ANNEX 1
REPORT ON COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

ATIAIA – BURITI SMALL HYDROPOWER PLANT PROJECT

Project No. CDM.Val0353

Date: 30/08/2006

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1 INTRODUCTION

In accordance with sub-paragraphs 40 (b) and (c) of the CDM modalities and procedures, the project design document of a proposed CDM project activity shall be made publicly available and the DOE shall make invite comments on the validation requirements from Parties, stakeholders and UNFCCC accredited non-governmental organizations and make them publicly available. This report describes this process for this particular project.

2 PROJECT DETAILS

2.1 Project title

Atiaia – Buriti Small Hydropower Plant Project.

2.2 Description of how and when the PDD was made publicly available

The Project Design Documents and its annexes were made publicly available from 12-01-2006 until 10-02-2006 on the website http://cdm.unfccc.int/Projects/Validation/DB/NKSQQI77SRXGU79UYBN6K7NH8ZJ9ST/view.html and comments were invited through the UNFCCC CDM homepage.

3 COMMENTS RECEIVED

3.1 Description of how comments were received and made publicly available

Comments could be submitted through a web interface or by email or fax.

As per procedures on public availability of the CDM project design documents and for receiving comments as referred to in paragraphs 40b and 40c of the CDM modalities and procedures, any received comments are displayed from the end of the 30 days commenting period, at the website listed in section 2.2.

3.2 Compilation of all comments received

No comments received to the DOE during the 30 days commenting period.

4 EXPLANATION OF HOW COMMENTS HAVE BEEN TAKEN INTO ACCOUNT

No comments received.

ANNEX 2
LIST OF DOCUMENTS ATTACHED

ATIAIA – BURITI SMALL HYDROPOWER PLANT PROJECT

Project No. CDM.Val0353

Date: 30/08/2006

/1/ Annex 1: Report on Comments by Parties, Stakeholders and NGOs

/2/ Annex 2: Comprehensive list of documents attached

/3/ Annex 3: List of persons interviewed

/4/ Annex 4: Validation Protocol (UK.AU4.CDM.Val0353)

/5/ Annex 5: Overview of findings (UK.Findings.CDM.VAL0353)

/6/ Annex 6: Answers from local assessor

/7/ Annex 7: Validation Report (UK.AR6.CDM.VAL0353)

/8/ Annex 8: Modalities of communication

ANNEX 3
Overview of documentation that has been reviewed and list of persons interviewed

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This document is an Annex to the validation report for CDM project activity registration. It gives overview of documentation that has been reviewed and names of persons that have been an interviewed as part of the validation.

List of documents reviewed

/1/ Project Design Document, Atiaia Energia S/A – Buriti and Canoa Quebrada Small Hydropower Plants, version 1 (06/01/2006); version 2 (16/03/2006); version 3 (31/03/2006); version 4, (07/04/2006), version 5 (15/05/2006), version 6 (23/05/2006), version 7 (24/08/2006), version 8 (30/08/2006).

/2/ Approved consolidated baseline and monitoring methodology ACM0002 – Consolidated baseline and monitoring methodology for grid-connected electricity generation from renewable sources, version 06, 19 May 2006.

/3/ Tool for the demonstration and assessment of additionality, version 2, 29 November 2005.

List of persons interviewed

	Name and position	Company name	Date interviewed
/1/	Manuel Gonçalves Martins / Director	Atiaia Energia	30/03/2006
/2/	Roberto Juliano B. Sena / Environmental Coordinator	Atiaia Energia	30/03/2006
/3/	Sergio Posternak / Administrative Manager	Atiaia Energia	30/03/2006
/4/	Décio / Engineer	Atiaia Energia	30/03/2006
/5/	Melissa Hirschheimer / CDM Consultant	Ecoinvest	30/03/2006
/6/	Manuel / Environmental Supervisor	Atiaia Energia	30/03/2006

Validation Protocol

This validation protocol is designed to ensure that the project meets the requirements for CDM projects that are detailed in paragraph 37 of the CDM modalities and procedures. Each requirement is covered in a separate table. The following requirements are discussed in this protocol:

Requirement	Description	
Participation requirements	The participation requirements as set out in Decision 17/CP7 need to be satisfied	Covered in table 1
Baseline and monitoring methodology	The baseline and monitoring methodology complies with the requirements pertaining to a methodology previously approved by the Executive Board	Baseline methodology is covered in table 2 Monitoring methodology is covered in table 4
Additionality	The project activity is expected to result in a reduction in anthropogenic emissions by sources of greenhouse gases that are additional to any that would occur in the absence of the proposed project activity	Covered in table 3
Monitoring plan	Provisions for monitoring, verification and reporting are in accordance with relevant decisions of the COP/MOP	Covered in table 5
Environmental impacts	Project participants have submitted to the designated operational entity documentation on the analysis of the environmental impacts of the project activity, including transboundary impacts and, if those impacts are considered significant by the project participants or the host Party, have undertaken an environmental impact assessment in accordance with procedures as required by the host Party;	Covered in table 6
Comments by local stakeholders	Comments by local stakeholders have been invited, a summary of the comments received has been provided, and a report to the designated operational entity on how due account was taken of any comments has been received;	Covered in Table 7
Other requirements	The project activity conforms to all other requirements for CDM project activities in relevant decisions by the COP/MOP and the Executive Board.	Covered in Table 8

Small sale projects and AR projects have specific requirements which are covered in Table 9-11. Small scale SSC projects have special requirements which might deviate from the requirements of other CDM projects. These requirements are tested in table 9. Please note that some questions in table 9 overlap with questions in the other tables. Where the questions in table 9 contradict or overlap questions elsewhere in the checklist, the questions in table 9 shall prevail. For the validation of small scale projects, assessor is required to address the questions in table 9 first before starting with the questions in the other tables.

Further remarks on the use of this document:

- text in *italic blue* is meant as guidance for the assessor
- MoV = Means of Verification, DR= Document Review, I= Interview

This protocol should be adapted as required. For example, if the project is not a small scale project or an AR project, some tables can be deleted.

Table 1 Participation Requirements for Clean Development Mechanism (CDM) Project Activities (Ref PDD, Letters of Approval and UNFCCC website) All CDM project activities

REQUIREMENT	MoV	Ref	Comment	Draft finding	Concl
1.1 The project shall assist Parties included in Annex I in achieving compliance with part of their emission reduction commitment under Art. 3 and be entered into voluntarily.	DR	PDD	No Letter of Approval from an Annex I country (Netherlands) has been provided.	Verify It will be obtained after the LoA from Brazilian DNA	
1.2 The project shall assist non-Annex I Parties in achieving sustainable development and shall have obtained confirmation by the host country thereof, and be entered into voluntarily	DR	PDD	No Letter of Approval by host country (Brazil) has been submitted to the validator.	Send the validation report to DNA	
1.3 All Parties (listed in Section A3 of the PDD) have ratified the Kyoto protocol and are allowed to participate in CDM projects	DR	UFCCC	Yes. Brazil: 23 Ago 2002 Netherlands:31 May 2002	Ok	Ok
1.4 The project results in reductions of GHG emissions or increases in sequestration when compared to the baseline; and the project can be reasonably shown to be different from	DR	PDD	The project uses renewable energy for electricity generation (hydro plant). The Project will result in	Ok	Ok

REQUIREMENT	MoV	Ref	Comment	Draft finding	Concl
the baseline scenario			reductions of GHG emissions as the result of the displacement of generation from fossil-fuel thermal plants that would have otherwise been delivered to the interconnected grid.		
1.5 Parties, stakeholders and UNFCCC accredited NGOs shall have been invited to comment on the validation requirements for minimum 30 days (45 days for AR projects), and the project design document and comments have been made publicly available	DR	UFCCC	PDD was publicly available: from 12 Jan 2006 to 10 Feb 2006. http://cdm.unfccc.int/Projects/Validation/DB/NKSQQI77SRXGU79UYBN6K7NH8ZJ9ST/view.html No comments were received.	Ok	Ok
1.6 The project has correctly completed a Project Design Document, using the current version and exactly following the guidance.	DR	PDD	Yes. The current version was used (version 2). See also CARs raised in Table 5 and 8.	See tables 5 and 8	Ok
1.7 The project shall not make use of Official Development Assistance (ODA), nor result in the diversion of such ODA	DR	PDD	This project activity received no public funding. The project was financed by BNDES and under CDM rules it is not considered as ODA.	Ok	Ok
1.8 For AR projects, the host country shall have issued a communication providing a single definition of minimum tree cover, minimum land area value and minimum tree height. Has such a letter been issued and are the definitions consistently applied throughout the PDD?			NA		
1.9 Does the project meet the additional requirements detailed in: Table 9 for SSC projects Table 10 for AR projects Table 11 for AR SSC projects			NA		
1.10 Is the current version of the PDD complete and does it clearly reflect all the information presented during the validation assessment.	DR	PDD	Yes. The current version of the PDD is used and all information presented was verified during the	Verify	Ok

REQUIREMENT	MoV	Ref	Comment	Draft finding	Concl
			site visit, additional document review and interviews.		
1.11 Does the PDD use accurate and reliable information that can be verified in an objective manner?	DR	PDD	See comments and CARs and NIRs raised in the section 3 (additionality)	See the sections below.	Ok

Table 2 Baseline methodology(ies) (Ref: PDD Section B and E and Annex 3 and AM) Normal CDM projects only

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
2.1 Does the project meet all the applicability criteria listed in the methodology	PDD AM	DR	CAR 11 was raised: During the validation process, the PDD was revised to use the latest version of ACM 0002 (version 6). The methodology is applicable to grid-connected renewable power generation project activities which include among other conditions "new hydro electric power projects with reservoirs having power densities (installed power generation capacity divided by the surface area at full reservoir level) greater than 4 W/m².". The original PDD (version 1 to 6) had included two plants. One plant (Canoa Quebrada) was excluded because has a power density less than 4 W/m². It is not acceptable by ACM0002. The PDD was revised to be in compliance with ACM0002 version 6. Only	CAR 11	Ok

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			the plant Buritis meets all the applicability criteria of the methodology. The plant Canoa Quebrada was excluded of the project. CAR 11 was closed out.		
2.2 Is the project boundary consistent with the approved methodology	PDD AM	DR	Yes. It encompasses the physical, geographical site of the hydropower generation source, which is represented by the respective river basin of project close to the power plant facility and the interconnected grid.	Ok	Ok
2.3 Are the baseline emissions determined in accordance with the methodology described	PDD AM	DR	Yes. The baseline emission factor is defined as (EF_y) and is calculated as a combined margin (*CM*), consisting of the combination of operating margin (OM) and build margin (BM) factors. Baseline emissions are calculated by using the annual generation (project annual electricity dispatched to the grid) times the CO_2 average emission rate of the estimated baseline, as follows: (A): Monitored project power generation(MWh) (B): Baseline emission rate factor (tCO_2/MWh) (A) x (B) (tCO_2) The EF calculated was 0.2647 tCO_2e/MWh. See PDD section E.4 for formulas and Annex 3 for external data used. CAR 5: There is a mistake in the figures presented for calculate the baseline emission factor EF_y (PDD, version 5, page 41).	CAR 5	Ok

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
2.4 Are the project emissions determined in accordance with the methodology described	PDD	DR	CAR 12 was raised: The project emissions should be determined in accordance with the methodology described. The version 6 of the ACM0002 requires that the PE should be calculated from the "power density". No reference about this was included in the PDD. PE is dependent on the reservoir area and capacity installed of the plant. These parameters are used for "Power density" calculation. No information about reservoir area is included in Section D of the PDD. Information about PE calculation and demonstration why PE=zero was provided in the revised PDD. "According to ACM0002 (version 6), new hydro electric power projects with reservoirs, shall account for project emissions. For SHP Buritis, considering the capacity of the project: 30MW and area of reservoir: 0.38 Km2, the power density = 30/0.38 = 78.95 W/m2. If power density of the project is greater than 10W/m2, PEy = 0". CAR 12 was closed out.	CAR 12	Ok
2.5 Is the leakage op the project activity determined in accordance with the methodology described	PDD	DR	Leakage is not applicable.	Ok	Ok
2.6 Are the emission reductions determined in accordance with the	PDD	DR	Yes.	Ok	Ok

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
methodology described	AM				

Table 3 Additionality (Ref: PDD Section B3 and AM) Normal CDM projects only

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
3.1 Does the PDD follow all the steps required in the methodology to determine the additionality	PDD Tool	DR	Yes. The "Tool for the demonstration and assessment of additionality" (UNFCCC) was used as required by ACM0002.	Ok	Ok
3.2 Is the discussion on the additionality clear and have all assumptions been supported by transparent and documented evidence	AM PDD	DR	ACM0002 methodology requires the use of the "Tool for the demonstration and assessment of additionality". The step 0 and step 2 were not applicable; other steps were followed. NIR 2 was raised: it is needed clarification and transparent evidence regarding the IRR discussed in the investment barrier. To clarify NIR 2, the spreadsheets were sent to the validator, which presents data and formulas to demonstrate how IRR was determined. It was verified that the investment barrier is not the most important barrier as the project received subsidised funds from BDNES (with interest rate lower than the rate of the market).	NIR2	Ok

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			PDD Section B.3 was revised to explain that some barriers that are common to the Brazilian context were not the case of Atiaia. NIR 2 was closed out.		
3.3 Does the selected baseline represent the most likely scenario among other possible and/or discussed scenarios?	AM PDD	DR	Yes.	Ok	Ok
3.4 Is it demonstrated/justified that the project activity itself is not a likely baseline scenario	PDD AM	DR	To be confirmed by local assessor. The project activity is not the business as usual in the country, and other alternatives could be the continuation of electricity supplied by large hydro and thermal plants in the country or to invest in financial market.	Verify	Ok

Table 4 Monitoring methodology (PDD Section D and AM) Normal CDM projects only

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
4.1 Does the project meet all the applicability criteria listed in the monitoring methodology	PDD AM	DR	To be confirmed by local assessor. Yes, run-of-river hydro plants.	Verify	Ok
4.2 Does the PDD provide for the monitoring of the baseline emissions as required in the monitoring methodology	PDD AM	DR	Yes, but the information about electricity generation monitoring was not informed under the correct header (Section D). See CAR 6 Verified PDD version 6 with correct information.	See CAR 6	Ok
4.3 Does the PDD provide for the monitoring of the project emissions as required in the monitoring methodology	PDD AM	DR	See CAR 12 (table 2.4)	See CAR 12	Ok
4.4 Does the PDD provide for the	PDD	DR	There is no leakage.	Ok	Ok

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
monitoring of the leakage as required in the monitoring methodology	AM				
4.5 Does the PDD provide for Quality Control (QC) and Quality Assurance (QA) Procedures as required in the monitoring methodology	PDD AM	DR	The QA/QC provided did not comply with that are required in the ACM0002. CAR 7 close out details: Verified PDD version 6 with correct information.	CAR 7	Ok

Table 5 Monitoring plan (PDD Annex 4) Normal CDM projects only

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
5.1 Monitoring of Sustainable Development Indicators/ Environmental Impacts					
5.1.1 Does the monitoring plan provide the collection and archiving of relevant data concerning environmental, social and economic impacts?	PDD	DR	There is no plan for monitoring Sustainable Development Indicators/ Environmental Impacts. CAR 3 close out details: details about environmental programmes and environmental indicators to be monitored were included in the revised PDD (Section F and Annex 4).	CAR 3	Ok
5.1.2 Is the choice of indicators for sustainability development (social, environmental, economic) reasonable?	PDD	DR	Yes, the indicators comply with the environmental agencies requirements and with good monitoring practices.	See also 5.1	Ok
5.1.3 Will it be possible to monitor the specified sustainable development indicators?	PDD	DR	Yes, related to environmental performance (see CAR 3 and Annex 4 of PDD). No significant social impact was identified which requires continuous monitoring.	See also 5.1	Ok

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
5.1.4 Are the sustainable development indicators in line with stated national priorities in the Host Country?	PDD	DR	Yes.	See also 5.1	Ok
5.2 Project Management Planning					
5.2.1 Is the authority and responsibility of project management clearly described?	PDD	DR	No information about responsibility of project management was provided in the PDD. Close out: Annex 4 of the PDD was revised to present the management structure of the project.	CAR 1	Ok
5.2.2 Is the authority and responsibility for registration, monitoring, measurement and reporting clearly described?	PDD	DR	See 5.2.1 and CAR 1	See 5.2.1	Ok
5.2.3 Are procedures identified for training of monitoring personnel?	PDD	DR/I	See 5.2.1 and CAR 1	See 5.2.1	Ok
5.2.4 Are procedures identified for emergency preparedness for cases where emergencies can cause unintended emissions?	PDD	DR	It is not expected that the project will cause unintended emissions.	Ok	Ok
5.2.5 Are procedures identified for calibration of monitoring equipment?	PDD	DR/I	There are no procedures for calibration of electricity meters. Energy distribution companies will be responsible for the calibration and maintenance of the monitoring equipment. Annex 4 of the PDD was updated with this information. CAR 4 was closed out.	CAR 4	Ok
5.2.6 Are procedures identified for	PDD	DR	See CAR 4	See 5.2.5	Ok

CHECKLIST QUESTION		Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
	maintenance of monitoring equipment and installations?				CAR 4	
5.2.7	Are procedures identified for monitoring, measurements and reporting?	PDD	DR	See Monitoring plan (Annex 4 PDD)	Ok	Ok
5.2.8	Are procedures identified for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation)	PDD	DR	Procedures are detailed in the Monitoring Plan and will be prepared and implemented before the crediting period. CAR 8 raised regarding records storage: As defined by methodology and in the Guidelines for completing the PDD, data shall be archived for 2 years following the end of the crediting period. Section D did not informed the correct period. It was informed that *"Data will be archived during the credit period according to internal procedures"*. . To close out CAR 8, it was verified that version 6 of PDD included in Section D the correct period for data storage.	CAR 8	Ok
5.2.9	Are procedures identified for dealing with possible monitoring data adjustments and uncertainties?	PDD	DR	As described in PDD, Annex 4, the electricity company will be responsible for dealing with possible monitoring data adjustments and uncertainties, for review of reported results/data, for internal audits of GHG project compliance with operational requirements and for corrective actions.	See also CAR 1 and obser-vation	Ok
5.2.10	Are procedures	PDD	DR	See CAR 1.	See	Ok

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
identified for review of reported results/data?			It was included in the Monitoring Plan (Annex 4, PDD)	also CAR 1 and obser-vation	
5.2.11 Are procedures identified for internal audits of GHG project compliance with operational requirements where applicable?	PDD	DR	See CAR 1. It was included in the Monitoring Plan (Annex 4, PDD)	See also CAR 1 and obser-vation	Ok
5.2.12 Are procedures identified for project performance reviews before data is submitted for verification, internally or externally?	PDD	DR	See CAR 1. It was included in the Monitoring Plan (Annex 4, PDD)	See also CAR 1 and obser-vation	Ok
5.2.13 Are procedures identified for corrective actions in order to provide for more accurate future monitoring and reporting?	PDD	DR	See CAR 1. It was included in the Monitoring Plan (Annex 4, PDD)	See also CAR 1	Ok

Table 6 Environmental Impacts (Ref PDD Section F and relevant local legislation) Normal CDM projects only

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
6.1 Has an analysis of the environmental impacts of the project activity been sufficiently described?	PDD	DR	Yes.	Ok	Ok
6.2 Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is an EIA approved?	PDD	DR	Verify EIA of SHP. Verified EIA PCH Buriti, May, 2002 (Ref.1)	Verify	Ok
6.3 Will the project create any adverse environmental effects?	PDD	DR	The environmental effects were identified in the EIA and mitigating measures were defined.	Verify	Ok
6.4 Are transboundary environmental impacts considered in the analysis?	PDD	DR	It was considered in the EIA.	Verify	Ok
6.5 Have identified environmental impacts been addressed in the	PDD	DR	Yes. It was established plans for address	Ok	Ok

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
project design?			adverse impacts (see PDD, section F).		
6.6 Does the project comply with environmental legislation in the host country?	PDD	DR	Verify environmental licenses and authorizations issued by State environmental agencies. The documented evidences that the project is in compliance with legal requirements were verified during the site visit. Copies were provided to SGS (see Ref. 2 and 3).	Verify	Ok

Table 7 Comments by local stakeholders (Ref PDD Section G) All CDM projects activities

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
7.1 Have relevant stakeholders been consulted?	PDD	DR	Yes. Verified list of people and organizations consulted.	Verify	Ok
7.2 Have appropriate media been used to invite comments by local stakeholders?	PDD	DR	Verify language and information used in the consult. The letters were sent in local language.	Verify	Ok
7.3 If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws?	PDD	DR	To be confirmed by local assessor. Letters were sent to the relevant stakeholders as required in Brazilian DNA Resolution n°1.	Verify	Ok
7.4 Is a summary of the stakeholder comments received provided?	PDD	DR	Yes. One comment received from FBOMS, suggesting the use of Gold Standard or similar tools for monitoring of environmental/social indicator.	Verify	Ok

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
7.5 Has due account been taken of any stakeholder comments received?	PDD	DR	The project participants considered that the requirements of Brazilian Government are sufficient to be used as sustainable indicators which are attended by the project activity.	Verify	Ok

Table 8 Other requirements. All CDM project activities

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
8.1 Project Design Document					
8.1.1 Editorial issues: does the project correctly apply the PDD template and has the document been completed without modifying/adding headings or logo, format or font.	PDD	DR	Yes. CAR 9: There was a mistake/inconsistency in the version/year of ACM0002 informed as reference in the PDD (page 29 informed year 2004, page 30 informed year 2002, Annex 5 informed 2004 and the version applied in the PDD was in fact from 2006). Close out: verified the PDD version 6 with the correct information (ACM latest version, issued on 19th May 2006). CAR 13: The table provided in Section E.6 (PDD version 7) did not comply with the format of CDM PDD template. Verified that the revised PDD (version 8) presents the correct table (section E.6). CAR 13 was closed out.	CAR 9 CAR 13	Ok

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
8.1.2 Substantive issues: does the PDD address all the specific requirements under each header. If requirements are not applicable / not relevant, this must be stated and justified	PDD	DR	Section C: The dates should be state in the following format: (DD/MM/YYYY). It was not informed the day of starting data (of the project activity and of the starting credit period (only month and year, May 2005 and January 2007 respectively). It was identified a mistake along the PDD (it was informed that the starting date will be in October 2006 and in other section that will be in January 2007). Section D: incorrect information under header D.4. (the monitoring parameter *Electricity generation of the Project delivered to grid (EGy)* (page. 34) should be included under D.2.1.3 *"Relevant data necessary for determining the baseline of anthropogenic emissions by sources of GHGs within the project boundary and how such data will be collected and archived"* (page 28-29) Close out: PDD version 6 presents the correct information.	CAR 10 CAR 6	Ok Ok
8.2 Technology to be employed					
8.2.1 Does the project design engineering reflect current good practices?	PDD	DR	Yes.	Ok	Ok
8.2.2 Does the project use state of the art technology or would the technology result in a significantly	PDD	DR	Yes. Buriti facility is a small hydro plant with reservoir and has	Ok	Ok

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
better performance than any commonly used technologies in the host country?			minimum diversion dams, which store water to generate electricity for short periods of time. Small hydro is considered to be one of the most cost effective power plants in Brazil.		
8.3 Is the project technology likely to be substituted by other or more efficient technologies within the project period?	PDD	DR	No.	Ok	Ok
8.2.4 Does the project require extensive initial training and maintenance efforts in order to work as presumed during the project period?	PDD	DR/I	It was verified during the site visit and by interviews with the Atiaia staff that no specific training has been required for this project.	Verify	Ok
8.3 Duration of the Project/ Crediting Period					
8.3.1 Are the project's starting date and operational lifetime clearly defined and reasonable?	PDD	DR	Section C.1.1 – starting 19/07/2005 (see CAR related to incomplete date). Section C.1.2 – lifetime 35 years	See CAR 10	Ok
8.3.2 Is the assumed crediting time clearly defined and reasonable (renewable crediting period of max. two x 7 years or fixed crediting period of max. 10 years)?	PDD	DR	Renewable crediting period: first period 7 years. See CAR 10 related to incomplete starting date of the first credit period and incoherent information along the PDD (it was informed that the starting date will be in October 2006 and in other section that will be in January 2007).	See CAR 10	Ok
8.3.3 Does the project's operational lifetime exceed the crediting period	PDD	DR	Yes.	Ok	Ok

Table 12 Additional information to be verified by local assessors / site visit

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
Verify the environmental licenses/ environmental impacts (are SHP in compliance with the legal requirements applied to the project?)	PDD	Site visit	The following documents were verified: - Environmental authorization n° 551/2005, 04/07/2005. - Installation license n° 006/2005, 15/12/2005 issued by IMAP.	Ok	Ok
Verify reservoir area (it complies with the PDD information and with the environmental licenses?)	PDD	DR site visit	Verified photos of the SHP Buriti (in construction).	Ok	Ok
Verify operation licence from ANEEL (national energy agency). Check if the PDD information can be confirmed with the specifications described in the licenses.	PDD	Site visit	Verified the following documents: - Ofício 369/2006-SCG-ANEEL – Grant hydro resources, PCH Buriti. - Resolution ANEEL n° 35, 31/01/2005	Ok	Ok
Verify PPA – PCH Buriti.	DR	Site visit	Verified the PPA signed between Eletrobrás and BSB Energética, 13/04/2005.	Ok	Ok
Verify stakeholders' consultation evidences	DR	Site visit	Copy of the letters and ARs were verified: *Prefeitura de Água Clara* (Água Clara City Hall) *Câmara Municipal de Água Clara* (Municipal Chamber of Água Clara) *Secretaria do Meio Ambiente de Água Clara* (Local Environmental Agency of Água Clara) *Associação de Pouso Alto* (Local community association) *Prefeitura de Chapadão do Sul (*Chapadão do Sul City Hall*)* *Câmara Municipal de Chapadão do Sul* (Municipal Chamber of Chapadão do Sul) *Secretaria do Meio Ambiente de Chapadão do Sul* (Local Environmental Agency of Chapadão do Sul) *Associação da Pedra Branca* (Local community association) *IMAP/Secretaria de Estado do Meio Ambiente do Mato Grosso do Sul* (Mato Grosso do Sul Environmental Agency) *Ministério Público do Mato Grosso do Sul* (State Attorney	Ok	Ok

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			for the Public Interest of the State of Mato Grosso do Sul) *Fórum Brasileiro de ONGs e Movimentos Sociais para o Desenvolvimento e Meio Ambiente* (Brazilian Forum of NGOs and Social Movements for the Development and Environment)		

References consulted during Ground Truthing and brief summary of content / significance [please try to obtain a hard copy where ever possible]:

Ref no.	Title (full bibliographic reference if possible)	Brief note on content / significance	Hard copy (Y/n)
1	EIA PCH Buriti, PCH BURITI MEIO AMBIENTE ESTUDO DE IMPACTO AMBIENTAL – EIA/RIMA 8681/00-6B-RL-0001-A 27 MAIO 2002; 8681/00-6B-RL-0002-A 27 MAIO 2002, Engemix	Environmental impact assessment.	Y
2	Environmental authorization n° 551/2005, 04/07/2005 issued by SEMA.		Y
3	Installation license n° 006/2005, 15/12/2005 issued by IMAP.		Y
4	Ofício 369/2006-SCG-ANEEL – Grant hydro resources, PCH Buriti.	Authorization to utilize water resources.	Y
5	Resolution ANEEL n° 35, 31/01/2005 PCH Buriti.	Authorization for independent energy producer issued by National agency of energy.	Y
6	Verified the PPA signed between Eletrobrás and BSB Energética, 13/04/2005.	Power purchase agreement.	Y
7	Spreadsheet PCH Buriti 08/12/2005 (Excel file).	Financial study considering CERs and without CERs.	Y

Individuals interviewed during Validation and Ground Truthing [name, position and contact details, plus a brief summary of points discussed

Date met	Name	Position	Contact details	Brief note on subject of interview
30/03/2006	Manuel Gonçalves	Director	Atiaia Energia	Project management

	Martins			
30/03/2006	Roberto Juliano B. Sena	Environmental Coordinator	Atiaia Energia	Environmental licenses and environmental programmes.
30/03/2006	Sergio Posternak	Administrative Manager	Atiaia Energia	Operational issues relate to SHP.
30/03/2006	Décio	Engineer	Atiaia Energia	Technical issues, maps.
30/03/2006	Melissa Hirschheimer	CDM Consultant	Ecoinvest	PDD developing, monitoring plan, baseline study.
30/03/2006	Manuel	Environmental Supervisor	Atiaia Energia	Environmental licenses.

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FINDINGS OVERVIEW

FINDINGS FROM VALIDATION OF *ATIAIA – BURITI SMALL HYDROPOWER PLANT – CDM.VAL0353*

Each Table below represents a finding from the validation assessment. The findings are numbered consecutively, approximately in the order that they have been identified.

Description of table:

Type	Findings are either New Information Requests (NIR) or Corrective Action Requests (CAR). CARs are items that must be addressed before a project can receive a recommendation for registration. NIRs may lead to the raising of CARs. Observations are included at the end and may or may not be addressed. They are primarily to act as signposts for the verifying DOE.
Issue	Details the content of the finding
Ref	refers to the item number in the Validation Protocol
Response	Please insert response to finding, starting with the date of entry.

Rows for comments and further response will be appended to the table until the Findings has been addressed to the satisfaction of the Lead Assessor.

Please note that this is an open list and more findings may be added as validation progresses.

Date: 07/03/2006 Raised by: Fabian Gonçalves/Aurea Nardelli

No.	Type	Issue	Ref
1	CAR	The operational and management structure that will be implemented is not described in details in the PDD (see section D.4 and Monitoring plan). It is lacking information about authority and responsibility, about monitoring and reporting procedures, internal reviews and training.	5.2.1 to 5.2.3, 5.2.7 5.2.9 to 5.2.13
Date: 16/03/06 [Comments]: The SHPs will work with a local manager, who has operational and managerial knowledge and three maintenance technicians (two responsible for electromechanical tasks and one for general services). All the operations will be centralized in Cuiabá – MT, in the *Centro de Operação do Sistema – COS* (Systems Operation Center), which will operate and plan the maintenance of five SHPs of Atiaia Group. COS will work with nine professionals: 1 director, 1 maintenance coordinator engineer, 1 operations coordinator engineer, 1 administrative coordinator and 5 system operators (shift work, 24 hours a day). All the procedures will be done by telecommand from COS in Cuiabá, but in the SHPs the local manager is capable of operating the whole plant, in case of communications failure with COS, as stated in Annex 4. Energy distribution companies ENERSUL (for PCH Buriti) and CEMAT (for PCH Canoa Quebrada) will be responsible for dealing with possible monitoring data adjustments and uncertainties, for review of reported results/data, for internal audits of GHG project compliance with operational requirements and for corrective actions. Approximately 120 days before the beginning of the commercial operation of the SHPPs, energy producers and energy distributors will sign an agreement to cover each side's responsibilities. SHPPs' technicians will be trained on the use of monitoring equipment according to the specifications of this agreement and the recommendations of the equipments' manufacturers.		

Date: 23/05/2006 – Aurea Nardelli. [Acceptance and close out]: The PDD, Annex 4 was revised to describe the operational and management structure of the project. CAR 1 was closed out. See observation raised.

Date: 07/03/2006 Raised by: Fabian Gonçalves/Aurea Nardelli

No.	Type	Issue	Ref
2	NIR	The discussion on the additionality is not clear (mainly about the investment barrier); transparent evidence related to the IRR analysis was not provided during the desk study.	3.2
Date: 16/05/06 [Comments]: IRR calculation is shown in the Excel spreadsheets sent by e-mail.			
Date: 23/05/2006 – Aurea Nardelli. [Acceptance and close out] ACM0002 methodology requires the use of the "Tool for the demonstration and assessment of additionality". The step 0 and step 2 were not applicable; the other steps were discussed. To clarify NIR 2, the spreadsheets were sent to the validator, which presents data and formulas to demonstrate how IRR was determined. It was verified that the investment barrier is not the most important barrier. The project received subsidised funds from BDNES (with interest rate lower than the rate of the market). PDD Section B.3 was revised to clarify that some barriers that are common to the Brazilian context were not faced by Atiaia. NIR 2 was closed out.			

Date: 07/03/2006 Raised by: Fabian Gonçalves/Aurea Nardelli

No.	Type	Issue	Ref
3	CAR	There is no plan for monitoring Sustainable Development Indicators/ Environmental Impacts.	5.1.1 to 5.1.4
Date: 16/03/06 [Comments]: Amper Energia, the company that controls SHP Canoa Quebrada, and Pouso Alto Energia, the company that controls SHP Buriti, have hired expert companies to execute their environmental programs. The hired companies keep an environment engineer full time in the plants, and the programs included in the PBA (Environmental Basic Program) are being executed by the SHPs' personnel. After the beginning of the commercial operations, restoration of degraded areas and of permanent preservation areas will be done according to the regulations of the environmental agencies, through a team of environment experts, that will also monitor the compliance with the environmental agencies' regulations. Studies done during the design phase of the project activities have shown the environmental impacts and the interference on the social development in the regions of the plants, indicating the mitigation measures to be adopted during the construction phase. These measures are being taken rigorously. Data about environmental impact are being archived by the SHPs and the environmental agencies, as stated in Annex 4.			
Date: 12/04/2006 – Aurea Nardelli. [Acceptance and close out]: detailed information about environmental programmes and monitoring were included in the PDD (Annex 4). Reasonable environmental indicators are defined to be monitored as part of the Environmental Program of each SHP. CAR 3 was closed out.			

Date: 07/03/2006 Raised by: Fabian Gonçalves/Aurea Nardelli

No.	Type	Issue	Ref
4	CAR	No procedures were identified for calibration and maintenance of monitoring equipment.	5.2.5; 5.2.6
Date: 16/03/2006 [Comments]: Energy distribution companies ENERSUL (for PCH Buriti) and CEMAT (for PCH Canoa Quebrada) will be responsible for the calibration and maintenance of the monitoring equipment, as stated in Annex 4.			
Date: 12/04/2006 – Aurea Nardelli. [Acceptance and close out]: Annex 4 of the PDD was updated with this information. It was also described in the PDD that the energy meters are specified by the energy distribution companies and approved by ONS (national agency). For SHP Buriti, the energy meter will be a Q 1000, manufactured by Schlumberger; for SHP Canoa Quebrada, a ION 8300 manufactured by Power Measurement. The SHPs have an individual meter per generator, whose measurement is done locally or remotely, in the *Centro de Operação do Sistema – COS* (Systems Operation Center), in Cuiabá. There is a meter also in the substations at the border between the local distributor system and the plants. This meter stores power data, which can be verified both by the SHPs and the local distributors. The measurements are controlled in real time by the SHPs. Measurement data is compared between the meters at the output of the generators and the meter in the substations, so that any problems can be detected (like water shortage, materials inside the turbines, meter inaccuracy, etc). CAR 4 was closed out.			

Date: 22/05/2006 Raised by: Fabian Gonçalves/Aurea Nardelli

No.	Type	Issue	Ref
5	CAR	It was identified a mistake in the figures presented for calculation of the baseline emission factor EF_y (the value of $EF_{BM,2004}$ was informed as 0.1045 tCO_2e/MWh as result of equation 2, but the $EF_{BM,2004}$ used in the equation 11 as 0.0962, see PDD, version 5, page 41).	2.3
Date: 23/05/2006 [Comments]: Data was corrected in the PDD version 6. The correct value for both cases is 0.0962			
Date: 23/05/2006 – Aurea Nardelli. [Acceptance and close out] : It was verified the revised PDD (version 6). CAR 5 was closed out.			

Date: 22/05/2006 Raised by: Fabian Gonçalves/Aurea Nardelli

No.	Type	Issue	Ref
6	CAR	The baseline emissions should be monitored as required in the methodology. The PDD should address all the specific requirements under each header. Section D: incorrect information under header D.4. (the monitoring parameter *Electricity generation of the Project delivered to grid (EGy)* (page. 34) should be included under D.2.1.3 *"Relevant data necessary for determining the baseline of anthropogenic emissions by sources of GHGs within the project boundary and how such data will be collected and archived"* (page 28-29, PDD version 5).	4.2 8.1.2
Date: 23/05/2006 [Comments]: Data was corrected in the PDD version 6.			
Date: 23/05/2006 – Aurea Nardelli. [Acceptance and close out] : PDD version 6 presented the correct information. CAR 6 was closed out.			

Date: 22/05/2006 Raised by: Fabian Gonçalves/Aurea Nardelli

No.	Type	Issue	Ref
7	CAR	The QA/QC provided in the PDD did not comply with that are required in the ACM0002.	4.5
Date: 23/05/2006 [Comments]: Data was corrected in the PDD version 6.			
Date: 23/05/2006 – Aurea Nardelli. [Acceptance and close out] : PDD version 6 presented the correct information. CAR 7 was closed out.			

Date: 22/05/2006 Raised by: Fabian Gonçalves/Aurea Nardelli

No.	Type	Issue	Ref
8	CAR	As defined by methodology and in the Guidelines for completing the PDD, data shall be archived for 2 years following the end of the crediting period. Section D did not informed the correct period. It was informed that *"Data will be archived during the credit period according to internal procedures".*	5.2.8
Date: 23/05/2006 [Comments]: Data was corrected in the PDD version 6.			
Date: 23/05/2006 – Aurea Nardelli. [Acceptance and close out] : To close out CAR 8, it was verified that version 6 of PDD included in Section D the correct period for data storage.			

Date: 22/05/2006 Raised by: Fabian Gonçalves/Aurea Nardelli

No.	Type	Issue	Ref
9	CAR	PDD template was not completed with consistent information. There was a mistake/inconsistency in the references mentioned in the PDD: version/year of ACM0002 informed in page 29 as issued in year 2004, in page 30 informed year 2002 and in the Annex 5 informed 2004. The correct year is 2006.	8.1.1
Date: 23/05/2006 [Comments]: Data was corrected in the PDD version 6.			
Date: 23/05/2006 – Aurea Nardelli. [Acceptance and close out] : PDD version 6 presented the correct information. The methodology used in the PDD version 6 was the latest version of ACM0002 (version 6, issued on 19th May 2006). CAR 9 was closed out.			

Date: 22/05/2006 Raised by: Fabian Gonçalves/Aurea Nardelli

No.	Type	Issue	Ref
10	CAR	The PDD was not addressing all the specific requirements under each header. The dates should be state in the following format: (DD/MM/YYYY). It was not informed the day of starting data (of the project activity and of the starting credit period (only month and year. There was inconsistent information along the PDD (it was informed that the starting date will be in October 2006 and in other section that will be in January 2007).	8.1.2

Date: 23/05/2006 [Comments]: Data was corrected in the revised PDD.			
Date: 23/05/2006 – Aurea Nardelli. [Acceptance and close out]: PDD presents the correct information. Starting date of the project activity: 19/07/2005; starting date of the first credit period: 10/11/2006. CAR 10 was closed out.			

Date: 21/08/2006 Raised by: Fabian Gonçalves/Aurea Nardelli

No.	Type	Issue	Ref
11	CAR	During the validation process, the PDD was revised to use the latest version of ACM 0002 (version 6). The methodology is applicable to grid-connected renewable power generation project activities which include among other conditions "new hydro electric power projects with reservoirs having power densities (installed power generation capacity divided by the surface area at full reservoir level) greater than 4 W/m².” The original PDD (version 1 to 6) had included two plants. One plant (Canoa Quebrada) was excluded because has a power density less than 4 W/m². It is not acceptable by ACM0002.	2.1
Date: 24/08/2006 A new version of PDD was prepared and sent to SGS.			
Date: 30/08/2006 – Fabian Gonçalves. [Acceptance and close out]: The PDD was revised to be in compliance with ACM0002 version 6. Only the plant Buritis meets all the applicability criteria of the methodology. The plant Canoa Quebrada was excluded of the project. CAR 11 was closed out.			

Date:21/08/2006 Raised by: Fabian Gonçalves/Aurea Nardelli

No.	Type	Issue	Ref
12	CAR	The project emissions should be determined in accordance with the methodology described. The version 6 of the ACM0002 requires that the PE should be calculated from the "power density". No reference about this was included in the PDD. PE is dependent on the reservoir area and capacity installed of the plant. These parameters are used for "Power density" calculation. No information about reservoir area is included in Section D of the PDD.	2.4/4.3
Date:24/08/2006 The PDD was revised and information about PE was included.			
Date: 30/08/2006 – Fabian Gonçalves. [Acceptance and close out]: Information about PE calculation and demonstration why PE=zero was provided in the revised PDD. "According to ACM0002 (version 6), new hydro electric power projects with reservoirs, shall account for project emissions. For SHP Buritis, considering the capacity of the project: 30MW and area of reservoir: 0.38 Km2, the power density = 30/0.38 = 78.95 W/m2. If power density of the project is greater than 10W/m2, PEy = 0". CAR 12 was closed out.			

Date:24/08/2006 Raised by: Fabian Gonçalves

No.	Type	Issue	Ref
13	CAR	The table provided in the Section E.6 of the PDD version 7 did not comply with the format of CDM PDD template.	8.1.1
Date:24/08/2006 The PDD was revised.			
Date: 30/08/2006 – Fabian Gonçalves. [Acceptance and close out]: Verified that the revised PDD (version 8) presents the correct table (section E.6). CAR 13 was closed out.			

Observations:

1) The plant is not in operation yet. As described in the PDD, the energy distribution company will be responsible for dealing with possible monitoring data adjustments and uncertainties, for review of reported results/data, for internal audits of GHG project compliance with operational requirements and for corrective actions. It was also informed during the site visit, the project managers will prepare the Operation and Maintenance Manual for the SHP.

The procedures should be clearly described and the operational and maintenance manual should be prepared and implemented until the start up of the plant. Personnel involved in monitoring activities should be trained on the procedures before the plant start to generate CERs.

Annex 6 - Local assessment checklist

Atiaia – Buriti Small Hydropower Plant (CDM.VAL 0353)

This checklist is designed to provide confirmation of in-country data and information provided in the Project Design Document. It serves as a "reality check" on the project. It is to be completed by SGS Brazil.

Issue	**Findings**	**Source /Means of Verification**	**Further action / clarification / information required?**
Verify the environmental licenses/ environmental impacts	The following documents were verified: - Environmental authorization n° 551/2005, 04/07/2005 issued by SEMA. - Installation license n° 006/2005, 15/12/2005 issued by IMAP.	Visit/DR/I	No
Verify reservoir area.	Verified photos of the SHP Buriti (in construction).	Visit/ DR	No
Verify operation licence from ANEEL (national energy agency)	Verified the following documents: - Ofício 369/2006-SCG-ANEEL – Grant hydro resources, PCH Buriti. - Resolution ANEEL n° 35, 31/01/2005	Visit/DR	No
Verify PPA – PCH Buriti.	Verified the PPA- Power Purchase Agreement signed between Eletrobrás and BSB Energética, on 13/04/2005.	Visit/DR/I	No
Verify stakeholders' consultation evidences.	Copy of the letters and ARs were verified: *Prefeitura de Água Clara* (Água Clara City Hall) *Câmara Municipal de Água Clara* (Municipal Chamber of Água Clara) *Secretaria do Meio Ambiente de Água Clara* (Local Environmental Agency of Água Clara) *Associação de Pouso Alto* (Local community association)	Visit/DR	No

Issue	Findings	Source /Means of Verification	Further action / clarification / information required?
	*Prefeitura de Chapadão do Sul (*Chapadão do Sul City Hall*)* *Câmara Municipal de Chapadão do Sul* (Municipal Chamber of Chapadão do Sul) *Secretaria do Meio Ambiente de Chapadão do Sul* (Local Environmental Agency of Chapadão do Sul) *Associação da Pedra Branca* (Local community association) *IMAP/ – Secretaria de Estado do Meio Ambiente do Mato Grosso do Sul* (Mato Grosso do Sul Environmental Agency) *Ministério Público do Mato Grosso do Sul* (State Attorney for the Public Interest of the State of Mato Grosso do Sul) *Fórum Brasileiro de ONGs e Movimentos Sociais para o Desenvolvimento e Meio Ambiente* (Brazilian Forum of NGOs and Social Movements for the Development and Environment)		