## Annex 1 INSPECTION PANEL REPORT ON UGANDA POWER III, POWER IV AND BUJAGALI HYDROPOWER PROJECT: FINDINGS, COMMENTS AND ACTIONS

## **UGANDA POWER III PROJECT (CREDIT 2268-UG)**

**Project Status.** IDA approved a Credit of USD 125 million equivalent on June 13, 1991, and a supplemental credit of USD 33 million equivalent on January 20, 2000 for the Third Power Project. The main objectives of the project were to expand Uganda's hydropower resources and its transmission and distribution system to provide least-cost reliable electricity to a greater portion of the population, and to improve the efficiency of the power sector. The project included the construction of the Owen Falls Extension power house and installation of 2x40MW generating sets, remedial works at Owen Falls dam, as well as technical assistance to the Uganda Electricity Board, to improve its operational and financial performance and for implementation of the Government's power sector reform program. The project was closed on December 31, 2001. The Implementation Completion Report is under preparation.

No.	Finding	Sec/	Pol-	Comment / Action
140.	rinuing	Para	icy	Comment / Action
P-III.1.	Power III Environmental Assessment: The environmental analysis of the Power III Project thus largely accords with the requirements of OD 4.00 despite the fact that it was not formally assigned an evaluation category under this OD. But the procedures envisaged for environmental evaluation by OD 4.00 were not complied with.  The Panel finds that the requirements of OD 4.00 for categorization and involvement of affected groups and for use of an environmental advisory panel were applicable to this Project and were not met. The Panel is satisfied, however, that the Power III Project (Owen Falls Extension) was analyzed, if not reported, as envisaged by OD 4.00 Annex B 1, and therefore, finds Management in partial compliance with this policy.	3.2, 58-62	OD 4.00	Comment: Management, as indicated by the Inspection Panel, took steps to address environmental impacts as envisaged by OMS 2.36 and OD 4.00. Annex 17 of the Staff Appraisal Report provides an analysis of the environmental impacts. Management has explained that OD 4.00 was not applicable to the Power III Project, since the 1988 formal review of the Initial Executive Project Summary predates OD 4.00's applicability date of October 15, 1989.  Action: The Power III Project was closed on December 31, 2000, and no action is envisaged.
P-III.2.	Supplemental Credit: The Panel concurs that no additional Environmental Assessment for the Supplemental Credit for the Power III Project (Owen Falls Extension) was required and that, therefore, Management was in compliance with OD 4.00 as regards this Credit.	3.3, 63-65	OD 4.00	Comment: Management notes the finding of compliance by the Inspection Panel.  Action: No action required.
P-III.3.	Sectoral EA/Cumulative Impacts: Since the Bank's safeguard policies or directives do not require a cumulative effects analysis, Management's actions in this respect are consistent with Bank's policy. As noted above, however, Management not only recommended in the SAR that a Sectoral Environmental Assessment of hydropower be undertaken, it also produced draft terms of reference for an SEA. These terms of references reflect Bank policy which provides the following rationale for undertaking an SEA: "They are particularly suitable for reviewing (d) the cumulative impacts of many relatively small, similar investments which do not merit individual project-specific EAs." Management has conceded that its failure to ensure that an SEA was carried out reflected inadequate supervision.  Thus, the Panel finds that Management is not in compliance with OD 13.05 on Project Supervision with respect to the Sectoral Environmental Assessment required under the Power III Project that would address cumulative effects.	3.6, 82-88	OD 13.05	See Sections B.2 and B.3 below which discuss the issues of Sectoral Environmental Assessment and cumulative impacts analysis.

UGAN	IDA: POWER III / POWER III SUPPLEMENTA	L CR	EDIT	
No.	Finding	Sec/ Para	Pol- icy	Comment / Action
P-III.4.	Economic Analysis, Capacity of Power III: The Panel accepts that Owen Falls Extension has a potential capacity of 200MW and finds that confusion arose because of changes in project specifications that were not adequately represented in the documentation. Management has acknowledged that "there was not full and frank disclosure of this situation" to the Board of Executive Directors. In this sense, the Board documents for the Power III Project do not meet the requirements of OD 10.00.	4.2, 98- 101	OD 10.00	Comment: Management admitted to this omission. It concurs with the Inspection Panel's comment noted below in P.111.6, that "the economic analyses reported in the SAR were broadly in compliance with the provisions of OMS 2.20 and OMS 2.21" (Section 4.3, para. 106 of the Report), and the comment noted in P-IV.5 that because of the hydrology debate, "a cautious and incremental approach to the extension of Owen Falls capacity has been adopted (Section 3.5, para. 81). The Panel concurs that this approach was and is appropriate."  Action: No action required.
P-III.5.	Economic Evaluation of Investment: The Panel accepts that OP 10.04 was not applicable in June/July 1990, as Management claims. It would observe, however, that Management also indicates that effective appraisal must have continued through 1991, as the Project's specifications continued to evolve.	4.3, 102- 107	OMS 2.20, 2.21	Comment: Management notes the finding of compliance by the Inspection Panel.  Action: No action required.
	In the Panel's view, the economic analyses reported in the SAR, and outlined in the previous paragraph, were broadly in compliance with the provisions of OMS 2.20 and OMS 2.21.			
P-III.6.	As regards externalities, however, the Panel feels that there is an area of non-compliance in relation to OMS 2.21. Management acknowledges that the economic appraisal of externalities was not carried out as it should have been because it excluded the estimated cost of resettlement and environmental mitigation measures from the calculation of the Project's economic return. The Response argues that: "Since these costs were insignificant in comparison with the capital investment costs, their inclusion would not have affected the project's viability." Nevertheless, since the only way to confirm that the magnitudes of externality costs are significant or insignificant is to prepare and include the estimates, the Panel finds that required procedures were not observed in this case.	4.3, 107		Comment: In accordance with OMS 2.21, Management considered the cost of compensation as insignificant in comparison with the capital investment costs (amounting to about 1%), and thus did not include the costs in the ERR calculation.  Action: Management has recalculated the ERR. The 1991 SAR ERR estimate was 16.5%, and would have been 16.2%, if the cost of resettlement had been included. Based on actual project cost and benefits at project completion (December 31, 2001), the ERR was 13.7%; and would have been 13.5% including the cost of resettlement.
P-III.7.	Hydrology Debate: In all documentation relating to the Owen Falls projects (i.e., Power II, Power III and Power IV), Management has drawn attention to the nature and seriousness of the hydrological debate. It is most unlikely that additional environmental studies or documentation would resolve the dispute. Because of this uncertainty, a cautious and incremental approach to the extension of Owen Falls capacity has been adopted. The Panel concurs that this approach was and is appropriate.	3.5, 75-81	n/a	Comment: Management notes the finding.  Action: No action required.
P-III.8.	<b>Safety of Dams:</b> The Panel finds that Management is <b>in compliance with OP 4.37</b> on Safety of Dams.	3.6, 89-91	OP 4.37	<b>Comment:</b> Management notes the finding of compliance by the Inspection Panel.
				Action: No action required.

## **UGANDA POWER IV PROJECT (CREDIT 3545-UG)**

**Project Status.** IDA approved a credit of USD 62 million equivalent on July 3, 2001 for the Fourth Power Project. The main objectives of the project are to expand power supply to meet demand on a least-cost basis, and to strengthen Uganda's capabilities in managing the energy reform and privatization process. The project includes the installation of between 40-80 MW of generating capacity at Owen Falls Extension and technical assistance for energy sector development and reform. The credit was declared effective on April 4, 2002, and project implementation is proceeding satisfactorily.

UGAN	IDA POWER IV			
No.	Finding	Sec/ Para	Pol- icy	Comment / Action
P-IV.1.	Environmental Category: [T]he Power IV Project relates almost entirely to the installation of electrical generating units at locations already prepared for them in the Owen Falls Extension Powerhouse. It does not require a new construction site and, consequently, no significant environmental effects were envisaged. The Project was, therefore, deemed to warrant a "B" category Environmental Impact Assessment. The Panel concurs and finds Management in compliance with OP/BP 4.01 in this respect.	3.4.1, 66-70	OP/B P 4.01	Comment: Management notes the finding of compliance by the Inspection Panel.  Action: No action required.
P-IV.2.	Environmental Assessment: In terms of the instruments used (i.e., environmental analysis, environmental management plans, environmental monitoring, and capacity enhancement), the Panel finds the Power IV Project, which is financing power generation Units 14 and 15 (the latter if economically viable), is in compliance with OP/BP 4.01.	3.4.2, 71-74	OP/B P 4.01	Comment: Management notes the finding of compliance by the Inspection Panel.  Action: No action required.
P-IV.3.	Economic Analysis: The Panel finds that the economic appraisals of the Power III and Power IV projects do not provide evidence to suggest that the evaluations were pessimistic and/or disadvantaged the Owen Falls Extension projects relative to the proposed Bujagali Project, thereby advancing the latter.	4.4, 108- 110		Comment: Management notes the finding.  Action: No action required.
P-IV.4.	Disclosure of Information – Environment: The Power IV Project Environmental Analysis is moot on the question of public consultation The Panel therefore finds that the Power IV Project is not in compliance with OP 4.01 with respect to (i) public consultation and (ii) disclosure.	9.3.1, 338- 342	BP 17.50	Comment: The EA was disclosed at the Infoshop on October 1, 2000 prior to the Power IV appraisal and in Uganda mid-January 2001, five and a half months prior to Board (July 3, 2001). This was not in compliance with the requirements that the EA be disclosed in country prior to appraisal. As the Panel's report also indicates, the EA was available for nearly six months to all who may have wished to comment on it. Consultations about the project were held with government agencies, including environmental agencies; labor unions; parliamentarians (including journalists and civil society), consumer representatives (Manufacturer's Association and Chamber of Commerce) and other donors. Consultations specifically regarding the EA were not undertaken with local NGOs and affected parties, largely as a result of the finding that there were no direct adverse environmental or social impacts expected from the installation of additional generating units within the existing, completed powerhouse at Owen Falls Extension which was financed under the Power III Project.  **Action:** In order to remedy this lack of policy compliance, Management proposes to include full and comprehensive discussions of the Power III and Power IV Projects and their relationship to the Bujagali Hydropower Project. This would be accomplished through

				gali Technical Assistance Project (FY03). The consultation strategy would be implemented by the Ugandan National Environmental Management Agency.
P-IV.5.	Hydrology Debate: In all documentation relating to the Owen Falls projects (i.e., Power II, Power III and Power IV), Management has drawn attention to the nature and seriousness of the hydrological debate. It is most unlikely that additional environmental studies or documentation would resolve the dispute. Because of this uncertainty, a cautious and incremental approach to the extension of Owen Falls capacity has been adopted. The Panel concurs that this approach was and is appropriate.		n/a	Comment: Management notes the finding.  Action: No action required.
P-IV.6.	Safety of Dams: The Panel finds that Management is in compliance with OP 4.37 on Safety of Dams.	3.6, 89-91	OP 4.37	Comment: Management notes the finding of compliance by the Inspection Panel.
				Action: No action required.

## **UGANDA – BUJAGALI HYDROPOWER PROJECT**

**Project Status.** An IDA Partial Risk Guarantee of USD 115 million and IFC support of: (i) an "A" loan of up to USD 60 million; (ii) a "B" loan of up to USD 40 million; and (iii) a risk management instrument of up to USD 10 million for the Bujagali Hydropower Project were approved by a joint IDA/IFC Board on December 18, 2001. The project involves the installation of a 200MW run-of-the-river power plant at Bujagali Falls as well as the construction of about 100 km of transmission lines and associated substations. The latest financing plan envisages that AES Corporation, the private sponsor, will provide USD 111.3 million in equity for the project. Other financiers include the African Development Bank (USD 55 million) and USD 219.5 million from export credit agencies (ECAs). AES will construct the hydropower plant on a build-own-operate-transfer basis. AES Nile Power, the privately owned and operated project company, will sell electricity to the Uganda Electricity Transmission Company under a 30-year Power Purchase Agreement.

Under the original financing plan, the ECAs were jointly providing comprehensive insurance cover to Swedish Export Credit Corporation and Exportifinans who were financing the ECA tranche then estimated at USD 234 million. In January 2002, the Swiss ECA approved its participation in the Project (USD 54 million). In late January 2002, the Swedish ECA decided not to participate in the project because of the country risk and as it apparently already had exposure constraints in Uganda. Similarly, the Norwegian and Finnish ECAs were concerned about the Ugandan country risk, and indicated that they would probably follow the Swedish ECA's decision, which would have resulted in a financing gap of about USD 180 million.

In February 2002, MIGA began actively discussing with the ECAs an option under which MIGA would provide political risk coverage to the lending institutions, Swedish Export Credit Corporation and Exportifinans alongside the ECAs who would provide commercial risk coverage. On May 16, 2002, the Norwegian ECA approved its participation in the project, and on May 30, 2002 the Swedish and Finnish ECAs approved their participation in the project. MIGA has circulated a Board paper to its Executive Directors seeking concurrence for aggregate MIGA guarantees of debt of equity of up to USD 250 million for Breach of Contract coverage, of which up to USD 100 million would be to MIGA's net own account.

The Engineering Procurement and Construction (EPC) contract expired at the end of December 2001. It is currently under renegotiation. In addition to minor changes in its terms, a key change to the contract relates to the new price escalation clause, which has led to an increase of about USD 0.8 million per month in the value of the contract. The EPC contract price is also subject to adjustment for foreign exchange rate fluctuations until financial closure, which is scheduled for the end of June 2002.

No.	Finding	Sec/ Para	Pol- icy	Comment / Action
B.1.	Environmental Assessment:it is evident that extensive environmental studies have characterized the Bujagali EA process. The Panel finds that the EA procedures followed in the preparation of the Bujagali Project are in compliance with the requirements of OP/BP 4.01.	5.2, 112- 121	OP 4.01	Comment: Management notes the finding of compliance by the Inspection Panel.  Action: No action required.
B.2.	Sectoral Environmental Assessment: Thus, since no Sectoral Environmental Assessment has been undertaken, the Panel finds that Management is not in compliance with paragraph 7 of IDA OP 4.01 in this respect.  The Panel 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. To be consistent with IDA policies, a further assessment of the cumulative effects of existing and potential hydropower developments 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.	5.3, 122- 124 and 5.4, para. 136	OP 4.01	Comment: In the context of IDA/IBRD OP 4.01, Annex A, para. 8, a Sectoral EA is "an instrument that examines environmental issues and impacts associated with a particular strategy, policy, plan, program, or with a series of projects for a specific sector (e.g., power, transport, or agriculture); evaluates and compares the impacts against those of alternative options; assesses legal and institutional aspects relevant to the issues and impacts; and recommends broad measures to strengthen environmental management in the sector." As a prime objective, Sectoral EA "evaluates and compares the impacts against those of alternative options"  IFC, which has a significant interest in the Bujagali Hydropower Project, has no requirement for Sectoral EA in its version of OP 4.01. Nevertheless, in recognition of the importance of analyzing the comparative economic, environmental and social impacts of energy alternatives, IFC examined these issues. The "Assessment of Generation Alternatives Uganda Final Report" (Acres International, May 2000) addressed the environmental issues and impacts associated with power generation in Uganda to meet its growing need for electricity. The specific objective of the Acres International May 2000 study was "to provide an assessment of the alternative electric generating projects in Uganda in order for the IFC to determine if such projects are appropriate for developmentand are compliant with IFC environmental policies." Other studies, such as the Hydropower Development Master Plan, November 1997, by Kennedy & Donkin Power Limited, et. al. which

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No.	Finding	Sec/ Para	Pol- icy	Comment / Action
				addressed environmental concerns, were used in this examination. Since the purposes and the resulting analyses of the IFC study and other studies were the same as what one might have expected from a Sectoral EA, IDA Management believed that these studies were adequate to fulfill the objectives of Sectoral EA within IDA/IBRD's OP 4.01, even if there was no particular document entitled "Sectoral EA."  **Action:* Consistent with the proposal of the Panel, the governments taking part in the Nile Basin Initiative (NBI) have requested, and IDA has agreed, to support preparation of an inclusive, participatory and riparian-owned Strategic/Sectoral Social and Environmental Assessment (SSEA) as an element of the work program for the Nile Basin Initiative (NBI). IDA will support this riparian-owned SSEA as part of the strategic planning for the Nile Equatorial Lakes Subsidiary Action Program (NELSAP). The SSEA will evaluate power generation options and associated transmission interconnections to meet these 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 multipurpose projects. The outcome of the process is anticipated to be a power strategy that will put forth the power options, including their economic and engineering feasibility as well as environmental and social impacts, to allow for informed and transparent decisionmaking in the selection of power investments by the Nile Basin riparian countries. The SSEA has an estimated cost of USD 1.0 million and would be an integral part of the NELSAP process. It
B.3.	Cumulative impacts: 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. To be consistent with IDA policies, a further assessment of the cumulative effects of existing and potential hydropower developments 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.  Because Cumulative Impact Assessment is not a requirement of a project-specific EA, a finding of non-compliance cannot be made. But as indicated in Sections 3.6 and 5.3 of this Report, the Panel finds that Management is not in compliance with the OP 4.01 requirement for a Sectoral Environmental Assessment, for which cumulative impact assessment would have been required.	5.4, 125- 138	OP 4.01	also would be a prerequisite to IDA investments in selected power generation facilities under NELSAP.  Comment: The "Assessment of Generation Alternatives Uganda Final Report" (Acres International, May 2000) included a cumulative impact assessment of existing and proposed hydropower projects for the Victoria Nile in Uganda, which also took into account ancillary development and urbanization in the basin. This cumulative impact assessment determined that the construction of multiple dams on the Victoria Nile would have major negative cumulative impacts. The Bujagali Hydropower Project EIA (March 2001), which built upon the May 2000 assessment, concluded that the cumulative impacts of Owen Falls, Owen Falls Extension and the Bujagali Hydropower Facility would be fewer than those of other development scenarios.  With respect to the river hydrology, the "Seventh Report of the International Environmental and Social Panel of Experts," reached an important conclusion for the combined development of Owen Falls, Owen Falls Extension and the Bujagali hydropower facilities (all run-of the river projects): "Because all the impounded water is live storage and because of the rapid throughput of impounded water, river flow downstream of the dam will be essentially the same as if the dam were not there." (p.9). Therefore, the cumulative impacts on hydrology are not significant. Other studies, such as that for suspended sediment during the construction phase presented in the Bujagali Hydropower EIA and the supplementary fisheries study ("Haplochromine Habitat Study," Fisheries Resources Research Institute and WS Atkins October 2001) reached similar conclusions relating to cumulative sediment loads and fisheries impacts.  An indicator of the level of detail in the May 2000 cumulative impact assessment is this finding from the "Seventh Report of the International Environmental and Social Panel of Experts" "In as-

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				sessment of the cumulative impacts of existing and proposed dams, evaluation of the combined operation of Bujagali dam, Owen Falls Dam, and the Owen Falls Extension showed that this would reduce the risk of malaria, bilharziasis and River Blindness. This is an unusual prediction for African dams, but it is supported by the POE and is an important health advantage of the proposed project at Bujagali" (p.5).  Thus, IDA Management believes that the cumulative effects assessment conducted was both adequate and sufficiently detailed to form a basis for decision-making.				
P.4			OD	Action: The NBI has made considerable progress in bringing the Nile riparians 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. A participatory SSEA will be supported as part of the strategic planning for the NELSAP. The SSEA would address future regional power options, which will analyze and rank 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 to proceed with the Bujagali Hydropower Project will serve as part of the information base for the SSEA. See also response to B.2.				
B.4.	Environmental Impacts on Fisheries and Aquatic Systems: The Panel finds that the original fisheries study reported in the EIA was limited but that the subsequent studies that have been undertaken rectify this. Consequently, Management is now in compliance with the applicable provisions of OP 4.01.	5.5, 139- 143	OP 4.01	Comment: Management notes the finding of compliance by the Inspection Panel.  Action: No action required.				
B.5.	Kalagala Offset: In accordance with the interpretation given in the Legal Opinion, the Panel finds that there is no obligation to preserve Kalagala Falls in perpetuity as an environmental offset in the Agreement on Kalagala Offset or the Indemnity Agreement. More importantly, in accordance with the same interpretation, the Panel finds that the GoU has assumed no obligation whatsoever to preserve the Kalagala Falls as an offset. Further, the Panel finds that the lack of a clear and binding obligation on behalf of the GoU to preserve the Kalagala site as an environmental offset in the Project's legal agreements is inconsistent with the Management Response and with Management's statements during Panel interviews.  The Panel finds that Management is not in compliance with OP 4.04 because the Project entails a significant conversion of natural habitats and IDA has failed to ensure the establishment and maintenance of the appropriate and technically justified mitigation measures.		OP 4.04	Comment: Management acknowledges that there is ambiguity in the language contained in the exchange of letters on this subject between Bank staff and the Government on the one hand, and the provisions of the Indemnity Agreement on the other. Management would however explain that supplementary letters of this kind are used frequently in Bank financed operations. In view of this ambiguity, Management agrees that the Government's policy and intentions with respect to the Kalagala offset should be clarified.  Action: The Government has furnished a clear commitment to abide by the provisions of the Indemnity Agreement, and further clarify the Government's intention to set aside Kalagala entirely to protect its natural habitat, environmental and spiritual values, and for tourism development, and not use the site for hydropower development purposes.  The letter is provided as Annex 2. It notes that: "I am writing to confirm the Government's intentions with respect to the Kalagala Falls site. The Government will set aside Kalagala exclusively to protect its natural habitat, environmental and spiritual values and for tourism development, and not subject the site to hydropower development, as required by OP/BP 4.04 on Natural Habitats."  "To this end, we have established a task force of stakeholders to identify sustainable investment programs to facilitate				

tull and natural habitat values. We have requested IDA financin to develop this plan further.'  Annex 2 also provides the Governments agreed revision the test of the Indemnity Agreement. The revised text, in the replacement section 3.08a, reads:  "Uganda will not develop the Kalagala Falls site exclusively to pretent in abitat and environmental and spiritual values a to develop tourism, and will not develop retingly and signe as soon as possible.  8.6. Adequacy of Kalagala Offset: The Panel also reviewed the technical adequacy of the Kalagala offset will make the provisions, as OP 4.04 calls for the establishment of the "ecologically similar protected area." The Requesters brought to the Panel's attention the claim that the Bujagal IEA does not give attention to the blodiversity present in the islands that will be fooded by the Project. The Panel reviewed the Bujagal IEA are found that the analysis of fervication of the Salagala site. If a secondary is the project is the panel reviewed the Bujagal IEA are found that the analysis of tervication of the Salagal and Set will impact of the March 2001 report in the Panel reviewed the Bujagal IEA are found that the analysis of tervication of the Salagal and Set will milipare and idea in the salagal site in order to ensure that Bujagal it shale associations. From the IEA is thus impossible to determine whether or not the IKA standard of Set will indeed protect plan communities and associations. From the IEA is thus impossible to determine whether or not the IKA standard of Set will indeed protect plan communities and associations. From the IEA is thus impossible to determine whether or not the islands of Bujagal. Moreover, no separate EIA was performed for the Kalagala site in order to ensure that Bujagal it shale and Kalagala is a site a coologically similar and the latter will be an adequate offset of the IKA standard of the Vision of the Kalagala site in order to ensure that Bujagal it and Kalagala is a site accologically similar and the latter will be an adequate o	UGA	NDA - BUJAGALI HYDROPOWER PROJECT	 	
tual and natural habitat values. We have requested IDA financin to develop this plan further.*  Annex 2 also provides the Government's agreed revision the text of the Indemnity Agreement. The revised text, in the revised text, in the revised text, in the revised text in the revised text in the revised plant of the Indemnity Agreement of the Association.* The Indemnity Agreement wall not develop to further, and will not develop to finity adjusted to develop tourism, and will not develop test for power generation without the Agreement of the Association.* The Indemnity Agreement will be revised accordingly and signe soon as possible.  8.6.  Adequacy of Kalagala Offset: The Panel also reviewed the technical adequacy of the Kalagala offset will not the Calamin that the Bulgala IEA does not give attention to the biodiversity present in the islands that will be flooded by the Project. The Panel reviewed the Bulgala IEA does not give attention to the biodiversity present in the islands that will be flooded by the Project. The Panel reviewed the Bulgala IEA does not give attention to the biodiversity present in the islands that will be flooded by the Project. The Panel reviewed the Bulgala IEA does not give attention to the biodiversity present in the islands that will be flooded by the Project. The Panel reviewed the Bulgala IEA and found that the analysis of lerication of the Panel State of the Panel State of the Bulgala IEA and found that the sandysis of lerication of the Panel State of the Panel State of the Bulgala IEA and found that the sandysis of lerication of the Panel State of the	No.	Finding	 -	Comment / Action
viewed the technical adequacy of the Kalagala off- set provisions, as OP 4.0 calls for the establish- ment of the "ecologically similar protected area."  The Requesters brought to the Panel's attention the claim that the Bujagali EIA does not give atten- tion to the biodiversity present in the islands that will be flooded by the Project. The Panel reviewed the Bujagali EIA and found that the analysis of ter- testrial ecosystems performed in it is limited. The focus was on species listing and identification of areas to be inundated rather than on mapping plant communities and associations. From the EIA it is thus impossible to determine whether or not the Kalagala site of determine whether or not the Kalagala offset will indeed protect plan com- munities equivalent to, if not, identical to, those on the islands of Bujagali. Moreover, no separate EIA was performed for the Kalagala site are ecol- ogically similar and the latter will be an adequate offset for the loss of the former.  18 Bujagali Hydropower Sites in Uganda" (A.H. Karatunga, Interna- tional Institution for Aerospace Survey and Earth Science, 1997), which is referenced in the March 2001 EIA, concluded that the be jagali site is similar to and may be less ecologically significant that respect to the March 2001 EIA and referenced the Kalagala site in order to en- sure that Bujagali is the Kalagala site are ecol- ogically similar and the latter will be an adequate offset for the loss of the former.  18 Bujagali Hydropower Sites in Uganda" (A.H. Karatunga, Interna- tional Institution for Aerospace Survey and Earth Science, 1997), which is referenced in the March 2001 EIA and referenced the Kalagala site, including consideration of terrestrial ecosystem and Malagala sites. These are:  18 Bujagali Hydropower Sites in Uganda" (A.H. Karatunga, Interna- tional Institution for Aerospace Survey and Earth Science, 1997), which is referenced in the March 2001 EIA concluded the Kalagala site is in order toe- sure that the Bujagali and Kalagala and Kalagala sites. T				Annex 2 also provides the Government's agreed revision to the text of the Indemnity Agreement. The revised text, in the replacement section 3.08a, reads:  "Uganda will 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 without the Agreement of the Association."  The Indemnity Agreement will be revised accordingly and signed
Action: No action required.	B.6.	viewed the technical adequacy of the Kalagala off-set provisions, as OP 4.04 calls for the establishment of the "ecologically similar protected area." The Requesters brought to the Panel's attention the claim that the Bujagali EIA does not give attention to the biodiversity present in the islands that will be flooded by the Project. The Panel reviewed the Bujagali EIA and found that the analysis of terrestrial ecosystems performed in it is limited. The focus was on species listing and identification of areas to be inundated rather than on mapping plant communities and associations. From the EIA it is thus impossible to determine whether or not the Kalagala offset will indeed protect plan communities equivalent to, if not, identical to, those on the islands of Bujagali. Moreover, no separate EIA was performed for the Kalagala site in order to ensure that Bujagali site and Kalagala site are ecologically similar and the latter will be an adequate		The Bujagali Hydropower Project EIA (March 2001) summarizes and cross-references detailed information on the terrestrial ecosystems at Bujagali Falls as the basis for its conclusions. For example, the Evaluation of Environmental Impacts of Bujagali and Kalagala as Potential Hydropower Sites in Uganda" (A.H. Karatunga, International Institution for Aerospace Survey and Earth Science, 1997), which is referenced in the March 2001 EIA, concluded that the Bujagali site is similar to and may be less ecologically significant than the Kalagala site, including consideration of terrestrial ecosystems. Additional studies prior to the March 2001 EIA and referenced therein also compare the ecological characteristics of the Bujagali and Kalagala sites. These are:  Bujagali Hydroelectric Project Environmental Impact Assessment Inception Report (WS Atkins, July 1998, Volume 2);  Bujagali Hydroelectric Project Environmental Impact Statemen (WS Atkins, 1999); and  January 2000 Cumulative Effects Assessment, cited in Bujagali Hydroelectric Power Project Environmental Impact Statement Final Report (WS Atkins, September 2000).  In the "Assessment of Generation Alternatives Uganda Final Report" (Acres International, May 2000), comparative tables illustrate that the Bujagali and Kalagala sites are very similar (see tables on pp.8-4 and 8-21). The "Haplochromine Habitat Study" (Fisheries Resources Research Institute and WS Atkins, October 2001), the supplementary fishing study requested by IDA/IFC, also concluded that both sites had similar habitats.  The ecological adequacy of the Kalagala Falls offset is confirmed in the "Sixth Report of the International Environmental and Social Panel of Experts" (February 9, 2000), which states that Kalagala Falls "deserve protection, and if the vegetation on the islands and adjacent river bank can be protectedthe area could be an important scenic resource and a significant part of Uganda's natural heritage" (p.8). This report further states (p.10) with respect to baseline ecosystem surve

No.	Finding	Sec/ Para	Pol- icy	Comment / Action
B.7.	Safety of Dams:the Panel finds Management in compliance with OP 4.37 on Safety of Dams.	5.7, 159	OP 4.37	Comment: Management notes the finding of compliance by the Inspection Panel.
				Action: No action required.
B.8.	The demand forecast range is too narrow		OP	
	1. Load Forecast Comparisons: In view of the 'high risk/high return' nature of the Project, and the central role of the load forecast – not least because, if the forecast fails significantly on the low side, all the dynamic issues of affordability come crowding in, while if it fails on the high side it represents significantly greater access to electricity and poverty reduction - it might have been anticipated that the process would take special care to address the dangers of a relatively narrow range between the high and low load forecasts. In the Panel's view, there is little evidence to suggest that it did so. In this sense, it did not fully comply with paragraph 6 of OP 10.04, which stresses that "the economic evaluation considers the sources, magnitude, and effects of the risks associated with the project by taking into account the possible range in the values of the basic variables and assessing the robustness of the project's outcome with respect to changes in these values."  2. In the Panel's view, a wider range on the demand forecasts would have stretched the resulting range of estimated EIRR values that emerge from the Monte Carlo risk analysis. This would have more appropriately reflected the range of risks and rewards, facilitating risk mitigation, consistent with OP 10.04's, paragraph 6 on risk.  3. In the Panel's view an analysis of the sensitivity of the key findings of the due diligence to a widening of the load forecast ranges would have been and could still be appropriate and valuable, and was needed in order fully to satisfy the requirements of paragraph 6 (Risk) of OP 10.04. This is not least because it might help in identifying key areas in which risk mitigation activities might be undertaken, refined or enhanced.  4. Least Cost Scenarios w/Bujagali: In the Panel's view, a wider range on the load forecasts would have enabled a more robust examination of the risks and rewards associated with the Bujagali Project, with respect to both hydrologies and timing. The narrow range limits the abilit		10.04	Comment: Management agrees with the Panel that the demand forecast range is narrower than usual. Management interpreted paragraph 6 of OP 10.04 where it calls for using 'the possible range in values" in terms of finding a range of values for most variables that captures about 80% of the probability of occurrence. The demand forecast range for Uganda is a result of a thorough and rigorous technical methodology based on these ranges for the factors that determine demand growth.  The adopted range of values was selected on the underlying assumption that the project would be carried out in a reasonably well-managed macro-economy and power sector. A completely separate – and much lower - demand forecast range, based on a much more pessimistic range of assumptions (an economic reversion scenario), was considered inappropriate. Uganda has a track record of sound macro-economic management dating back over a decade. Currently, consistent with the economic outlook underlying the Uganda Country Assistance Strategy, there are no ground to assume a reversion scenario. Thus, a reversion scenario as a downside risk of the present policy framework was not carried out because the assumptions underlying a reversion scenario are not simply lower probability extensions to the ranges of assumptions underlying the "good management" scenario.  Even though the low end of the range of variables in the existing low demand growth projection showed the project's risks clearly, Management agrees with the Panel's view that had the lower demand forecast been lower still, there would have been a reduced lower bound of the EIRR, and the economically least-cost commissioning date of the Bujagali Hydropower Project on the yel lower low demand case would be after 2010. Also, the financial equilibrium of the power sector could be impaired, and the cost-risk advantage for proceeding now rather than delaying a decision would have been at least narrowed, but most likely not eliminated unless the demand projections were very much lower increased

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				ready in place, such as a tariff leveling mechanism, PPA payment caps, scope for reshaping of PPA payments, debt relief from old and poorly performing loans, and support for a high quality privatization of the distribution sub-sector, with clear commitments agreed between the Government and the private operator to substantially increase viable connections to the power system and to improve cash collections and reduce system losses.  **Action:* Management plans to closely monitor electricity demand growth, billing and collection management, and tariff levels under the ongoing supervision of the Bujagali Hydropower and Power IV Projects. In addition, the proposed Bujagali Technical Assistance Project (FY03) will include power sector financial and contractual advisory services to the Government as well as assistance in developing a contingent liabilities management program with particular emphasis on the Bujagali Hydropower Project. These actions will help to develop an early warning system on the project and power sector such that financial and other issues can be identified at an early stage, and measures can be undertaken appropriate to
B.9.	Institutional, Tariff and Affordability Risks:		OP	the circumstances.
	1. In the Panel's view, given the importance of distribution sector performance for new connections and non-technical loss reduction, the institutional risk to sustainability through delayed distribution, privatization, and/or underperformance, should have been more thoroughly explored. Consequently, the Bank is not in full compliance with paragraph 5 of OP 10.04.	6.1, 162- 170	10.04	Comment: Concerning the statement that the robustness of the project's affordability is missing from the economic appraisal summarized in the SEDD, Management wishes to clarify that the SEDD is not required or intended to satisfy any Bank OP. In the case of Bujagali, IDA and IFC prepared and made available to the public ar extensive economic analysis of a power project pre-Board, prior to completion of the IDA appraisal process. As agreed as an outcome of the July 2000 NGO Forum held in Washington D.C, the SEDD was issued into the public domain (IFC website) to give interested members of civil society a greater opportunity to comment on the
	2. Tariffs and Affordability: In the Panel's view, what the analysis suggests is that even if all the underlying assumptions hold (the achievability of the load forecast, including the price responsiveness of consumers, the success of the distribution privatization, the exports available and sold, etc.) there is still a potentially serious affordability problem that could be addressed through financial arrangements that include debt restructuring, and tariff leveling mechanisms. The analysis does not address the net economic costs and benefits of these devices, although it would be appropriate to do so since they might add to the net costs of the Project.  In the Panel's view, because it represents a significant risk to the affordability of the Project, it [ef-	0.5, 177- 184		work.  Section V.B of the PAD reflects the outcome of the IDA appraisal process (and not the SEDD), discusses these risks in som depth and quantifies the possible financial consequences of reduced demand growth on the financial equilibrium of the power sector.  Management clarifies that debt restructuring and tariff leveling mechanisms are financial management devices that redistribute costs over time and between parties. These measures reflect historical performance issues and the increasing future cost of power in Uganda – regardless of the generation source. They would be common to almost any power system restructuring and development program in Uganda, hence they are not necessarily project-specific, nor do they increase the social economic resources of any project. Management wishes to highlight that the impact of the Government's financial restructuring plan on tariff levels.

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	fects of deterioration (or an appreciation) in the USh/USD exchange rate] should have formed part of the risk analysis and/or discussion relating to affordability in Annex 4 of the PAD.  3. In the Panel's view, an indication of a thorough examination of the institutional risk of a delayed or under performing privatization of the distribution system, and its impact on the robustness of the Project's affordability is missing from the economic appraisal summarized in the [Summary of Economic Due Diligence], although this was needed for full compliance with paragraphs 5 and 6 of OP 10.04. Such an appraisal would have given some indication of appropriate risk mitigation activity and might also have inspired greater confidence in the findings about the Project's affordability.	6.8, 210- 216		and on the establishment of a sinking fund in order to smooth out tariffs (and thus support the affordability of electricity) has been described in the PAD on pages 21, 22 and 25-29. The detailed assumptions for the projections are provided on pages 84-88 of the PAD.  The following analyses were carried out under the supervision phase of the project (i.e., following Board approval), since due diligence is an on-going process. The specific issues concerned were:  • What could be the exposure of the Government to the Bujagali PPA payments if GDP growth were only about 3% per year;  • If demand were below the base case and tariff increases were needed to maintain power sector revenue adequacy, what would be the further impacts on demand; and  • Are the present and forecasted tariffs "affordable"?  Accordingly,  • A scenario was constructed to determine the potential public sector liability if GDP growth were to be only 3% per year, domestic demand for electricity were correspondingly much lower than in the base case (about 20% less by 2006 and one-third less by 2011) and end-user tariffs could not be increased. The results of this analysis indicated that by 2011 the potential call on the general revenue of the Government would be about 1.3% of year 2000/2001 tax revenue or 1% of projected year 2011 tax revenue.  • Another analysis was undertaken to assess the impact of a 10 percent lower level of electricity demand relative to the Base Case in respect of the tariff increases needed to sustain adequate revenues to meet the power sector's obligations, and the consequential further reduction of demand due to the increasing tariffs (i.e., price and affordability impacts of demand well below the expected level). These results showed that in 2007, with Bujagali commissioned and 10% lower demand, end-user tariffs would need to be increased by about 10.6%, and the induced reduction of consumption would be 49 GWh, or about 3% of the original demand level. The analysis demonstrates that "affordability" moderately improves o

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				prove sector efficiency (reduce losses, improve collections and extend grid connections) as per the performance based concession contracts.  It should be highlighted that UEB's poor performance bottomed in 1998, with a steady trend of billing improvement since then, and introduction of efficiency improvements such as the reduction in staff, etc.  In respect of exchange rate risk on affordability, the Panel's comment that inflation accompanies devaluation implies that nominal incomes also inflate, thus maintaining affordability of electricity. Real income may well increase at the same time inflation and devaluation occur, preserving affordability. Since all of Uganda's power supply options are about equally dependent on imported inputs, any investment in generation capacity would cause Uganda to face the risk of exposure to exchange rate movements. Hence the impact of devaluation would be mitigated by implementing the least-cost option for power supply.  **Action:** Through IDA's ongoing macro-economic dialogue, Management will monitor the exchange rate and the affordability of electricity. Similarly, through supervision of the Bujagali Hydro-power and Power IV Projects and the proposed Bujagali Technica Assistance Project (FY03), the evolution of distribution system development, electricity consumption and tariff levels will be monitored at regular intervals to ascertain whether remedial measures are warranted. Finally, Management proposes to enhance the collection and analysis of household income and expenditure data vis
B.10.	Examination of Power Generation Alternatives  1. Alternatives – Generation Options: In the Panel's view, this evidence that alternatives to Bujagali had not been considered (as opposed to having evaluated and rejected them), confirms the importance of IDA's responsibility to scope and evaluate them thoroughly. This is clearly required by OP 10.04: "Consideration of alternatives is one of the most important of features of proper project analysis throughout the project cycle. To ensure that the project maximizes net present value, subject to financial, institutional, and other constraints, the Bank and the borrower explore alternative, mutually exclusive, designs."  2. Least Cost Scenarios w/o Bujagali: The Panel finds that in its treatment of geothermal energy, Management has only partially complied with OP 10.04.  3. In the Panel's view, it is regrettable that the 1999 ESMAP recommendation was not followed. Had it been so, better information on costs and possible environmental and social impacts would have been assembled and available for use in the least cost expansion analysis, thus enabling a more thorough consideration of alternatives, consistent with OP 10.04.	7.2, 233- 242	OP 10.04	Comment: Analysis of Alternatives: The Acres Report of November 2001 is the most comprehensive options analysis undertaken to date for developing Uganda's power generation capacity. The depth and accuracy of such analyses depend on available information at the time the project analysis is undertaken. International experience indicates that many potential generation capacity options are rarely brought up to feasibility level of preparation because of the time and expense involved. Many options developed to the pre-feasibility level are frequently included in least-cost planning studies. Best efforts were made to assess the appropriateness of geothermal energy as a practical alternative to hydropower, based on available information and experience elsewhere with geothermal at the time of due diligence. Management believes that the proposed development program and costs cited in the Acres Report of November 2001 for implementing a geothermal program are realistic. The issue is that the available information about geothermal is too limited on which to base a decision about deferring a project such as Bujagali, which is ready to implement, has an economic advantage and is anticipated to meet projected demand.  Follow-up to ESMAP Study: In line with the recommendations of the 1999 ESMAP study; the Government sought international assistance (including the United States Department of Energy and others) to finance a Geothermal Exploration II Project as a follow up to the 1992 Geothermal exploration I Project funded by the UNDP, the OPEC Fund, and the Governments of Iceland and Uganda. In August 2000, the GoU signed an agreement with the AfDB for an "Alternative Energy Resource Assessment and Utilization Study." This study will carry out the processing, interpretation and evaluation of existing geologic geochemical and geophysical data, and Phase 2 will prepare feasibility studies and market

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				(Katwe, Kibiro and Buranga) in Western Uganda for power generation. Selection of the geothermal consultants is under way for this AfDB supported project.			
				Status of Geothermal Development: The status and limitation, to date, in geothermal development in Uganda are discussed in a paper published in the Proceedings of the World Geothermal Congress, Kyushu-Tohoku Japan, June 2000 by Edward Isabirye Mugadu of the Uganda Department of Geological Survey and Mines, Entebbe. In discussing the fields at Katwe, Kibiro and Buranga, the paper concludes as follows:			
				"Although all the three areas above are potential geothermal targets, some more work is required to raise the confidence level of the results, especially those of Katwe and Buranga. [] A selection of one of the three areas for detailed studies is not possible at this stage without carrying out geophysical investigations to ascertain the size and structural characteristics of the geothermal reservoirs [] From the preliminary results of Geothermal Energy Exploration Project (GEEP) I, the chemical composition of the thermal waters from Katwe and Buranga shows that the anions of CI, HCO <sub>3</sub> and SO <sub>4</sub> occur in about equal proportions. This is an unusual composition of geothermal water whose utilization may prove problematic [] the possibility of intercepting more dilute fluids at depth cannot be ruled out [] Finally, the failed projects in this sector of the Rift System underscore the need to respect the role scientific research plays as a basis for successful technological and engineering design. It can only be expensive in terms of time []"			
				Need for Detailed Investigation Program: The above comments indicate that, as an alternative to the rapid scoping study proposed in the Panel Report Section 72, para 24, it may be more useful to proceed directly to a detailed program of field based investigations complemented by geothermal exploration and drilling to more comprehensively assess this resource and evaluate its potential at the national and local level for commercial power generation. As the Panel's Report notes in Section 7.1.3, para 231, "field investigations to ascertain the productivity of the geothermal source have still to be carried out".			
				<b>Action:</b> Since other sources of funding for geothermal exploration and drilling have not been forthcoming, IDA proposes to include a component in the proposed Bujagali Technical Assistance Project (FY03), to assist the Government with these activities in Western Uganda assuming that the ongoing technical and market studies financed by the AfDB determine that it is an economically and financially viable option for power.			
B.11.	Externalities  White Water Rafting: Since the loss of white water rafting is part of the costs of the Project, and since this is an issue around which much controversy centers, in the Panel's view, the SEDD should have presented the underlying assumptions (particularly those involved in the Monte Carlo analysis) and the findings in a more transparent fashion. Consequently, full compliance with paragraph 8 of OP 10.04, which requires that "the economic evaluation of the Bank-financed projects take into account any domestic and cross-border externalities," has not been demonstrated.	6.4, 174	OP 10.04	Comment: As mentioned above, the SEDD is not required or intended to satisfy any Bank OP; it was a document issued on IFC's website prior to completion of IDA appraisal which was intended to help provide more information to the public on the economics of the project. The PAD describes the outcome of the IDA appraisal process. In the PAD, Annex 4, paragraphs 24 and 25 provide a description of the main assumptions and conclusions of the whitewater rafting analysis. The main conclusion is that: "A separate analysis conducted on the value of reserving the Bujagali rapids for white-water rafting rather than power supply indicated that there are no realistic circumstances in which it would be economic to do so." The EIRR analysis does include the loss of white-water rafting value-added as a charge against the project. Finally, the Project File contains a detailed paper addressing the requirements			

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				of OP 10.04 paragraph 8 in respect of white-water rafting, and is the background material supporting PAD Annex 4 paragraph 25.
				Action: The report is in the Project File.
B.12.	Disclosure of Information – Economics and Financing: In the Panel's view, pursuant to BP 17.50 and the OM on Disclosure of Factual Technical Documents, the factual technical documents, as feasibility studies, including cost-benefit analyses, should be disclosed to the public, unless the restrictions set forth in the paragraph 3 of the OM on Disclosure would apply. The Panel did not receive any evidence that these restrictions were applicable to the Acres Report. The Panel finds that Management is not in compliance with IDA's Disclosure Policy because of its refusal to release the Acres Report on Economic Review of the Bujagali Hydropower Project.	9.2, 326- 337	BP 17.50	Comment: Management would like to note that the provisions of BP 17.50, and the OM on Disclosure of Factual Technical Documents apply to documents produced or owned by the Bank. However, under the Bank's Disclosure Policy, "some documents and information are provided to the Bank on the explicit or implied understanding that they will not be disclosed outside the Bank The Bank must treat such information accordingly. A related consideration is the obligation to respect property rights over documents held by the Bank but owned by, or jointly with, other parties. The Bank, as a legal matter, does not publish such documents, nor does it distribute them to the public without the permission of the owner of such documents."  Management wishes to highlight that the Acres Report is owned by AESNP and IFC and therefore the restrictions set forth in paragraph 3 of the BP on Disclosure which states that, "the only factual technical documents the Bank does not release are those that (a) involve confidential material or material that could compromise government/Bank interactions, or (b) are directly related to internal Bank decision making."  This is a private sector project. IFC's Policy on Public Disclosure (September 1998), which is publicly available on IFC's external website, states that "IFC recognizes and endorses the fundamental importance of accountability and transparency in the development process. Accordingly, it is the Corporation's policy to be open about its activities, to welcome input from affected communities, interested members of the public and business and to seek out opportunities to explain its work to the widest possible audience." As IFC's operations all involve private sector sponsors, the Policy also states that "the Corporation's approach to information about its activities embodies a presumption in favor of disclosure where disclosure would not materially harm the business and competitive interests of clients."  IFC's Policy on Public Disclosure articulates principles for nondisclosure of cer

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		raia	lcy	not disclosed and remains confidential to this date." The SEDD states the major findings of the Acres Report, and thus achieves a balance between protecting client confidentiality and openness.
				<b>Action:</b> No action proposed, as AES has confirmed, in its letter dated June 3, 2002, that it does not agree to the release of the Acres Report.
3.13.	Power Purchase Agreement and Executed Agreements – Specific Issues: Concerns related to transmission, parent company support and capacity charges are of secondary importance as compared with the strategic risks considered below. Nevertheless the Panel believes that their treatment in the Executed Agreements alone, if not rectified elsewhere, could increase risk for the power purchaser and their guarantors.	6.6.1, 185- 189		Comment: Transmission: In line with the Panel's findings, the parties have endeavored to achieve equitable risk allocation consistent with the objective of mobilizing private capital. The sector has been unbundled into generation, transmission and distribution entities, wherein UETC is responsible for the development, operation and maintenance of the transmission system in the country. This is essential for ensuring optimal operation of the transmission system. In order to ensure that there is no mismatch between the construction of the 100 km 220 kV transmission line additionally required for the evacuation of the power from the Bujagali Hydropower Project and the commissioning of the power plant, the financing and construction of the line has been included as a part of the Bujagali Hydropower Project and AESNP's obligations. UETC is thus not exposed to the financing and construction risk associated with the transmission line which will be built, together with the hydropower facility, as apart of the turnkey construction contract for the Bujagali Hydropower Project.  Parent Company Support: The fundamental nature of a limited recourse structure is to limit the flow of liabilities from the project company (i.e., AESNP) to the parent (or sponsor), in this case AES. Most often, the parent's financial support terminates at about the time the project commences operation. In the Bujagali Hydropower Project, AES will also backstop the obligations of its wholly owned operating subsidiary. These obligations represent a significant long-term commitment on the part of AES to the Bujagali Hydropower Project.  Capacity Charges. The proportionate penalty scheme for lower than specified availability is meant to deal with scenarios were the plant availability of Bujagali Hydropower Project is somewhat impaired. This is a rare occurrence in hydropower projects once they are successfully commissioned. A prolonged/sustained non-performance by AESNP during constructior and operation of the plant under the PPA/IA does provide the
3.14.	Power Purchase Agreement and Executed Agreements – Strategic Risks/Affordability	6.6.3- 6.6.6,	OP 10.04	Action: No action proposed.  Comment: The risk allocation embedded in the project agreements reflects a negotiated arrangement between the GoU and
	Benefits: The question for the Panel, however, in relation to the Request for Inspection is whether the Executed Agreements are satisfactory in their response to the strategic risks - which in the end may be risks for all stakeholders, including the people of Uganda, or whether more could have been done to mitigate them whilst preserving the	192- 202	.3.37	AESNP for developing, financing, and constructing the plant over 44-month and operating it for a period of 30 years. These arrangements are essential to mobilize private capital for the project While capacity payments are only payable during the operational phase, significant risks remain in the developing, financing and construction phases of the project.  As in the case of the Bujagali Hydropower Project, the appo
	potential benefits. In the Panel's view, the strategic risks just examined in relation to the PPA suggest the value of additional risk mitigation measures beyond those already provided for.			tioning of risks is essential in private power projects where independent regulation, commercial decision making and participation of the private sector have only recently been introduced.  While the long term objectives of the Bank and the government are to progressively transfer more risks to the private sector as suggested by the Panel's Report, this can be only achieved af

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	By the reduction of uncertainty for both sides, the total of these costs should be minimized and the prospect that the Project would be able to deliver its benefits would be increased, in line with the approach to risk mitigation and sustainability recommended in OP 10.04. As it is, the Panel concurs with the PAD that this is a high risk/high reward project for Uganda, with the rider that the risks may come early and the rewards late. In summary, the Executed Agreements generally address and allocate risks appropriately and the provisions generally reflect good international practice. Specific questions arise in respect of treatment in the Agreements of responsibility for transmission and UETC's role; the scope of Parent Company responsibility; and particular aspects of the capacity payment. At a strategic level, serious risks remain for the purchaser and their guarantors, arising from demand shortfall and/or non-affordability. It is possible that further provision to mitigate those risks could have been – and might still be - made in the Agreements.	Para	icy	ter there is a credible history of commercial operation of the sector corresponding development in the legal, institutional framework as well as the improved credit rating of the country and the utility, as recently evidenced even in developed countries. The project agreements envisage that the government guarantee of UETC obligations would be eliminated as soon as it achieves a local currency investment grade rating.  If the private sector were to assume significant market risks as suggested in the quoted paragraphs, then it would amount to what is commonly termed as "merchant risk". Projects with "merchant risks" borne by private investors have been implemented in very few countries. In a sector which is on the verge of being privatized and has only been commercially operational for a couple of years, as is the case in Uganda, merchant risks are still largely undefined and beyond the scope of risks which can be reasonably borne by private investors. The Bujagali Hydropower Project's risk allocation is typical of private-public partnerships. Over the medium term as the private sector establishes itself, the GoU has envisaged phasing out the single buyer (UETC) in favor of the private sector. Under such an arrangement, the private sector in Uganda may also take an increasing share of market risks.
B.15.	Economic Appraisal and Project Risks: In the Panel's view, however, if the Project is a high risk-high return Project, as described in Section V.E. of the PAD, it is inconsistent that the Risk/Risk Mitigation table on page 46 of the Bujagali PAD should fail to describe any of the risks as 'high', instead listing them all as 'substantial' or 'moderate.'	6.7, 203- 209	PAD, Sec. 5, Sustai nabil- ity and Risks	<b>Comment:</b> As noted by the Panel, Section V of the PAD provides a detailed analysis concerning why Management considers this project high-risk, high-return. In the table on page 46, Management has assessed and rated each of the project risks on an individual basis. When assessing the combined risks of the project, however, Management has determined the project to be high-risk, high-return. Thus, Management concurs that the "Overall Risk Rating" on the last line of the Table should have indicated a consolidated project rating of "high", instead of "substantial". <b>Action:</b> No action envisaged. The PAD was issued to the Board in mid-November 2001 and cannot be revised.
B.16.	Social Compliance – RAP –  Socio-economic Survey: In brief, the Panel finds that the socio-economic survey requirement may have been met in the formal sense that surveys are mentioned and ultimately carried out, but there is no real evidence of their use or utility in planning. Thus, the requirements of OD 4.30 have been met in respect of process but not in respect of substance.  Overall: In conclusion, although the RAP component of the RCDAP as updated in the EIA of March 2001 may be regarded as formally in compliance with the provisions of OD 4.30, there are important requirements still to be met. This is particularly true of those that are related to valuations and payment for the crops, which continue to be disputed by a significant number of affected people.	8.2, 252- 260	OD 4.30	Comment: Management notes the finding that the RAP component of the RCDAP may be regarded as formally in compliance with the provisions of OD 4.30. At the outset of involvement in the Bujagali Hydropower Project, staff social specialists found the socio-economic survey to be inadequate. An adequate baseline survey, reflecting pre-project conditions, had been precluded, because AESNP had already initiated land purchase surveys. This activity had triggered in-migration and local speculation in land and crops. Thus, the baseline conditions by which to gauge impacts on income as a result of land acquisition and to identify economically vulnerable people had become skewed. Upon the request of staff social specialists, the sponsor carried out a second census and a retrofitted socio-economic survey to gather basic demographic and income data. In addition, the social specialists requested that the sponsor perform a house-by-house follow-up to identify vulnerable households and those that would experience significant economic impact. The vast majority of those affected lost very small plots of land (less than 0.1 ha). Despite the weakness of the sponsor's initial surveys, these additional studies were done to ensure full compliance with OD 4.30.  Crop valuations were based on a study carried out by qualified agroeconomists. The GoU took action to limit crop speculation and established a cut-off date for new planting, which was made public. Nevertheless, it was difficult to stop the momentum of speculation. On the basis of IFC and IDA experience, it is not un-

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				usual for expectations to be high and for disputes to arise in such a situation, even when appropriate steps are taken.  **Action:* AESNP will be requested to carry out focused surveys, during the construction phase, to support design, implementation and monitoring of relevant components of the CDAP. During IDA supervision, following financial close, IDA will revisit the crop payments with assistance from PAPs, PAP's legal counsel, Witness NGO and local land commission authorities to identify and resolve any cases where legitimate, non-speculative crop payments were not made. IDA supervision showed that, as of April 2002, only 5 of about 4,000 compensation cases for the hydropower facility were disputed or outstanding. IDA will continue to monitor this issue and will inform the responsible parties of any problems identified.				
B.17.	Social Compliance – CDAP: The Panel finds that the CDAP does not meet the requirements of OD 4.30 because it is weak and sketchy in the extreme; it focuses almost entirely on short-term exercises; its targets are poorly laid out; and it makes no significant or systematic effort at achieving long-term poverty alleviation. It does not adequately address the issue it raised initially in the CDAP regarding the development of safety mechanisms for people who experience difficulties after the compensation and resettlement process. Most of the resources are directed to short-term construction projects rather than institution building or social fundamentals. Further, the net present value of the resources to be contributed over a 35-year period seems very low. The CDAP is, therefore, not in compliance with IDA's policy on Involuntary Resettlement.	261- 273	OD 4.30	Comment: As the Panel notes: "the Panel concludes that, with few exceptions, most of the people resettled ended up not worse off, but better off than they were prior to their physical relocation and, in this sense, the main objective of OD 4.30 was achieved".  A CDAP is not an instrument required by OD 4.30. It represents an attempt to develop best practice over and above the safeguard provisions of the OP, the formal requirements of which were met by the RAP.  Action: IDA will continue supervision to ensure that required RAP actions are met and that the best practice objectives of the CDAP are achieved.				
B.18.	Process Compliance and Implementation and Compensation of Land and Crops: In the Panel's view, the initial implementation of the RAP had serious problems, especially in the determination of legitimate claimants and in the valuation of land and crops. In this sense, it is not in compliance with the requirements of OD 4.30. Nonetheless, the Panel concludes that, with few exceptions, most of the people resettled ended up not worse off, but better off than they were prior to their physical relocation and, in this sense, the main objective of OD 4.30 was achieved. At the same time, this does not preclude the possibility that some affected people may have been harmed.	8.4- 8.5, 274- 300	OD 4.30	Comment: Such conflicts are not unusual during implementation of RAPs and this is why grievance procedures are provided.  Action: IDA will review this issue as an element of supervision, consistent with B.17 above. Supervision will include field visits to determine if specific parties have been harmed and any such issues identified will be brought to the attention of the project sponsor.				
B.19.	Compensation for Tourism: In failing to ensure that compensation was paid, and/or rehabilitation was provided, to people who will lose their primary sources of income as a result of the Project's impacts on the tourist industry, the Panel finds that Management is not in compliance with OD 4.30.	8.6, 301- 307	OD 4.30	Comment: Loss of tourism income and employment was dealt with in two ways: (1) at the level of the tourism enterprises or operators; and (2) at the level of project-affected individuals deriving income from tourism. At the enterprise level, the IFC loan agreement provides, as a condition of disbursement, that mutually satisfactory Memoranda of Understanding (MOUs) will be signed by AESNP and tourism enterprises affected by the project. One of the five tourism operators has already signed an MOU. At the level of individuals affected by loss of employment, AESNP will give first priority to the employment of economically displaced individuals, as part of its overall commitment to employing the local population. The sponsor has an ongoing process in place to identify individuals affected by loss of employment, including tourism.				

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				The long-term outlook for employment in the tourism industry is positive in light of proposed tourism development in the circuit between the Bujagali dam and Kalagala Falls, where investment in tourism is being actively promoted (see B.5).
				Action: IDA will verify that the five MOUs are signed with tourism operators and monitor implementation of the MOUs' provisions. During supervision, IDA will work with IFC to reiterate to the sponsor its commitment to proactively identify and give first priority for employment to people affected by project-induced loss of income/employment. The sponsor will monitor, track and report on all cases where employment priority has been given to those economically displaced. IDA will also examine other measures that could be taken to address re-employment of Ugandan citizens affected by loss of tourism-related jobs.
B.20.	Cultural Property Management: In short, while there are irresolvable issues related to cultural property management, it appears that the sponsor has acted responsibly in consulting local people, religious specialists and leaders, and has acted in good faith in attempting to mitigate the cultural consequences of losing the Bujagali falls. In dealing with spiritual forces one has to work with the human resources at hand. It is obvious that the sponsor has allocated considerable time and resources to the problem of community spirits. AESNP's Cultural Property Management Plan appears to meet applicable policies and its implementation to date is satisfactory even though not free of controversy. One would hope that as the Project goes forward, efforts would be made to include all religious leaders in consultation and take steps to minimize the very real possibility of disturbance to the local communities that might arise from excluding any faction.	8.7, 308- 323	OPN 11.03	Comment: Management notes the finding.  Action: Efforts will be made by IDA, as per the recommendation of the Panel, to include all religious leaders in consultations and to take steps to minimize disturbances to local communities.
B.21.	Disclosure of Information – Disclosure of the Power Purchase Agreement (PPA): It seems evident that, as claimed, full disclosure of the PPA 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. It is also evident and 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 PPA be disclosed, Management's actions have been consistent with IDA's Disclosure Policy.	9.2, 326- 337	BP 17.50	Comment: Management notes the Panel's finding of compliance with relevant policies in not requiring AESNP or the GoU to disclose the PPA.  Confidentiality with regard to PPAs is a standard industry practice. The disclosure of the PPA was actively discussed amongst a broad range of stakeholders during the July 2001 NGO forum held in Washington D.C, at which IDA and IFC facilitated a discussion between the stakeholders, the Government and AESNP. The Government has consistently stated that it does not intend to disclose the PPA: it will disadvantage the Government in any private projects to be negotiated in the future, since all developers will strive to have the Bujagali terms, even under different commercial and risk profiles.  IDA received a letter from the Government on June 4, 2002, stating that, "it is the Government policy not to release to the public investment documents which have sensitive commercial information. This policy applies not only to the Bujagali PPA but to all investment documents like Production Sharing Agreements for petroleum exploration and development; mineral development agreements and mining leasesthe PPA was laid before the parliament of Uganda before it was executed. Parliament debated the PPA, including the Report of the Joint Committee of Natural Resources and the National Economy which had analyzed the PPA as mandated by Parliament. The people's representatives in Uganda did approve the PPA following a thorough analysis."

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No.	Finding	Sec/ Para	Pol- icy	Comment / Action				
				AES, through its letter dated June 3, 2002, has stated that it does not agree with the release of the PPA. AES advised that "the terms of the PPA itself provide for explicit confidentiality terms. Each of the possible lenders and participants to the Bujagali Hydropower Project has to sign a detailed Confidentiality Agreement before receiving copies of any project documents, including the PPA. Even if AES were to agree to such release (which, as noted above, it does not) the Government and UEB would also need to consent to the disclosure of the PPA as otherwise AES would be in default of the PPA and would risk losing the Bujagali Hydropower Project."				
				<b>Action:</b> The Government and AES have advised IDA that they do not intend to release proprietary documents such as the PPA.				
B.22.	Disclosure of Information – Environment:the Panel finds that Management is in compliance with OP 4.01 and BP 17.50 on the issue of pub-	9.3.2, 343-	BP 17.50	<b>Comment:</b> Management notes the finding of compliance by the Inspection Panel.				
	<b>lic disclosure and consultations</b> with respect to the environmental matters on the Bujagali Hydropower Project.			Action: No action required.				
B.23.	Clarifications on the Panel's Findings related to the Economic Analysis		OP 10.04					
	1.a. Economic Rate of Return: In the Panel's view, it is surprising that in neither document is it made clear which analysis is the most recent; it is also unsatisfactory, because of the substantial differences in the EIRR values and their distributions.	6.3, 172- 173		Clarification: As noted above, the SEDD was published on the IFC website before completion of IDA appraisal in an effort to make useful information available to the public well before presentation of the IFC and IDA financed projects to the Board. The PAD reflects the final phase of the technical work on the EIRR following				
	1.b. Economic Analysis – Overview: In the Panel's view, such a lack of transparency [of the SEDD] is inappropriate when dealing with areas of high sensitivity: to reach an informed judgment, concerned stakeholders need to be able to appreciate both the complexity of the appraisal problem and the sophistication with which the Bank has addressed it. In addition, the SEDD does not always make clear the documentary origin of the analysis that it summarizing.	6.8, 210- 216		the completion of IDA appraisal.				
	<b>2.a.</b> In relation to affordability, it illustrated how a mild depreciation of the Ugandan Shilling of 10% per year against the US Dollar would double the electricity tariff to Ugandan consumers over 7 years, raising many questions.	Ex. Sum, 60, 6.5, 184,		<b>Clarification:</b> A depreciation of the Ugandan Shilling would also affect most costs of any alternative power generation because they are all predominantly composed of imported resources and financing. A depreciation of the Ugandan Shilling of 10% per year against the US Dollar would require less than a doubling of tariffs				
	<b>2.b</b> A mild depreciation of the Ugandan Shilling of 10% per year against the US Dollar would double the electricity tariff to Ugandan consumers over 7 years, to the equivalent of 13-15 cents wholesale, or up to 20 cents on lower output – surely unaffordable.	6.8, 216		after 7 years, because (1) Bujagali capacity payments are one component of system costs amongst others; and (2) not all costs of delivered energy are linked to the US Dollar. The statements also imply that the Ugandan power tariff is increased at double the rate of the devaluation, while there is no obvious reason why this should occur. If tariffs were to be increased at the same rate as the devaluation, then they would remain at the same level in US Dollar terms.				

•	Finding	Sec/ Para	Pol- icy	Comment / Action
	3. The treatment of the potential role of imported electricity, in particular, raises questions about whether sufficient efforts were made in their appraisal.	6.6.3, 194 Ex. Sum 66		Clarification: Acres concluded that the prospects for finding large scale imports of electricity for the foreseeable future are highly unlikely. IDA is supporting a Trust-fund financed study for the East African Community to assess options for promoting regional cooperation in electricity. Once this study is completed, it will provide the member States with new perspectives for future planning of power exchanges. However, there is uncertainty about when this study will be completed and agreed upon by the East African Community members and when the follow-up analysis required to deal with a complex set of issues involved in preparing a project covering at least two, but possibly more countries will be initiated and completed. In addition, financing needs to be identified and agreements negotiated and executed amongst sovereign governments. Uganda needs to take decisions today based on the available information to ensure that the prevailing power shortages are eliminated in the short to medium term to meet its economic development objectives. The analysis that was undertaken was based on a rigorous assessment of feasible options.
	4. In the Panel's view, the decision to rely only on the single year's data for the year 2000, which yields an increase of two-thirds on the average 1994-99 figure and nearly five times the 1999 figure for total new connections, is not properly justified, except for a brief reference to the 'specific nature' of the year 2000 []	6.1, 166,		Clarification: Usually, the base year values of demand forecast assumptions are the actual base year levels unless there is good reason to suggest that they should be different. Though admitted not well articulated in the Demand Forecast Up-Date Report of January 2001, Management wishes to clarify that the consultant adopted the year 2000 value based on the likelihood that this connection rate would be a more representative starting point for a power sector undergoing privatization and generation expansion, compared with the previous years when connection rates were negatively impacted by inadequate supply, under-investment in distribution and management problems.
	5. The SEDD points out that the EdF work was completed before the Uganda Electricity Authority announced a new tariff effective June 1, 2000. This implied an average increase of 74% and was structured different from Bujagali assumptions. This raises some questions about whether the Electricité de France tariff analysis accurately represents the range of affordability	6.5, 179		Clarification: Staff work undertaken after the June 2001 tariff increase indicates that the GoU's actual tariff increase in 2001 and Electricité de France's forecasted increase differ in structure, but are similar in aggregate end-effects and would most likely have a similar impact on demand.
	<b>6.</b> Apart from a cast iron guarantee by IDA to AESNP for a full return on equity, it is hard to see what more could have been done in the Executed Agreements to mitigate strategic/political risks for investors and lenders – which is not to say that significant political risks to them do not remain.	6.6.2, 190		Clarification: The IDA guarantee covers the Government's contractual obligations under the Project Agreements and does not provide a guaranteed return on AES' equity. Lenders and investor are exposed to risks associated with the development, financing, construction and operation of the power plant. The AESNP equity return would be reduced if the plant is not constructed on time and operated with in the agreed performance standards.