.</p> <ul style="list-style-type: none"> <li>In parallel, the Bank-supported ERT Project has identified a number of measures that could have an immediate positive effect ("quick win") on demand side management which has identified a set of measures in the following order, the first of which is a component of the ERT Project: <ul style="list-style-type: none"> <li><i>Compact fluorescent lights (CFLs)</i> – to reduce evening peak demand, which is heavily influenced by lighting. CFLs consume about 75% less energy than conventional incandescent lights. The ERT Project is financing procurement of an initial 800,000 CFLs, which would be distributed free to UMEME customers in order to gain immediate demand reductions. Thereafter, a commercial CFL market would be promoted.</li> </ul> </li> </ul> <p>Other elements of the demand side management program will be supported by the proposed Power Sector Development Project (FY07), as well as the next phase of the ERT Project:</p> <ul style="list-style-type: none"> <li>Capacitors for power factor correction – to improve the efficiency of the distribution network</li> <li>Streetlighting program – to replace conventional streetlights with energy efficient bulbs</li> <li>Solar water heating program – to replace electric water heaters with solar water heaters, and thus reduce electricity load</li> <li>Long-term energy efficient/demand side management strategy – which would set out a long term plan for improving energy efficiency, targeting both existing and new users.</li> </ul>
	<ul style="list-style-type: none"> <li><b>Wind power</b> potential needs further exploration, as wind speeds have been recorded at low heights, not the 10 meters that is standard for wind power analysis.</li> </ul>	<p>The recent Renewable Energy Assessment states that "due to its geographical location, Uganda does not seem to benefit from good wind resources with most areas having wind speeds of less than 3.0 m/s."<sup>14</sup> However, the assessment points out that a full assessment of wind resources has not yet been concluded for Uganda, and there may be isolated sites, such as in Karamoja, which show promise. The Bank-supported ERT Project is supporting a broad program of renewable energy development, which seeks to prioritize the assessment, development, and investment in the most promising renewable energy areas. In comparison to other renewable resources with which Uganda is richly endowed such as mini/micro-hydro and biomass, wind power is not considered to be a promising option within the timeframe of the Bujagali economic analysis.</p>

<sup>14</sup> Page 36. Also, it should be noted that sustained wind speeds of 5-6 m/s are needed to consider wind for grid-connected power applications.

No	Claim/Issue	Response
	<ul style="list-style-type: none"> <li>Improved, efficient <b>stoves and biogas digesters</b> would be key to bringing cleaner energy to the rural poor, and reduce deforestation from cutting fuel wood.</li> </ul>	<p>Management agrees that improved efficiency in traditional fuel use will have important environmental benefits for Uganda. However, as noted in Item 11, these cannot be considered as “alternatives” in the economic assessment of the Bujagali hydropower plant.</p> <p>Nevertheless, it should be noted that GoU, with the support of GTZ (Germany), is promoting use of biomass technologies developed to improve energy efficiency for household, institutional and industrial practices. These include the domestic and institutional firewood stoves and the firewood baking oven.</p> <p>In addition, the Bank, under the ongoing ERT Project, in order to facilitate expanded use of renewable energy power generation based on biomass, is supporting the installation of demonstration biogas digesters in Uganda at the three institutions of Kyambogo, Nyabyeya Forest Reserve and Buddo. The objectives of this activity are to: (i) demonstrate the feasibility of biomass gasification for electricity generation and thermal productive uses; (ii) explore the possibility to use a variation of biomass fuel stocks; (iii) train engineers and raise awareness of biomass gasification as a low cost renewable energy option for rural electrification and productive thermal uses; and (iv) use gasification producer gas to improve energy efficiency. However, biomass gasification is not sufficiently advanced in Uganda to consider it as a commercial option today. It was therefore not proposed as an alternative to Bujagali in the WASP analysis.</p>
	<p>...The SEA does not give cost, cost-benefit and opportunity-cost scenarios and calculations for installation and development of these alternative energy options as basis for determining Bujagali as the least-cost option. The idea of dismissing energy alternatives, because they cannot easily be connected to the national grid ...is erroneous. What should be assessed is rather whether alternative electricity options will help reduce the burden on existing national grid-based hydropower at competitive costs (prices) than other options by taking away areas where other energy options could be developed as independent grids rather than emphasizing the need for connectivity to the national grid. These independent grids could prove more beneficial to the majority of the people and the current rural electrification scheme being promoted by government. It therefore becomes clear that the various energy options have not been assessed in either a comprehensive or balanced way as part of the evaluation leading up to Bujagali.</p> <p>The East African commission, in a report on the decline of Lake Victoria's water levels, stated that: <b>“Partner states should make deliberate efforts to reduce dependency on hydropower by developing alternative sources of energy like geother-</b></p>	<p>The Requesters are correct in that the SEA does not give costing and other engineering information on the alternatives considered. However, complete information in this regard is found in the PPA Ltd. Economic Study, which has been publicly disclosed, and which was provided to the Requesters in a meeting with IFC officials on February 28, 2007.</p> <p>With regard to the support for independent grid networks, Management also agrees that they form an important element of Uganda's electrification program. This is especially true in light of the extremely low electrification rate (5%) in Uganda. Therefore, when undertaking an assessment of a particular electrification site, the option of whether it should be grid-connected or “off-grid” is always considered. It should be noted that the “dis-economies” of scale of smaller power generators usually result in a decision for grid connection in cases where the community is relatively close to the national grid. However, in regions such as West Nile (northwestern Uganda) and Kisiizi (southwestern Uganda) the analysis demonstrated that off-grid systems were preferable. Both are being supported by the ERT Project.</p> <p>Nevertheless, expansion of the national grid network remains the least-cost means of connecting most Ugandan customers.</p>

No	Claim/Issue	Response
	<p>mal, wind, solar, thermal and natural gas within 5 years.” But, the Government of Uganda, the project developer and the World Bank are proceeding with Bujagali as the least-cost option, yet this has been effectively disputed.</p>	
	<ul style="list-style-type: none"> <li>• <b>Other factors</b> critical to the decision-making process about “best options,” for example, the risk that drought will cripple the economy, have not been adequately assessed. It is not clear whether the World Bank’s “Independent Hydrological Review” of the Victoria Nile will be publicly released and debated in time for an informed decision-making process. The World Bank Group, like the Ugandan government, has skewed its research efforts to consistently promote Bujagali above other options. In the project’s first incarnation at the Bank, data was manipulated to justify Bujagali as the “least-cost” option for Uganda after its consultants pointed to other projects as cheaper. While the World Bank’s 2002 appraisal of the Bujagali project was over-optimistic in many instances, the analysis of alternatives to the project was consistently pessimistic. This is still a problem with the new BEL Bujagali project. Going back even further, the World Bank used unusually optimistic hydrological data on the Kiira project, and claimed there was little risk to using the optimistic figures (even though most experts at the time believed otherwise). This has resulted in drastic draining of Lake Victoria to low levels close to those in 1924. A comprehensive, independently facilitated and participatory options assessment process is needed for future energy planning in Uganda, especially one that incorporates a rights and risk analysis. More importantly, there needs to be concerted action to develop these resources.</li> </ul>	<p>As stated throughout this Annex, the economic and hydrological analyses conducted for the Bujagali project were undertaken by qualified consultants (PPA, in association with Coyne et Bellier and ECON of Norway). This work has been thorough, has utilized appropriate data and analytical methods, has incorporated suitable alternatives, and has selected a base case hydrology which is conservative (i.e., the “low hydrology” case) and based its analysis on the full available 106 year hydrological record. The analytical work has been closely monitored by World Bank Group task team members and reviewed by Government and industry stakeholders, an independent hydrologist, and Bank peer reviewers. The analyses, contained in the Economic Study, were made public on February 26, 2006. (See Items 1 and 2 above).</p> <p>The Bujagali project’s economic viability was appraised using conservative assumptions for the base case against a wide range of alternative power generation options. A comprehensive risk analysis for main project determinants was conducted (see Items 1, 10, and 11 above).</p> <p>The cost estimate of the main hydropower alternative to Bujagali, Karuma, was conducted after consultation with Karuma’s sponsors and using the same methodology as for Bujagali. Karuma was found to be more expensive than Bujagali; in addition, the earliest commissioning date for Karuma would be 2012, about one year later than Bujagali.</p> <p>The generation expansion plan developed by PPA Ltd also finds that Bujagali is the least-cost option; this conclusion is robust to risk analysis of the main variables.</p> <p>As mentioned in Item 1 above, the Lake Victoria hydrological record shows a period of high hydrology spanning forty years, from the 1960s to 2000. Based on the 106 year historical record of the hydrological system, there are possibilities of 10-year hydrological cycles that will cause significant changes in available water flows. Lake Victoria levels, and thus the flow of the Nile River, will also continue to fluctuate seasonally, as experienced in the past. Future high flow seasons are also possible, along with the prospects for low flow periods. The Power III Project—which funded Kiira construction—was approved late in this period. The Kiira dam was designed both to improve the overall safety of Nalubaale and also to add new generation capacity to take advantage of high water flows. It was also expected that the Kiira units would ultimately replace the old and inefficient units at Nalubaale. Use of the Kiira units for base-load has improved water usage owing to the greater efficiency of</p>



No	Claim/Issue	Response
		these units.
13.	<p><b>Affordability.</b> Bujagali remains an economically risky project, a risk worsened by changing hydrology. The cost of Bujagali to Uganda has long been a contentious issue, and questions have been raised about citizens' ability to afford its tariffs, the high cost of the project, which has grown considerably, and issues of indebtedness. At one time, the cost of the Bujagali project was reported to be US\$430 million, then US\$550 million and then US\$580 million. Now, it has risen to US\$735 million. The Prayas report of 2002 indicated that the project had been over-priced by more than double the actual costs, which could lead to a national loss of more than US\$20 million in excessive payments each year. In a meeting between the World Bank and NAPE held on the 28<sup>th</sup> February 2007 in Kampala, World Bank acknowledged that the cost of Bujagali project had increased by 30%.</p> <p>It is, therefore, increasingly becoming clear that Bujagali Dam will not meet the basic energy needs of the majority of Ugandans who are now without power and live far from the national grid. Biomass (burning wood) continues to account for more than 90% of the nation's primary energy use, and only a fraction of the population can afford unsubsidized electricity. Bujagali will feed into a very limited national grid, its power bound mainly for Kampala, Jinja, Entebbe and other urban centers. Therefore, we are convinced that, even if the national grid covers the whole of Uganda, electricity from the Bujagali project would not be affordable. The high cost of the project will further limit funds available for rural electrification and is expected to lead to reductions in subsidies for electricity tariffs for grid-connected users. Uganda already has the most expensive power in the region and tariffs have more than doubled in recent months, thus pushing more people out of the already limited market for electricity. This will therefore negate the country's economic development and efforts for poverty eradication.</p>	<p>The latest project cost estimate is US\$799 million, including US\$511 for the EPC cost. This compares to an expected EPC cost of US\$315 million in 2000 during the first attempt to develop the project. The main reasons for this increase in EPC cost by approximately 65% are: (i) increase in the cost of metals by an estimated 90% over the last 5 years (metals account for about 40-60% of power generation equipment); (ii) increase in the cost of oil (140% between 2000 and 2006), which raises the cost of transporting equipment to Uganda over more than 1,000 km from the nearest port in Kenya; (iii) a tighter market for power generation equipment: higher global demand combined with consolidation among manufacturers has resulted in higher prices.</p> <p>The World Bank Group and other lenders have taken several steps to ensure that costs of Bujagali reflect current market conditions. BEL conducted its procurement of the EPC contractor under the supervision of the EIB. In addition to the review of bid prices conducted by BEL's Owner's Engineer, the EPC contract price and conditions will be reviewed by the lenders with the assistance of their Independent Engineer before finalization.</p> <p>Average end-user tariffs in Uganda almost doubled in 2006 and have reached around US¢17.2/kWh (excluding VAT). This is due to the rising proportion of currently expensive thermal power. The increased price still does not fully cover the cost of generation, transmission and distribution, estimated at US¢25/kWh, requiring government subsidies for the difference. (This would not have been necessary had Bujagali been commissioned by the end of 2005, as originally envisaged.)</p> <p>The levelized wholesale tariff of Bujagali power is US¢9.7/kWh under the low hydrology scenario (or US¢5.7/kWh under the high hydrology scenario) in 2006 real terms. According to the Economic Study, Bujagali's commissioning in 2011 would enable the cost of power to end-users to fall to US¢16/kWh in 2006 money. This would improve the affordability of power to end users. The alternative sources of power for residential consumers who are not connected to the grid are significantly more expensive: the Economic Study estimates this cost at US¢126/kWh on average. PPA Ltd estimated that expenditure on electricity by grid-connected residential consumers would not exceed 5.2% of household income on average in 2011, which is considered to be an affordable proportion. Affordability will improve further with time as per capita incomes rise.</p> <p>Management acknowledges that this project cannot meet the needs of the remaining 95% of Ugandan households. Other efforts are needed and are underway, such as the ERT Project. As well, the impacts of electricity programs and pricing will be evaluated through a poverty and</p>

No	Claim/Issue	Response
		social impact analysis that will focus on issues of affordability and willingness-to-pay.
14.	<p><b>Policies.</b> We believe that the absence of an adequate and comprehensive economic and alternative (options) assessment of the Bujagali dam Project violates the World Bank's Policies on Economic Evaluation of Investment Operations (OP 10.04), Poverty Reduction (OP/BP 1.00), among others, which requires the evaluation of projects to ensure that they meet development goals.</p>	<p>Management believes that the alternatives considered for the economic analysis were complete and appropriate, and in compliance with OP 10.04 (see Item 10 above.) With regard to OP 1.00, Management notes that the OP focuses on the Bank's mission of "sustainable poverty reduction" and explicitly highlights that, "the Bank's support for poverty reduction is focused on actions, consistent with its mandate, to increase opportunity, enhance empowerment, and strengthen security." Within this broad framework, a critical priority is promoting broad based growth, given its proven importance in reducing poverty. Management views the Bujagali hydropower plant as an important element of the infrastructure backbone needed for Uganda to continue its broad based growth in support of poverty reduction.</p>
<b>Indigenous Peoples, Cultural and Spiritual Issues</b>		
15.	<p><b>Basoga.</b> BEL's SEA considers the project area as not inhabited by indigenous people. It therefore considers Basoga as not being indigenous, yet the Constitution of the Republic of Uganda (third Schedule) considers Basoga as an indigenous people. Has the constitution of Uganda changed? Or is the Constitution of Uganda (1995) not relevant to the Bujagali project?</p>	<p>It is important to distinguish between the Ugandan constitution's definition of indigenous people and the Bank's Operational Policy on Indigenous Peoples. Nevertheless, the project has separate programs for addressing the needs of ethnically differentiated communities and other vulnerable groups (e.g. women, youth, disabled persons).</p> <p>According to the Constitution of Uganda (Article 10 and Schedule 3), one must belong to one of the "indigenous communities" (or have a parent or grandparent who does) in order to be considered a Ugandan by birth. The Basoga are part of this list, but so are the 55 other groups of Uganda, including the Baganda who mainly live on the other side of the river. Thus, all natural-born citizens of Uganda are indigenous under the constitution.</p> <p>The Basoga are "indigenous" as opposed to foreign in origin; that is, they are autochthonous to Uganda, of as much antiquity, as the other groups. The Baganda, Banyoro, Bakiga, Banyankole, Batoro and others have exactly the same origins and antiquity, and all are farming peoples, together making up the vast majority of Uganda's population.</p> <p>The Bank does not dispute the Ugandan constitution's delimitation of who the indigenous ethnic groups of Uganda are. The Bank's OP on Indigenous Peoples specifies criteria that define Indigenous Peoples as follows: (i) self identification as members of a distinct indigenous cultural group and recognition of this identity by others; (ii) collective attachment to geographically distinct habitats or ancestral territories in the project area and to the natural habitats and territories; (iii) customary, cultural, economic social, or political institutions that are separate from those of the dominant society; and (iv) an indigenous language, often different from the official language of the country or</p>

No	Claim/Issue	Response
		<p>region.</p> <p>In examining the claim that the Basoga meet the requirements of the Bank's Indigenous Peoples' policy, Management considers that a clear demarcation line exists between the Basoga and ethnic groups in other African countries that the Bank has defined as indigenous – such as under-representation in the politics and in the economy of the country, social discrimination and the need for affirmative recognition to ensure survival. The Basoga are a large and influential group within Uganda. Considering the Basoga and all other Ugandan groups as indigenous peoples would defeat the intended objectives of OP 4.10, which are to respect “the dignity, human rights, economies, and cultures of Indigenous Peoples who, ...as social groups with identities that are often distinct from dominant groups in their national societies, ...are frequently among the most marginalized and vulnerable segments of the population. As a result, their economic, social, and legal status often limits their capacity to defend their interests in and rights to lands, territories, and other productive resources, and/or restricts their ability to participate in and benefit from development.”.</p> <p>As with all Operational Policies, Bank staff are responsible for applying the policies in accordance with the applicable criteria. Thus, based on these criteria, the definition of Indigenous Peoples for the purposes of the World Bank policy must take into account everything that is known about, and all consultations with, African people and governments. The Africa Region, aligning itself with other World Bank Regions looks beyond the facts of ancient origin, land, and self-definition as "indigenous," and has come to treat some, but not all, peoples of Africa as Indigenous Peoples based on the fact that they are marginalized and vulnerable. In general it follows the deliberations of the African Union's Commission on Human and Peoples' Rights (CHPR – Working Group on Indigenous Populations/Communities) and the traditions that have been established at the UN Permanent Forum on Indigenous Peoples (the "Forum") and the Indigenous Peoples of Africa Coordinating Committee (IPACC), all of which operate with broad governmental support through their respective international bodies.</p> <p>Finally, it should be further noted that the Inspection Panel investigation report on the first Bujagali project (page 77) agreed that the Indigenous Peoples' policy should not have been triggered: "There are no minorities involved; thus there is no evidence that the Bank's policy on Indigenous People (OD 4.20, issued in September 1991) is applicable to this Project." Management considers that as there are no changes since that time, the Bujagali project does not affect Indigenous Peoples as defined by the Bank's policy and specific regional considerations.</p>
16.	<b>Cultural and Spiritual Issues.</b> Cultural and spiritual	BEL is committed to complying with World Bank

No	Claim/Issue	Response
	<p>issues in the Bujagali project area were inadequately covered in the SEA. It is assumed in the SEA to have addressed cultural and spiritual issues of the affected community.</p> <p>This, then calls for an effective consultation process involving all clans that are culturally and spiritually attached to Bujagali Falls followed by a public hearing.</p>	<p>OP/BP 4.11, <i>Physical and Cultural Resources</i>. Community concerns in relation to these issues have been discussed regularly in public consultations, including expanding consultations to the Buganda and Basoga Kingdoms, who are culturally responsible for villages living on the west and east banks, respectively, since the project preparation began in 2000, under the original developer AES and, subsequently, BEL.</p> <p>The management of cultural and spiritual issues is part of the overall social management plan (part of the SEAP), which will be implemented throughout the life of the project. Implementation will be monitored/supervised by the World Bank Group throughout the loan/contract periods. A Ugandan NGO, "Interaid," was contracted to carry out independent monitoring during AES implementation of its RAP. BEL has committed to independent monitoring, also through Interaid, of all aspects of the project, including those related to cultural heritage.</p> <p>There have been extensive consultations on various social aspects of the project, including spiritual and cultural issues. Appendix H of the Hydropower SEA report provides information on the consultations. (See Annex 4.)</p>
17.	<p><b>Policies.</b> The failure of the World Bank to respect the Constitution of the Republic of Uganda as regards indigenous peoples is a <i>violation of World Bank's Policy on Indigenous Peoples (OP/BP 4.10)</i>.</p>	<p>See response to Item 14.</p>
<b>Compensation and Resettlement</b>		
18.	<p><b>AESNP Resettlement.</b> BEL's SEA states that AESNP, the previous project proponent, completed land acquisition, resettlement and relocation of all residents formerly located in the reservoir area and compensated land owners and other project affected people. However, houses and facilities provided to the resettled communities by AESNP are now dilapidated less than five years after construction, implying that the structures were poorly constructed and would probably soon crumble.</p>	<p>The SEA Report states that AES would assume responsibility for resettling project affected people, not that the resettlement program was completed. Implementation of the resettlement plan started under AES. Approximately 4,600 stakeholder contracts have been compensated. Resettlement/compensation could not be fully completed because the project was terminated in 2003.</p> <p>The BIU, which was left in charge by the GoU of community relations until a new developer could be identified, was constrained by limited resources. BEL became involved in the resettlement process in 2006 and conducted the APRAP, which identified legacy issues and actions that need to be undertaken for the project, in compliance with World Bank Group resettlement policies. BEL is also committed to implementing the CDAPs. Recent supervision missions have confirmed that the quality of resident houses is still adequate (see Annex 7, with photographs of the resettlement houses/community that were constructed at the time of the previous effort to develop the Bujagali project (circa 2001)). The outstanding claims under the resettlement grievance mechanism, do not include any complaints concerning housing quality. Any future claims will be addressed through the grievance mechanism.</p>
19.	<p><b>Compensation and Resettlement Frameworks.</b> The existing compensation and resettlement frame-</p>	<p>In 2000, AES prepared and disclosed RAPs for the hydropower project and also for the transmission line.</p>

No	Claim/Issue	Response
	works are out-dated and do not reflect current economic situations.	<p>Only implementation of the RAP for the hydropower project and the Kawanda substation (as part of the transmission line) had been initiated in 2001.</p> <p>BEL has carried out a stocktaking assessment of the past resettlement (i.e., the APRAP) for its Hydropower Project and for the Kawanda substation, which is posted at the World Bank website (<a href="http://www.worldbank.org/Bujagali">www.worldbank.org/Bujagali</a>) and at the InfoShop. With respect to the transmission line (part of the Interconnection Project) that will be owned by UETCL and is expected to be financed by the AfDB (and would thus be considered an associated facility by the World Bank), a new Resettlement and Community Development Action Plan (RCDAP) has been disclosed at the above-mentioned website and InfoShop.</p> <p>Both the APRAP and the RAP for the transmission line have taken into account new conditions. For example, the APRAP determined that past resettlement did not provide for vulnerable people and has recommended actions to ensure that these people's needs are addressed going forward.</p>
20.	<p><b>Bujagali Interconnection Project.</b> People affected by the Bujagali Interconnection Project were never compensated and resettled. It is therefore important that compensation and resettlement of project-affected people is based on updated compensation and resettlement frameworks that reflect current economic realities.</p> <p>There is, however, no clear commitment on the part of BEL to complete the compensation and resettlement exercise in a manner that reflects current realities. There should have been a re-assessment of social costs and benefits of the compensation and resettlement exercise to reflect the current and future realities.</p>	<p>The transmission line RAP prepared by the previous developer, AES, was not implemented because the sponsor withdrew and the project was terminated.</p> <p>The SEA prepared by BEL for UETCL's Interconnection Project includes a clear commitment to resettle adequately any project affected persons in the transmission line area. Land evaluations for the Interconnection Project were completed in late 2006 and early 2007 and formed the basis for compensation in the new RCDAP.</p>
21.	<p><b>Policies.</b> The lack of a detailed compensation and community development action plan in BEL's SEA is a violation of World Bank's Policy on Information disclosure, Involuntary Resettlement (OP/BP 4.12), Piloting the use of Borrower systems to address Environmental and Social Safeguard Issues in Bank-Supported Projects (OP/BP 4.00), Environmental Action Plans (OP/BP 4.02), Indigenous Peoples (OP/BP 4.10), Projects in Disputed Areas (OP/BP 7.60), among others.</p>	<p>Management considers that BEL has carried out social and environmental evaluations and documentation that are in full compliance with World Bank policies. The social and environmental assessments were disclosed in the InfoShop and at locations in Uganda. These can also be obtained from World Bank website dedicated to the project (<a href="http://www.worldbank.org/Bujagali">www.worldbank.org/Bujagali</a>).</p> <p>As explained in Item 15, Management considers that OP/BP 4.10, <i>Indigenous Peoples</i>, is not triggered by this project. This project does not pilot the Use of Country Systems, and thus does not trigger OP/BP 4.00. OP/BP 7.60, <i>Projects in Disputed Areas</i>, is not triggered, as this project is not being implemented in a disputed territory.</p>
22.	<p><b>Consultation Concerns.</b> While there is evidence of consultations in BEL's SEA, project proponents confuse consultation with true participation in a decision-making process. Consultations with the 240 clans in Busoga and 52 clans of Buganda were not done at all. In addition, the SEA does not indicate how each</p>	<p>The SEA includes an annex listing issues and concerns raised in each of the public consultations. There is also a Public Consultation and Disclosure Plan (PCDP) discussing past and planned consultation activities. Both the SEA and PCDP are posted at the website: <a href="http://www.worldbank.org/Bujagali">www.worldbank.org/Bujagali</a> and are also available at the</p>

No	Claim/Issue	Response
	<p>of the stakeholders' concerns raised during the consultation process are going to be addressed. The failure to address concerns raised and obtain agreements during the consultation process by the dam developer violates World Bank Policies on Environment Action Plan OP/BP 4.01, Social Assessment (OP/BP 4.10), and Physical Cultural Resources (OP/BP 4.11).</p>	<p>InfoShop.</p> <p>The consultation process includes continuous consultations with representatives from communities and clans. While it would be impossible to address "each of the stakeholders'" concerns, at all meetings with stakeholders, the developer has invited community representatives and community members to raise issues with regard to their involvement in the project. For example, at community meetings held on October 5 and 6, 2006, community members made comments with regard to public services and job opportunities, among others.</p>
23.	<p><b>Naminya Community.</b> Most of the people who were moved in 2002 were not given land titles to their new lands, which caused great uncertainty. Problems that arose with the resettled communities were left unresolved for years after the original project sponsor (AESNP) abandoned the project. It took strenuous lobbying on their behalf by our organizations to get the government to respond to some of the problems. [See below for more detail].</p>	<p>Supervision/preparation missions observed in 2006 that 34 of the 50 homes in Naminya were occupied. To date, 28 of the 34 households have already received their land titles, with the remainder to be settled (see sub-item on Land Titles below).</p>
	<ul style="list-style-type: none"> <li>• <b>Land Titles.</b> We were promised that all the resettled people would be given plots of land with land titles. Few people have so far received land titles for their plots after long waiting and protests to government. Many of us are not sure whether or not we shall be able to get land titles for our plots of land. This has caused uncertainty to whether that land we have belongs to us or another person holding the land title, who can easily evict us. We have heard rumours that the land we have belongs to Madhavani.</li> </ul>	<p>This issue was addressed in the APRAP. As explained above, 28 of the 34 households have received title in Naminya, of which 19 titles have been processed. One title is awaiting selection of a guardian for a minor; another is in probate. Four remain to be settled because of discrepancies in the original land survey. The BIU is working to resolve these discrepancies. BEL is working with the BIU and local authorities to speed up the process. Any land not titled is owned by the Uganda Land Commission; no third parties are involved. This situation was clarified with the community on March 1, 2007.</p>
	<ul style="list-style-type: none"> <li>• <b>School.</b> We were promised a Primary School for our children, but today, our families are increasing and the children do not have any primary school to go to. We have improvised by using one of the vacant houses in the resettlement area as a nursery and primary 1 to 4 classes. But, we are continuously warned to vacate the premises and take our children elsewhere. Where shall we take our children for schooling? The available schools are far away and our young children find it difficult to go there. The nearby school is a missionary and private school and the owners have refused our children to go to attend in that school.</li> </ul>	<p>The resettlement program included provisions for improvement of educational facilities within the project area. This included five schools that were selected for improvement of existing structures, construction of new structures, provision of equipment and improvement of existing sanitation facilities. Because AES withdrew in 2003, only a few of the planned improvements were implemented at Budundo and Kyabirwa Primary Schools. BEL has recognized this gap and lack of implementation in the APRAP, and has included specific actions to be taken in the SEAP and the CDAP. In particular, the Naminya Primary School, St. Stevens Secondary School and Nile Vocational School never benefited from the community development/resettlement programs.</p> <p>The APRAP identified this issue as one of legitimate concern, although the original commitment was for the school in Naminya to be refurbished in order to accommodate the additional pupils from the resettlement village. Local educational authorities consider that the resettlement village still has too few students to justify its own primary school. Thus, BEL has recommitted to upgrading the existing Naminya school, but also recently committed</p>

No	Claim/Issue	Response
		to building a kindergarten (nursery).
	<ul style="list-style-type: none"> <li><b>Health centre.</b> We were promised a Health Centre III with maternity ward, laboratory, minor theatre, inpatient wards, but today what we have is a model house with two health personnel which operates 5 days a week and only 3 hours a day. To get this facility was a very long struggle with the help of some NGOs that linked us to Mukono District Local Government. The question is, "When shall we ever get the type of health facility that was promised"?</li> </ul>	<p>The resettlers at Naminya were promised a health center but not a level III one (i.e., with maternity ward, laboratory, etc.). There is an existing level III health center at Wakisi (about 7 km to the north of the resettlement site), and the local authorities say that they do not have the resources to support another one. BEL is committed to further upgrades to the existing health services as part of the CDAP.</p> <p>One of the structures built as a house in Naminya village is now used as a health center, and medicine is available. This existing health center was equipped by the Ministry of Health at the Naminya resettlement community and is an interim solution until BEL begins implementing the Bujagali project, when the health program under the project also will begin. In the pre-construction phase of the project, BEL will convert two vacant houses into accommodations for the health center staff who now commute from Jinja. This will allow operating hours to be increased. BEL's program also includes improvements of Wakisi and Bodondo Health Centers on the west and east banks respectively, a program for HIV/AIDS/STD control and mitigation, as well as a program for vector-borne diseases.</p> <p>BEL recognizes the gap in health services and lack of implementation of the health program in the APRAP, and has included specific actions to be taken in the SEAP and the CDAP.</p>
	<ul style="list-style-type: none"> <li><b>Water.</b> We were promised water tanks for harvesting rain water on every house, but after using those tanks for less than one year, they started leaking and now majority of them are not functioning. The available 3 functional plastics water tanks were provided by an NGO. There is only one borehole in the community that can not serve the whole community. Even then, it is not centrally located and not easily accessible by the majority of the resettled people.</li> </ul>	<p>This issue is addressed in the APRAP. AES installed a drilled well at the entrance of the Naminya site near the health center. AES also built an improved spring catchment in the middle of the site. A pre-existing drilled well is available to the resettlers at the other end of the site. AES also installed rain harvesters, and there are currently 51 rain harvesters at Naminya. The well, spring, and rain harvesters lack maintenance. For example, small parts are not replaced, etc.</p> <p>BEL has recognized the gap in water provision and lack of implementation of the water program, especially the fact that the communities need training in maintenance of small technical works. The APRAP identified the gaps and the CDAP has included specific actions to be taken.</p> <p>For example, recent visits to the community have found that the problems appear to be related to the taps in the rainwater tanks. Maintenance of the tanks is the responsibility of the resettlers. However, BEL has committed to replacing the taps and training people in maintaining the tanks. BEL has also upgraded the pump in the well installed by AES. Overall, access to water is above the level found in surrounding communities as well as in planning guidelines for communities in rural Uganda.</p>
	<ul style="list-style-type: none"> <li><b>Housing.</b> The houses that were provided with</li> </ul>	Bank missions have observed and concluded that the

No	Claim/Issue	Response
	<p>are sub-standard and incomplete. By the time, people were resettled; the houses did not have kitchens, were not plastered and lacked ceilings. The houses are too small to cater for our families, especially those of us with two wives and many children. To make the matters worse, the houses are now cracked and we fear that they will fall on us.</p>	<p>standard of housing is satisfactory. Cooking is an outdoor function in rural Uganda. The RAP provided for kitchens to be built outside the main houses, by the owners themselves, following African tradition. The sizes of the houses were calculated based on average family size and are of better quality than the original houses. The new houses are of permanent character and are of a design that was developed with full participation of the project affected households. Post-resettlement expanding families are responsible for providing adequate housing for their family members.</p>
	<ul style="list-style-type: none"> <li>• <b>Latrines.</b> The latrines that were provided were too small in size and shallow (less than 8 ft deep) and whenever it rains, they are filled with water that floods which could pose danger to our health.</li> </ul>	<p>This issue is addressed in the APRAP and concerns six specific latrines. All the existing pit latrines were constructed according to good practice designs at the time. Latrines at six houses were later found to be adversely affected by water inflow, and a different model was installed at these locations. The current conditions of all the latrines will be evaluated during the pre-construction phase, and BEL will consider next steps for addressing any outstanding issues or problems. BEL will also build latrines at the construction site, thus improving sanitation for the project affected people.</p>
	<ul style="list-style-type: none"> <li>• <b>Electricity.</b> We were promised electricity, but up to now, we have never been given electricity. Moreover, during the resettlement, some settlers were given plots in the way-leave of the high voltage transmission lines that evacuates electricity from Jinja to Kampala. Later on, these people are being told that they cannot use these plots and yet they are not given alternative plots.</li> </ul>	<p>BEL, together with UMEME, is exploring possibilities for the provision of electricity. BEL will also finance a feasibility study for electrical distribution to the resettlement community, which may convince UMEME to provide a supply. Any future scheme that seeks to respond to the demand for electricity and preferential rates has to take into account the challenge that, BEL, as a producer of electricity, is not allowed to distribute it. In addition, electricity needed in the project impact area for domestic consumption has to be low voltage, whereas the electricity produced by the hydropower project will be high voltage.</p>
	<ul style="list-style-type: none"> <li>• <b>Sources of income and food.</b> Where we originally were, we carried out fishing and farming as sources of income, but the plots we were given in the resettlement area are not enough for farming. Moreover, we no longer have access to the river to do fishing, because the river has been fenced-off by the dam developers. This has negatively affected our sources of income and food. The fish ponds that were promised to us have never been put in place.</li> </ul>	<p>Changes in income and livelihoods of project affected people are being monitored through BEL's bi-monthly site visits to resettled families in Naminya and surrounding villages. Project affected people were provided with the necessary information to make informed choices with regard to resettlement packages. The 34 households at Naminya chose to be resettled there and receive a house on one acre of land, in addition to two more acres for farming. Naminya is farther away from the river, but people in the area are nevertheless combining fishing with farming.</p> <p>The APRAP identified income replacement programs as necessary for the project to meet World Bank Group resettlement standards. These programs are planned over several years following the project's financial closure. Land is extremely limited in the area, so BEL has committed to implement a program of intensified agriculture for increasing yields on available lands and developing markets for produce, including assistance in establishing small business and providing micro-credit.</p>



No	Claim/Issue	Response
		BEL is committed to honoring all the promises made by the previous developer; however, the construction of a fish pond was not included as part of the resettlement package. With regard to access to the river, the west bank of the river is fenced, but gates are temporarily kept unlocked in order for the population to reach the river on that side. BEL will work with local communities to ensure that access to the river is provided during construction and operation for fishing and other water-dependent uses. BEL will collaborate with NAFFIRI, the Uganda national fisheries institute in Jinja, to develop the fisheries program.
	<ul style="list-style-type: none"> <li><b>Resettlement disturbance package.</b> We were promised a resettlement disturbance package for a period of five years, but up to now, we have never received anything.</li> </ul>	Each affected household received and agreed to a resettlement/compensation package. This included a one time disturbance allowance/resettlement assistance compensation. A RAP does not normally include a five year resettlement disturbance package. Longer term monitoring and income restoration activities that were planned by AES over a period of several years ceased or were curtailed when AES withdrew. Continuation or completion of these activities, updated to reflect current conditions, is planned by BEL and is addressed in the APRAP and CDAP.
	<ul style="list-style-type: none"> <li><b>Community centre.</b> We were promised a community centre, but up to now, it has never been put in place.</li> </ul>	Insofar as can be determined, no formal or other commitment to construct a community center was made by AES. The APRAP does document that a local political leader made a recommendation for such a center during the 2006 consultations.
	<ul style="list-style-type: none"> <li><b>Market.</b> We were promised a market nearby, but up to now the market has never been constructed.</li> </ul>	Provisions for new markets and marketing are provided for in the new CDAP, Section 5.3.
	<ul style="list-style-type: none"> <li><b>Environment protection.</b> We were promised tree seedlings to plant in our compounds and the settlement area, but up to now we have never received any seedlings, yet the resettlement is on a slope and is bare, without trees.</li> </ul>	Each household received five tree seedlings as part of its package. Most houses at the resettlement site are surrounded by trees. BIU provided additional seedlings as recently as 2005. The prior sponsor did have an agro-forestry program for farmer groups and schools. BEL, as part of its agricultural extension program will provide additional technical advice and assistance for agro-forestry, among other land-based income-generating activities.
	<ul style="list-style-type: none"> <li><b>Employment.</b> We were promised jobs once construction of Bujagali dam starts. But we need written assurance that we shall get those jobs when construction of the dam starts, particularly we want to know how many of our people will be employed.</li> </ul>	BEL has publicly declared that recruitment offices will be opened on the east and west banks. An EPC contractor will manage the entire construction, and the contract between the EPC and BEL stipulates that priority will be given to qualified local people. During construction, around 600 to 1500 workers will be needed. Only about 10% of these jobs, however, will be for unskilled labor and realistically open to local labor. Vocational training, in collaboration with the existing technical schools in the area, will be provided, but this training may not add substantially to the number of local people who can be employed. Realizing the gap between local expectations and likely local recruitment, BEL has recently committed to develop-

No	Claim/Issue	Response
		ing additional job opportunities, including a project to plant trees in a 100 meter belt around the new reservoir and between the Bujagali hydropower facility and Kalagala Falls. International labor and employment rules (i.e., the World Bank Group) as well as local Ugandan rules and company standards will apply.
	<ul style="list-style-type: none"> <li><b>Routine maintenance of access roads and other infrastructure.</b> We were promised routine maintenance of our access roads, but up to now, maintenance has never been done.</li> </ul>	Again, BEL has recognized the gap in road services and lack of implementation of the road program in the APRAP, and has included specific actions to be taken in the SEAP and the CDAP. The resettlement community was also educated on taking responsibility for road maintenance, as was originally planned. Each household is supposed to maintain the portion of the road adjacent to its plot. Further education may be needed on this issue with the support of the local authorities.
	<ul style="list-style-type: none"> <li><b>Visitations and consultations by World Bank, Government and the dam developer.</b> Why is it that whenever World Bank, Government and the Bujagali dam developers visit us, they just pass through without talking to us. They just discuss among themselves and leave. Even when they want to discuss with us, they do not give us ample time for us to prepare ourselves. Does being in a settlement remove our respect of being citizens of this country?</li> </ul>	The social scientists who have participated in missions, starting in 2000 and continuing to the present have all spent much of their time visiting project affected people in the field, including visits to the Naminya resettlement site. There have been extensive consultations with project-affected persons, and ample disclosure of the project documents. BIU has also acted as a liaison to the community. Appendix H of the Hydropower SEA report, the PCDP, provides information on the consultations. (See also Annex 4.)
<b>Information Disclosure, Transparency and Openness regarding the Bujagali Dam Project</b>		
24.	<p><b>Nile Hydrology and Lake Victoria.</b> The World Bank has also recently refused to publicly release information on the Nile hydrology and the impacts of Kiira dam's operations on the levels of Lake Victoria, as has the Ministry of Energy and Mineral Development (MEMD). The Bank has commissioned new analysis of the Lake Victoria hydrological situation, but it is unclear if these studies (and the data they are based on) will be made public.</p> <p>More transparency and openness is needed on how various options have been evaluated. At least, project proponents should release all documents on the project's economic viability, including all studies on the Lake Victoria/Nile hydrology, the Power Purchase Agreement, and options analysis. The information must be released with adequate time to review before further action is taken on Bujagali. The only document released for review was BEL's SEA, which does not address the overall issue of Lake Victoria's long-term health, other than to assert that Bujagali Dam will be designed based on the "Agreed Curve."</p>	As described in Item 1 above, a thorough hydrological analysis was undertaken as part of the due diligence for the project. This analysis underwent extensive internal reviews and also was discussed in a series of meetings with Ugandan power sector stakeholders. Following the final stakeholder consultation in January 2007 regarding the Economic Study, the conclusions regarding hydrology were publicly disclosed on February 26, 2007. A copy of this report was provided by IFC staff to the Requesters on February 28, 2007.
25.	<p><b>Power Purchase Agreement.</b> The key document that assigns economic risks, the Power Purchase Agreement, was only recently (January 8, 2007) re-</p>	Copies of the Power Purchase Agreement and Implementation Agreement were made publicly available at the ERA offices for a 30 day period starting on March 6, 2006

No	Claim/Issue	Response
	<p>leased for public scrutiny at the Uganda Electricity Regulatory Authority's (ERA) Office in Kampala. It is a photocopy, without dates for its signifying, the pages are not serialized, it has excerpts of AESNP, there are inconsistencies in what the term "the company" refers to (is it UETCL, AESNP, IPS or BEL?), it does not include the costs of Bujagali dam project, it does not apportion responsibilities, risks and guarantees between the parties regarding the dam project and it is tied by strings to a reading table in ERA's library. One is not allowed to obtain an original copy (photocopy). People are required to read it only during working hours. Since it is only one document, it is difficulty for two or more people to read it at the same time, thus limiting public participation. We believe that this is not the actual Power Purchase Agreement being used to negotiate loans from the World Bank.</p> <p>The previous Power Purchase Agreement for AESNP was first kept secret, until after the High court of Uganda ruled that it is a public document that should be made public. This was also the position of the Inspection Panel in 2002, which stated that <i>"It seems evident that full disclosure of the [Power Purchase Agreement] is vital, if the intent is to place the public in a position to analyze, understand, and participate in informed discussion about viability of the Project and its impact on the economy and well-being of Ugandans."</i> When the AESNP Power Purchase Agreement was finally released, it was revealed that it posed unjustifiable risks to the Uganda and government, consumers and taxpayers. Uganda laws require that Parliament must approve the state's obligations under the Power Purchase Agreement. There is no evidence that BEL's Power Purchase Agreement has been debated and approved by Uganda's Parliament, yet it is reported in BEL's SEA to have been signed way back in 2005 by government. BEL's SEA was therefore signed without incorporating the costs of the project related to studies, construction and compensation and resettlement issues, which will definitely be reflected in the tariff of electricity from the Bujagali project. This is not proper.</p>	<p>(see Annex 8, Public Notice by the ERA concerning the Bujagali project). Management has been informed by ERA that this disclosure satisfied the requirements resulting from the High Court ruling: <i>Greenwatch (U) Ltd. vs. A.G &amp; Uganda Electricity Transmission Company Ltd. HCCT-00-CV-MC-0139 of 2001</i> to which Management believes the Requesters refer. However, in the interests of greater transparency, ERA has again made the Power Purchase Agreement and Implementation Agreement publicly available for an open-ended period, starting on January 8, 2007. ERA's disclosure of commercial documents of this nature is a departure from standard industry practice, since such documents are frequently considered to be sensitive and confidential. It is understandable that ERA may wish to retain a measure of control over the circulation of the documents. ERA maintains a log of visitors who have reviewed these documents. When IFC staff visited ERA in late February 2007, there were four entries in this log.</p> <p>Management further has been informed by the regulator that the Power Purchase Agreement, available at its office, is a copy of the documents signed by BEL and UETCL, the transmission company and power purchaser, on the basis of which lenders are currently negotiating the project financing package. The Power Purchase Agreement, in combination with the Implementation Agreement (also disclosed), provides a detailed allocation of responsibilities among BEL, UETCL, and the GoU. The Agreements have been reviewed by the World Bank Group and are consistent in form and substance with international standards.</p> <p>While Management acknowledges that the disclosure of the Power Purchase Agreement is limited to the premises of the regulator's office, it wishes to highlight that such disclosure in itself is highly unusual. In this context, the Inspection Panel investigation report highlighted that <i>"the Panel finds that according to IDA's policy, there is no specific requirement to disclose contracts to which IDA is not a party. Therefore, in not requiring that the Power Purchase Agreement be disclosed, Management's actions have been consistent with IDA's Disclosure Policy."</i></p> <p>With regard to the final tariff, the GoU has followed a two step process for the project wherein the sponsor was selected based on a competitive and transparent process. The sponsor was then required to select the EPC contractor through a competitive process. This process has now been undertaken by the sponsor, and the EPC contractor has been selected. Annex D of the Power Purchase Agreement spells out the methodology for tariff calculation, including the methodology for incorporating the EPC and other project related costs that are considered in calculation of the tariff. In accordance with normal practice, the actual tariff will be determined at the commissioning of the plant.</p>

No	Claim/Issue	Response
		<p>The GoU will be required to seek all approvals under local laws, prior to the lenders (including the Bank Group) providing any financing for the project.</p>
26.	<p><b>Policies.</b> We believe that the discrepancies in the Power Purchase Agreement pose a great threat to the Ugandan society and economy and are a contravention of the law of Uganda and <i>violate the World Bank's Policy on Information Disclosure, Accountability, Economic Evaluation of Investment Operations (OP 10.04), Poverty Reduction (OP/BP 1.00), etc.</i></p>	<p>The World Bank Group Policy on Disclosure does not require the Power Purchase Agreement or other such commercial documents to be publicly disclosed, especially those to which the Bank is not a party. However, the World Bank Group encourages private companies and governments to disclose the maximum information. In response to World Bank Group requests, the sponsor and the government decided on an exceptional basis to make the Power Purchase Agreement publicly available at the ERA's office.</p> <p>World Bank Group consultants carried out economic evaluation of the project required for investment operations. The report, "Bujagali II – Economic and Financial Evaluation Study" (i.e., the Economic Study) prepared by PPA Ltd., is publicly available as noted above in Item 1.</p> <p>As explained in Item 13 above, Management considers that it has properly applied OP/BP 1.00, <i>Poverty Reduction</i> in preparing this project.</p>
<b>Safety of Dams</b>		
27.	<p>Bujagali dam design does not adequately consider the safety problems regarding the old Owen Falls (Nalubaale dam), especially now when the powerhouse and bridge have large cracks. BEL's SEA states that a Bujagali Dam Safety Panel (BDSP) shall be formed. Just forming a dam safety panel is not enough. There should have been an integral comprehensive plan and strategies for addressing dam safety issues, such strategies should have included concrete steps to decommission the old Nalubaale and disaster preparedness mechanisms and associated costs. Such strategies are very important; especially since there was no EIA done for Kiira dam and no post-construction audit don for Nalubaale dam. In a meeting between NAPE and Rachel Kyte of the World Bank held in Kampala on the 28<sup>th</sup> February 2007, the Bank acknowledged that the absence of EIA for Kiira and post-construction audit for Nalubaale was an omission. The issue of whether Bujagali Dam would be able to survive a failure of the Owen Falls Dam is still a major concern.</p>	<p>Management agrees that dam safety concerns are an integral part of the review of any hydropower development. Dam safety analyses are normally conducted as part of feasibility studies and later as part of detailed design. For large dams an expert panel is normally established to advise on the dam's design, construction, and operation. Periodic monitoring of dam operation, including safety, is normally conducted by independent specialists. This work is conducted separately from a project's social and environmental studies, and any recommendations are reflected in the SEAPs.</p> <p>The existing Nalubaale dam and powerhouse were constructed in the 1950s and unexpected and significant deterioration subsequently occurred due to the effect of the alkali-silica reaction between the aggregates and the cement in the concrete. The GoU, with the assistance of IDA under the Third Power Project, engaged consultants to review the safety of the dam structure (i.e., a post-construction audit) and to devise a plan and strategy for remedial works to correct deficiencies. These remedial works were concluded under the oversight of an international expert panel.</p> <p>At the time of the appraisal of Bujagali by AES, the Lenders' Independent Engineer (Harza Engineering, USA) reviewed the reports of the panel of experts for the remedial works of Nalubaale and concluded in its April 2001 report that the structures do not pose an unusual risk to the Bujagali project. The panel advised on the need to continue regular monitoring and dam safety reviews of Nalubaale in a manner consistent with good international practice. The DSP appointed by AES con-</p>

No	Claim/Issue	Response
		<p>ducted an independent review of Nalubaale remedial works and concluded that “the remedial and strengthening works for the Owen Falls main dam satisfactory as they were planned and will increase the factor of safety to comply with current standards.” The current Lenders’ Independent Engineer (Colenco International Power, Switzerland) has endorsed the above recommendations of Harza in regards to Nalubaale (Owen Falls).</p> <p>Monitoring of the Nalubaale structures is also being addressed through the Fourth Power Project. According to the latest Annual Inspection Report (Year 2005), prepared by Lahmeyer International, there is no present risk in the condition and stability of the main dam, but the situation is more serious for the intake structure, the head-race bridge and the powerhouse structure. Lahmeyer concludes that “a long term safe operation of the turbines can not be guaranteed.” In 2005, ESKOM (Uganda) Ltd. was awarded the long-term concession for operating the Nalubaale/Kiira facility. This includes obligations to ensure availability and safety. ESKOM (Uganda) has since taken over the annual inspection duties, and has also initiated remedial works for the intake structures, most recently for unit 8.</p> <p>The Inspection Panel, in its Investigation Report of Uganda’s Third and Fourth Power projects, and Bujagali Hydropower Project of May 23, 2002, found Management in compliance with OP 4.37. Management considers the current project in compliance with the OP. It is accepted practice to assess the consequences of failure of large dams and to use the results of the analysis in the formulation of emergency preparedness and response plans. An EPRP that includes failure scenarios for N/K and Bujagali is not yet available for Bujagali, but BEL is responsible to the World Bank Group through its SEAPs, which include provision for an EPRP, and compliance with such plans will be part of the financing agreements.</p> <p>The design of the Bujagali dam has been reviewed by the technical advisors of the GoU, the current Owners’ Engineer (Montgomery Watson Harza) and the Lenders’ Engineer (Colenco Power International). The preliminary dam design, including the selection of the site, seismic design requirements, the general arrangement of the site, the location of the main structures, and the scheme for diversion of the river during construction, is considered appropriate for the site and its construction feasible. This review has also included the evaluation of flood risks and their incorporation in the design of Bujagali and is considered to be consistent with industry design practice.</p> <p>Finally, Management wishes to state that the representation of the meeting between NAPE and Ms. Rachel Kyte on February 28, 2007 is not correct. See Item 30 below.</p>
28.	<b>Policies.</b> Failure to address dam safety issues in the SEA violates World Bank Policies on Safety of Dams (OP 4.37), OP/BP 4.01, OP/BP 4.04, OP 7.50, to	The World Bank’s Operational Policy 4.37 requires a DSP to be appointed to review and advise BEL on matters relative to dam design and safety as part of the im-

No	Claim/Issue	Response
	mention but a few.	<p>plementation of any dam greater than 15 m in height. BEL has established a DSP with TOR and staffing satisfactory to the World Bank Group. The TOR considers the examination of any safety issues posed by Nalubaale and its impact on Bujagali as well as extensive participation on all technical matters associated with Bujagali. The DSP will provide advice through final design, construction, initial filling, and start-up of the dam, including any design or operational precautions to ensure that the project is consistent with OP 4.01, Environmental Assessment and OP 4.04, Natural Habitats. The project is proceeding in a manner consistent with OP 4.37. The Nile River is an international waterway, and thus the Bank's OP 7.50, Projects on International Waterways has been triggered. In accordance with the policy, the GoU notified all nine upstream and downstream riparian states in 2000 and in 2006, and recently (March 2007) issued a new letter notifying governments of additional information regarding the project, which has been publicly disclosed.</p>
<b>Communications with the Bank</b>		
29.	<p>We have taken the following actions to try to resolve the above mentioned issues, but in vain: Requested for the Power Purchase Agreement, a comprehensive economic and options assessment of the Bujagali Dam project from World Bank, Uganda government and the developer (BEL), but, what is now available as Power Purchase Agreement, economic and options analyses do not address our outstanding concerns.</p> <p>We have sent our outstanding concerns to the World Bank (available at <a href="http://www.irn.org/programs/bujagali/index.php?id=061204letter.html">http://www.irn.org/programs/bujagali/index.php?id=061204letter.html</a>).</p>	<p>A communications strategy focusing on outreach, message mitigation, and information sharing has been devised and is currently being implemented. This includes a project dedicated website (<a href="http://www.worldbank.org/Bujagali">www.worldbank.org/Bujagali</a>).</p> <p>Disclosure was a key request by the NGO community on this project. At the request of the World Bank Group, the project sponsor and GoU have disclosed the Power Purchase Agreement and Implementation Agreement at the Electricity Regulatory Agency's office in Kampala. The project economic due diligence (including a detailed review of the project's hydrology) conducted by independent consultants (PPA Ltd., in coordination with Coyne et Bellier) at the request of the World Bank Group, was also publicly disclosed in its entirety on the dedicated project website on February 26, 2007. Frequently asked questions and responses are also posted at the project website.</p> <p>IFC officials met NAPE on many occasions during the previous and current efforts to develop the Bujagali project. Most recently, IFC met with NAPE on February 28, 2007. NAPE staff was under the impression that the World Bank Group had done a hydrological study of Lake Victoria separate from the Nile Basin study. They had not read the Economic Study at that time. IFC provided a hard copy of the Economic Study to NAPE. All of the data and studies that NAPE has requested to be publicly released have been released, although these may not be organized in exactly the way NAPE describes them. For instance, the Economic Study also contains information on hydrology.</p> <p>The Economic Study, also disclosed at the Bank's website for the project, presents: (i) Electricity demand</p>

No	Claim/Issue	Response
		<p>forecast; (ii) Hydrology scenarios and power generation; (iii) Least cost expansion plan; (iv) Economic gains from Bujagali; (v) Economic rate of return; (vi) Impact on electricity tariffs; and (vii) Macroeconomic impact.</p> <p>As explained in Item 20, the documentation was also disclosed in the InfoShop and at locations in Uganda. A list can be obtained from <a href="http://www.worldbank.org/Bujagali">www.worldbank.org/Bujagali</a>.</p>
30.	<p>We invited the World Bank Country Office in Kampala to attend our public meetings on Lake Victoria and the role of the dams in draining Lake Victoria (held in August and October 2006), and got no response. The only meeting we had on 28<sup>th</sup> February 2007 was with Rachel Kyte of the World Bank Headquarters, Washington D.C. that did not adequately address our concerns, because she state that her mission to Uganda was not to resolve issues concerning the project, but to appraise the project.</p>	<p>The country office in Kampala did receive one of the two invitations mentioned by NAPE – the invitation for the August 15, 2006 Stakeholder Workshop on the decline of water levels in Lake Victoria. Unfortunately, staff was unable to attend this meeting due to other previously scheduled commitments. NAPE provided a copy of the recommendations following the consultations (dated November 3, 2006), confirming that the meeting focused on Lake Victoria's declining water levels, and not on the Bujagali project. The country office does not have any record of having received the October 2006 invitation.</p> <p>The country office had held earlier meetings with NAPE in 2004 (one meeting was held in the country office and chaired by the Country Manager and a second meeting took place in the NAPE office), in which the country team and NAPE agreed to contact each other on any Bujagali-related concerns and/or questions. NAPE has copied the country office on its letters to GoU on various issues, including Lake Victoria and the proposed Bujagali project. However, the country office had not received any formal communication raising concerns about the project prior to the Request for Inspection submitted to the Inspection Panel.</p> <p>Rachel Kyte, Director, Environment and Social Development, IFC, asked for a meeting with NAPE when in Uganda at the end of February, 2007. NAPE had communicated their comments on disclosed documentation to Ms. Kyte directly. Subsequent to requesting the meeting, NAPE wrote with concerns regarding people resettled to the project team. Rachel Kyte and Nick Flanders, a senior environmental specialist at IFC, met NAPE staff for a courtesy breakfast on February 28, 2007; they also discussed the concerns raised in comments and in the letter.</p> <p>Public consultation is an ongoing process; World Bank Group disclosure principles require public consultations to continue throughout the project design and implementation phases. The PCDP that was disclosed together with the rest of the project documents in December 2006 outlines stakeholder engagement activities already undertaken during the preparation of the SEA, as well as planned future activities.</p> <p>Since the new project developer, BEL, became involved in the project, public consultations have continued throughout 2006 and 2007, and most recently on March 1 and 2, 2007. In addition to project affected communities, interested NGOs were invited to the meetings. The wit-</p>

No	Claim/Issue	Response
		<p>ness NGO was also present during public meetings.</p> <p>As also explained above there is a project dedicated website (<a href="http://www.worldbank.org/Bujagali">www.worldbank.org/Bujagali</a>), with frequently asked questions and answers posted there. The availability of this website was announced on the Bank's general website, as well as through e-mail notifications targeted to NGOs and other stakeholders.</p>