

Kristin Schumann

From: Antonio Fonseca dos Santos [antonio.fonseca@brookfieldenergia.com]
Sent: 27 January 2010 19:41
To: Helen Locher
Cc: Kristin Schumann
Subject: RE: Trial of the Draft Hydropower Sustainability Assessment Protocol
Attachments: Xanxere SHPP I-1.xls; Xanxere SHPP I-2.xls; Xanxere SHPP I-3.xls; Xanxere SHPP I-4.xls; Xanxere SHPP I-5.xls; Xanxere SHPP I-6.xls; Xanxere SHPP I-7.xls; Xanxere SHPP I-8.xls; Xanxere SHPP I-9.xls; image001.jpg

Importance: High

Dear Helen

I am sending to you the Hydropower Sustainability Assessment Protocol Auditor Worksheet that we performed here in Brazil for the Xanxerê Small Hydroelectric Power Plant, project that is in the assessment phase. Due to a change in the company (part of the team is moving from Curitiba to Rio de Janeiro) we have some difficulties in doing the job. We are trying to finish the audit of the Serra dos Cavalinhos II SHPP, project that is in the preparation phase, but we are with a lot of work and I am having difficulties to conclude the work. We at Brookfield intend to work in the reports for the projects in all phases so I would like to know if it is possible for someone from the forum help me with that. I know that having an independent person "auditing" our projects will not be an easy task to approve internally, but, if somehow the forum could help I would try to get internal approvals and even help with some travel assistance. To help you let me do some comments about the document and our conclusion:

- 1 – PRACTICABILITY: The Draft Protocol is a practical assessment tool, and although need some improvement mainly in the implementation guidance.
- 2 – CONTENT: The content of the protocol is very appropriate and of high quality covering a wide range of projects of different types, scale and geographical settings. As a suggestion, in the Hydropower Sustainability Assessment Protocol Auditor Worksheet and in other papers or documents related with the assessment, it would help a lot (at least for the one reading or analyzing the documents) a space to fill with the type, size and location of the project.
- 3 – IMPLEMENTATION GUIDANCE: The introduction and implementation guidance are very helpful, but there is something that need an improvement (in my point of view). Some attributes of the aspects, in some cases, have more than one bullet to be analyzed to get the score. It was difficult for me to understand whether to analyze all the bullets, or if we have to analyze the bullets when we are interviewing more than one party. That question should be better addressed in the guidance, even it was not very well defined how to get the final score when we find more than one bullet to assess.
- 4 – SCORING: As stated in the last comment we need to find a way to aggregate bullet points within an attribute given more attention to the scores of the bullet points with a stronger evidence.
- 5 – PRESENTATION OF RESULTS: The presentation of results have to be improved, although the emphasis is not an overall single score or a pass/fail project, but rather on systematically analyzing and understanding the strengths, weaknesses and pathways towards improvement for a hydropower project, for the protocol to be a better tool for developers and even decision makers, some kind of final score should be included.

Sorry by the delay but I hope my comments and suggestion can be useful for the document. I also waiting for the response on any kind of help that I can get with the Brookfield project assessments.

Best regards

Antonio Fonseca dos Santos
Meio Ambiente, Fundiário e Resp. Socioambiental

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Table 3. HYDROPOWER SUSTAINABILITY ASSESSMENT PROTOCOL AUDITOR WORKSHEET

PROJECT NAME: _Xanxerê Small Hydroelectric Power Plant

ASPECT NAME: _ DEMOSNTRATED NEED

Considerations relevant to project context or scale? If implemented can be the first of a cascade of small power plants

Aspect relevant? (X) Yes () No. If no, evidence to determine not relevant? _____

SCORING SUMMARY: Highest Attribute Score: __5__ Lowest Attribute Score: __4__

ATTRIBUTE	SCORE (1-5)	PARTIES INTERVIEWED	EVIDENCE	NOTES
Quality of the Assessment Process	5	Developer	Federal government program to incentive of renewable energy	For a developing country, as Brazil, the need of energy and water services are well stablished, and the implementation of a power plant is usually seen as a tool for regional development. That is a fact is this case.
Quality of the Management Process	Not relevant			
Quality of the Consultation Process	4	Developer and affected community	Public hearing and meetings memoires	Hearings and meetings performed only with affected community and not with all land owners
Level of Stakeholder Support	5	Developer and affected community	Agreements with affected community signed in 2003 and 2009	
Level of Compliance	Not relevant			
Level of Conformance with Plans	Not relevant			
Level of Effectiveness	4	Developer and affected community		Social development program to be implemented in the region for over 10 years will be so due to the implementation of the power plant

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Table 3. HYDROPOWER SUSTAINABILITY ASSESSMENT PROTOCOL AUDITOR WORKSHEET

PROJECT NAME: _Xanxerê Small Hydroelectric Power Plant

ASPECT NAME: _OPTIONS ASSESMENT

Considerations relevant to project context or scale? If implemented can be the first of a cascade of small power plants

Aspect relevant? (X) Yes () No. If no, evidence to determine not relevant? _____

SCORING SUMMARY: Highest Attribute Score: __4__ Lowest Attribute Score: __3,5__

ATTRIBUTE	SCORE (1-5)	PARTIES INTERVIEWED	EVIDENCE	NOTES
Quality of the Assessment Process	3.6	Developer		detains the technology of hydropower generation the options assesment is not always performed. The main reason is the cost of the energy production
Quality of the Management Process	Not relevant			
Quality of the Consultation Process	3.5	Developer		Government in Brazil usually does not perform consultation with respect of options assesmente, developers do it more frequently, and in this case the options were presented at the meetings
Level of Stakeholder Support	4	Developer and affected community	Agreements with affected community signed in 2003 and 2009	
Level of Compliance	Not relevant			
Level of Conformance with Plans	Not relevant			
Level of Effectiveness	4	Developer and affected community		The implementation of a hydropower plant will create the opportunity of a social development plan for the region (use of lake, reforestation, tourism), other options (thermal or nuclear) will not

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Table 3. HYDROPOWER SUSTAINABILITY ASSESSMENT PROTOCOL AUDITOR WORKSHEET

PROJECT NAME: _Xanxerê Small Hydroelectric Power Plant

ASPECT NAME: _REGIONAL & NATIONAL & POLICIES & PLAN

Considerations relevant to project context or scale? If implemented can be the first of a cascade of small power plants

Aspect relevant? (X) Yes () No. If no, evidence to determine not relevant? _____

SCORING SUMMARY: Highest Attribute Score: __4,33__ Lowest Attribute Score: __3__

ATTRIBUTE	SCORE (1-5)	PARTIES INTERVIEWED	EVIDENCE	NOTES
Quality of the Assessment Process	4.33	Developer	PROINFRA (federal gov. plan)	For each bullet a score was set. Brazil has a strong strategic plan to bust renewable power sources. The understanding of this plan, regional gaps and fit for the region were very well done by the developer and discussed
Quality of the Management Process	3.5	Developer		
Quality of the Consultation Process	Not relevant			
Level of Stakeholder Support	Not relevant			
Level of Compliance	3	Developer	Developer Environmental Management System and	The developer has ISO 14001 certification for its powerplants and alsoi has a strong social responsibility plan, so to implement the project has to
Level of Conformance with Plans	4	Developer		
Level of Effectiveness	4	Developer	Developer Environmental Management System and Socil Responsibility	The environmental management system and social management system, have strong tools to manage gaps and shortfalls.

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Table 3. HYDROPOWER SUSTAINABILITY ASSESSMENT PROTOCOL AUDITOR WORKSHEET

PROJECT NAME: _Xanxerê Small Hydroelectric Power Plant

ASPECT NAME: _POLITICAL RISKS

Considerations relevant to project context or scale? If implemented can be the first of a cascade of small power plants

Aspect relevant? (X) Yes () No. If no, evidence to determine not relevant? _____

SCORING SUMMARY: Highest Attribute Score: 5 Lowest Attribute Score: 3

ATTRIBUTE	SCORE (1-5)	PARTIES INTERVIEWED	EVIDENCE	NOTES
Quality of the Assessment Process	5	Developer	Official authorization of the Federal Government to go ahead with project	
Quality of the Management Process	3.5	Developer		
Quality of the Consultation Process	Not relevant			
Level of Stakeholder Support	Not relevant			
Level of Compliance	Not relevant			
Level of Conformance with Plans	3	Developer		
Level of Effectiveness	3.5	Developer		The developer can manage and mitigate political risks due to strong community support,

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Table 3. HYDROPOWER SUSTAINABILITY ASSESSMENT PROTOCOL AUDITOR WORKSHEET

PROJECT NAME: _Xanxerê Small Hydroelectric Power Plant

ASPECT NAME: _ INSTITUTIONAL CAPACITY

Considerations relevant to project context or scale? If implemented can be the first of a cascade of small power plants

Aspect relevant? (X) Yes () No. If no, evidence to determine not relevant? _____

SCORING SUMMARY: Highest Attribute Score: 5 Lowest Attribute Score: 3

ATTRIBUTE	SCORE (1-5)	PARTIES INTERVIEWED	EVIDENCE	NOTES
Quality of the Assessment Process	5	Developer	Environmental Management System	The existence of an EMS, and the certification (ISO 14001) of its power plants, shows the quality of the developer's assesment process
Quality of the Management Process	4	Developer	Environmental Management System	The existence of an EMS, and the certification (ISO 14001) of its power plants, shows the quality of the developer's assesment process
Quality of the Consultation Process	Not relevant			
Level of Stakeholder Support	Not relevant			
Level of Compliance	Not relevant			
Level of Conformance with Plans	3	Developer		
Level of Effectiveness	3	Developer		The developer can manage public sector capacity shortfalls (score 4) but the government can not mitigate its own shortfalls (score 2)

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Table 3. HYDROPOWER SUSTAINABILITY ASSESSMENT PROTOCOL AUDITOR WORKSHEET

PROJECT NAME: _Xanxerê Small Hydroelectric Power Plant

ASPECT NAME: _ TECHNICAL ISSUES & RISKS

Considerations relevant to project context or scale? If implemented can be the first of a cascade of small power plants

Aspect relevant? (X) Yes () No. If no, evidence to determine not relevant? _____

SCORING SUMMARY: Highest Attribute Score: 5 Lowest Attribute Score: 4

ATTRIBUTE	SCORE (1-5)	PARTIES INTERVIEWED	EVIDENCE	NOTES
Quality of the Assessment Process	5	Developer	The growth of the company	The developer start with 3 SHPP's 9 years ago and now owns and operate 31 SHPP's (12 constructed and 19 acquired) . The growth happened due to a strong development, construction and aquisition technical team.
Quality of the Management Process	4	Developer	Environmental Management System	The existance of an EMS, and the certification (ISO 14001) of its power plants, shows the quality of the developer's assesment process
Quality of the Consultation Process	4	Developer	Public hearings and meetings	During the hearings, the technical team explained the engeneering project for the stakeholders in much detail
Level of Stakeholder Support	Not relevant			
Level of Compliance	Not relevant			
Level of Conformance with Plans	Not relevant			
Level of Effectiveness	4	Developer		The developer start with 3 SHPP's 9 years ago and now owns and operate 31 SHPP's (12 constructed and 19 acquired) . The growth happened due to a strong development, construction and aquisition technical team

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Table 3. HYDROPOWER SUSTAINABILITY ASSESSMENT PROTOCOL AUDITOR WORKSHEET

PROJECT NAME: _Xanxerê Small Hydroelectric Power Plant

ASPECT NAME: _SOCIAL ISSUES & RISKS

Considerations relevant to project context or scale? If implemented can be the first of a cascade of small power plants

Aspect relevant? (X) Yes () No. If no, evidence to determine not relevant? _____

SCORING SUMMARY: Highest Attribute Score: __5__ Lowest Attribute Score: __4__

ATTRIBUTE	SCORE (1-5)	PARTIES INTERVIEWED	EVIDENCE	NOTES
Quality of the Assessment Process	4	Developer	Social survey	The developer performed a social survey (census) in the affected community
Quality of the Management Process	4	Developer	Social Responsibility Program and Management System	The developer's Social Responsibility Program has several tools that help the planning of the social risks and projects management
Quality of the Consultation Process	5	Developer	Public hearings and meetings memoires	During the hearings, the technical and social teams discussed with the community the future projects and the opportunities that will come with the implementation of the powerplant prior to the definition of activities
Level of Stakeholder Support	5	Developer and affected community	Agreement of 2009	The agreement signed in 2009 was reached after meetings and public hearings where the future projects of the social development plan that will be implemented with the implementation of the power plant were discussed and defined.
Level of Compliance	Not relevant			
Level of Conformance with Plans	Not relevant			
Level of Effectiveness	5	Developer	Agreement of 2009	As the developer and the affected community are building in partnership the projects that will be implemented due to the opportunities that will come with the construction of the powerplant, the benefits are likely to be

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PROJECT NAME: _Xanxerê Small Hydroelectric Power Plant

ASPECT NAME: _ ENVIRONMENTAL ISSUES & RISKS

Considerations relevant to project context or scale? If implemented can be the first of a cascade of small power plants

Aspect relevant? (X) Yes () No. If no, evidence to determine not relevant? _____

SCORING SUMMARY: Highest Attribute Score: __4__ Lowest Attribute Score: __4__

ATTRIBUTE	SCORE (1-5)	PARTIES INTERVIEWED	EVIDENCE	NOTES
Quality of the Assessment Process	4	Developer	Environmental survey for river inventory studies	The developer performed na environmental survey for the river inventory studies
Quality of the Management Process	4	Developer	Environmental Management System	The developer's Environmental Management System has several tools that help the planning of the environmental risks and issues management
Quality of the Consultation Process	4	Developer	Public hearings and meetings memoires	During the hearings preliminary finds and reslts from the environmental survey were presented to the community
Level of Stakeholder Support	4	Developer and affected community	Agreement of 2009	The agreement signed in 2009 was reached after meetings and public hearings where preliminary results of the environmental survey were presented
Level of Compliance	Not relevant			
Level of Conformance with Plans	Not relevant			
Level of Effectiveness	4	Developer	Environmental Management System	The developer's Environmental Management System has several tools that help the planning of the environmental projects to increase the likelihood of the deliverance of environmental benefits

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Table 3. HYDROPOWER SUSTAINABILITY ASSESSMENT PROTOCOL AUDITOR WORKSHEET

PROJECT NAME: Xanxerê Small Hydroelectric Power Plant

ASPECT NAME: ECONOMIC & FINANCIAL ISSUES & RISKS

Considerations relevant to project context or scale? If implemented can be the first of a cascade of small power plants

Aspect relevant? (X) Yes () No. If no, evidence to determine not relevant? _____

SCORING SUMMARY: Highest Attribute Score: 4 Lowest Attribute Score: 4

ATTRIBUTE	SCORE (1-5)	PARTIES INTERVIEWED	EVIDENCE	NOTES
Quality of the Assessment Process	4	Developer		Developer has a strong finance team, that performed several economic and financial studies to verify projects economic feasibility
Quality of the Management Process	4	Developer		Developer has a strong finance team, that performed several economic and financial studies to verify projects economic feasibility
Quality of the Consultation Process	4	Developer		During the process of verifying economic feasibility, financial, technical, environmental and social team discuss all aspects trying to understand financial risks
Level of Stakeholder Support	Not relevant			
Level of Compliance	Not relevant			
Level of Conformance with Plans	Not relevant			
Level of Effectiveness	4	Developer		Because of the internal consultation process, a project with small chance of deliver economic and financial benefits, or a project with unavoidable economic and financial risks does not go ahead

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