

## ANNEX 1 REPORT ON COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

# Braço Norte III Small Hydro Plant

Project No. CDM.Val0338 Date: 31/07/2006

SGS United Kingdom Ltd SGS House, 217-221 London Road, Camberley, Surrey GU15 3EY **Tel** +44 (0)1276 697810 **Fax** +44 (0)1276 697888 Registered in England No. 1193985 Rossmore Business Park, Ellesmere Port, Cheshire CH65 3EN www.sgs.com



### **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

Braço Norte III Small Hydro Plant.

## 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 21 Dec 2005 until 19 Jan 2006 on the website

http://cdm.unfccc.int/Projects/Validation/view.html?ProjectId=CVHKLM6AY9RIIOKK88YI7Y9ML FEXT0&OE=SGS-UKL 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

# Braço Norte III Small Hydro Plant

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- /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.Val0338)
- /5/ Annex 5: Overview of findings (UK.Findings.CDM.VAL0338)
- /6/ Annex 6: Answers from local assessor
- /7/ Annex 7: Validation Report (UK.AR6.CDM.VAL0338)
- /8/ Annex 8: Modalities of communication
- /9/ Letter of Approval from the Government of Brazil



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

# BRAÇO NORTE III SMALL HYDRO PLANT

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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, Braço Norte III Small Hydro Plant. Version 1 (08/11/2005); version 2 (02/05/2006) and version 3 (20/07/2006).
- /2/ AMS-I.D: Grid connected renewable electricity generation (Simplified baseline and monitoring methodologies for selected small scale CDM project activity - Type I – Renewable Energy Projects/ I.D. Grid connected renewable electricity generation), Version 08 (03/03/2006).

List of persons interviewed

	Name and position	Company name	Date interviewed
/1/	Edno Negrini / Executive Director	Guarantã Energética Ltda	March 9 <sup>th</sup> , 2006
/2/	Pedro Geraldo / Energy Coordinator	Guarantã Energética Ltda	March 9 <sup>th</sup> , 2006
/3/	Clóvis Badaró/ Director	Lumina Engenharia e Consultoria	March 9 <sup>th</sup> and 10 <sup>th</sup> , 2006
/4/	Luis Battaini / Engineer	Eletram – Eletricidade da Amazônia	March 9 <sup>th</sup> and 10 <sup>th</sup> , 2006



### **ANNEX 4 - 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 9
Monitoring plan	Provisions for monitoring, verification and reporting are in accordance with relevant decisions of the COP/MOP	Covered in table 9
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 9
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	Covered in Table 7



	operational entity on how due account was taken of any comments has been received;	
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 annex I is identified yet in this project.	Ok	Ok



REQUIREMENT	MoV	Ref	Comment	Draft finding	Concl
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. The letter will be issued after the report is analysed and approved by Brazilian DNA.	The report will be sent to the DNA for analysis.	
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	PDD UNF CCC site	Yes, Brazil. Ratification date: 23 Aug 02	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 the baseline scenario	DR	PDD	Yes. Project improves the supply of electricity with clean, renewable hydroelectric power. It reduces emissions of greenhouse gas (GHG) by avoiding electricity generation by fossil fuel sources (and CO <sub>2</sub> emissions), which would be emitted in the absence of the project. The PDD discuss the barriers that would prevent the project implementation. The most likely alternative presented would have been not to build Braço Norte III.	Ok	Ok
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	UNF CCC site	Global stakeholder: 21 Dec 05 – 19 Jan 06 <u>http://cdm.unfccc.int/Projects/Validation/view.html?Projectl</u> <u>d=CVHKLM6AY9RIIOKK88YI7Y9MLFEXT0&amp;OE=SGS-</u> <u>UKL</u> 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 UNF CCC site	Yes, CDM SSC-PDD (version 2, 8 July 2005).	Observation (1): it is not informed the version of the PDD in section A,	Ok.



REQUIREMENT	MoV	Ref	Comment	Draft finding	Concl
				item A.1	
1.7 The project shall not make use of	DR	PDD	To be confirmed by local assessor.	Verify	Ok
Official Development Assistance (ODA), nor result in the diversion of such ODA	site visit		As discussed during interviews with project managers (carried out by the local assessor), the project does not make use of ODA.		
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?			N/A		
1.9 Does the project meet the additional requirements detailed in: Table 9 for SSC projects Table 10 for AR projects	DR	PDD	Yes (see table 9)	Ok	Ok
Table 11 for AR SSC projects 1.10 Is the current version of the PDD	DR	PDD	Yes.	Ok	Ok
complete and does it clearly reflect all the information presented during the validation assessment?	DR	FUU	The information presented was confirmed by the local assessor during the site visit.	ŬK.	UK
1.11 Does the PDD use accurate and reliable information that can be verified in an objective manner?	DR	PDD	It is not clear the information in Section B.3 of the PDD where Proinfa is mentioned, as the project did not apply for that programme. Section E.1.2.4 of the PDD mentioned a non-registered PDD (other project) as reference for Emission factor calculation, which was not clear. NIR 1 was raised. To clarify the NIR , the text in the PDD was revised. It was	NIR 1	Ok



REQUIREMENT	MoV	Ref	Comment	Draft finding	Concl
			included "As other similar projects, despite its attractiveness, the Braço Norte III project did not apply for participation in Proinfa."		
			It was not clear how the baseline emission factor was calculated (data and formulas). NIR 2 was raised.	NIR 2	Ok
			Data were checked by the local assessor on site. The PDD was revised to include additional information; the emission factor (0.5364 t CO2 e/MWh) was calculated according to the most recent data available from ONS. NIR 2 was closed out.		
			The other information presented (location, specification and capacity of the SHP, total amount of electricity generated and sources of external data and references regarding baseline scenario and additionality) were accurate and reliable, as verified in field by the local assessor and during the document review.		

- Table 2 Baseline methodology(ies) (Ref: PDD Section B and E and Annex 3 and AM) Normal CDM projects only N/A
- Table 3
   Additionality (Ref: PDD Section B3 and AM) Normal CDM projects only N/A
- Table 4
   Monitoring methodology (PDD Section D and AM) Normal CDM Projects only N/A
- Table 5
   Monitoring plan (PDD Annex 4) Normal CDM Project activities only N/A



### Table 6 Environmental Impacts (Ref PDD Section F and relevant local legislation) Normal CDM Project Activities only – N/A

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
7.1 Have relevant stakeholders been consulted?	PDD	DR	Yes. A list of organizations consulted was provided in the PDD and confirmed by the local assessor.	Ok	Ok
7.2 Have appropriate media been used to invite comments by local stakeholders?	PDD	DR	Verify letters sent to stakeholders. It was verified by the local assessor that Guarantã Energética sent letters to stakeholders, describing the project the and inviting for comments (letters sent in local language - Portuguese).	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/ Reso lution n°1	DR	<ul> <li>Verify if the process complied with Resolution n°1.</li> <li>Letters were sent to local stakeholders on 30<sup>th</sup> January 2006. The following organizations were invited: <ul> <li>Environment Secretary of the State of Mato Grosso;</li> <li>Climate Change Brazilian forum: Fórum Brasileiro de Mudanças Climáticas;</li> <li>NGOs' Brazilian forum: Fórum Brasileiro de ONGs e Movimentos Sociais para o Meio Ambiente e Desenvolvimento;</li> <li>Mayor, President of the County Hall and Secretary in charge of Environment of the county of Guarantã do Norte.</li> </ul> </li> </ul>	CAR 3	Ok

### Table 7 Comments by local stakeholders (Ref PDD Section G) All CDM Project Activities



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			In addition to the list mentioned above, it is required to invite the local communities and the Public Attorney of Mato Grosso. CAR 3 was raised.		
			To close out CAR 3, it was verified the letter sent on 15 May 2006 to Ministério Público and on 9 June 2006 to a local organization.		
7.4 Is a summary of the stakeholder comments received provided?	PDD	DR	Yes, no comments received.	Verify	Ok
7.5 Has due account been taken of any stakeholder comments received?	PDD	DR	No comments received.	ОК	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 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.	Ok	Ok				
8.1.2 Substantive issues: does the PDD address all the specific requirements under each header. If requirements are not applicable / not	PDD	DR	Yes.	Ok	Ok				



	CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
	levant, this must be stated and stified					
3.2 Te	chnology to be employed					
3.2.1	Does the project design engineering reflect current good practices?	PDD	DR	Yes.	Ok	Ok
3.2.2	Does the project use state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country?	PDD	DR	As described in the PDD and verified by the local assessor, Braço Norte III is a small run of river hydro plant with 14.16 MW installed capacity. This run-of-river project does not have any dam or water storage, and therefore makes complete use of the water flow. The equipment used in the project was developed and manufactured in Brazil. The plant consists of two sets of turbine-generators. The turbines are Kaplan S elbow type turbines, being the most adequate technology as of today.	Ok	Ok
s e	the project technology likely to be ubstituted by other or more fficient technologies within the roject period?	PDD	DR	It is not expected.	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	As described in the PDD and verified by local assessor during the site visit, electricity generation is the core business of Braço Norte III plant. No additional management structure or extensive training were required for the CDM project. Operation, maintenance, monitoring and reporting are part of the routine of the plant.	ОК	Ok



	CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
8.3	Duration of the Project/ Crediting	Period				
8.3.1	Are the project's starting date and operational lifetime clearly	PDD	DR	Section C.1.1 – starting date $3^{rd}$ October, 2003 (it was considered as the starting date of the plant operation).		Ok
	defined and reasonable?			Section C.1.2 – lifetime 30 years.		
				The crediting period started prior to the registration of project activity, and they shall provide evidence that the starting date of the CDM project activity falls between 1 January 2000 and the date of the registration of a first CDM project, and provide evidence that the incentive from CDM was considered.		
				It was verified the meeting notes of Guarantã board ( "Ata de Reunião da Guarantã Energética Ltda" – Ref.13), that considered the CDM project to mitigate the investments costs, dated on 10/09/2001. Although the preliminary project was designed in 1999, the construction and implementation was carried out only in 2001-2002.		
8.3.2	0	PDD	DR	Section C.2.1.2 – crediting period 7 years.	CAR 4	Ok
(renewable crediting max. two x 7 years	clearly defined and reasonable (renewable crediting period of max. two x 7 years or fixed crediting period of max. 10 years)?			Table in section A.4.3.1 (PDD) did not present the correct period of credits. Year 2003 started on 3rd October and the end of the first crediting period should be on 2 <sup>nd</sup> October 2010. The annual estimation of ERs should be calculated for the correct period (for each year).		
				The PDD was revised. The values for each year were checked and were correct. A spreadsheet with monthly data of energy generation was provided to check the total of CERs presented. CAR 4 was closed out.		



	CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
8.3.3	Does the project's operational lifetime exceed the crediting period	PDD	DR	Yes. Crediting period – 7 years (X 3 =21 years)	Ok	Ok
				Operational lifetime: 30 years		

### Table 9 Additional requirements for SSC project activities only

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl			
SSC projects use the SSC PDD and simplified baseline and monitoring methodologies as detailed in Appendix B (to the Modalities and Procedures for Small scale CDM projects, Annex II to Decision 21/CP.8) Indicative simplified baseline and monitoring methodologies for selected small scale CDM project activity categories								
<ul><li>9.1 Does the project qualify as a small scale CDM project activity as defined in paragraph 6 (c) of decision 17/CP.7 on the modalities and procedures for the CDM?</li></ul>	PDD	DR	Yes, renewable energy generation for a grid with 14.16MW. (less than 15MW - the limit for small scale projects)	Ok	Ok			
9.2 The project conforms to one of the categories listed in Appendix B to Annex II to Decision 21/CP8	PDD	DR	Yes, ID – Grid connected renewable electricity generation.	Ok	Ok			
9.3 The small scale project activity is not a debundled component of a larger project activity?	PDD	DR	To be confirmed by local assessor. Verified during site visit that the project activity is not a debundled of a larger activity. The project is located in the Braço Norte river, close to other plants (Braço Norte and Braço Norte II) on the same river, and another one (Braço Norte IV) which is under construction. Braço Norte and Braço Norte II started their operation before year 2000 (they are not CDM projects). Braço Norte IV is a CDM project, but separate from the Braço Norte III. Both plants	Verify	Ok			



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			are located in the same river but not in the same place, and Braço Norte IV will start operation only in 2007.		
9.4 PDD has been prepared in accordance with appendix A of Annex II to Decision 21/CP8	PDD	DR	Yes, the version 02 is correctly applied.	Ok	Ok
<ul> <li>9.5 The project uses a simplified baseline and monitoring methodology specified in Appendix</li> <li>B. If not, they may propose changes</li> </ul>	PDD	DR	The project applied AMS type I, renewable energy projects. Category I.D – grid connected renewable electricity generation, version 08, 03 March 2006 (version 07 was used in the first version of PDD).	Ok	Ok
to the meths or a new SSC project category			For the discussion of additionality, it was used the "Tool for the demonstration and assessment of additionality", (SSC projects can use simplified procedures - Attachment A to Appendix B. The project has done more than necessary to demonstrate additionality, but it is acceptable).		
9.6 Are the emission reductions determined in accordance with	PDD	DR	It is calculated using the total of electricity generated * baseline Emission factor.	Ok	Ok
the methodology described			See also NIR 2 related to the baseline emission factor.		
<ul> <li>9.7 Is there any bundling of SSC activities into one PDD? If so, does the monitoring plan consider sampling of activities? Refer to para 19 of Annex II. Also, note bundling provisions in SSC Briefing Note and SSC meths I C / I D and III D and Para 22e of Appendix B</li> </ul>	PDD	DR	No.	Ok	Ok
9.8 Is EIA required by host party? If not, none is required irrespective of SHC.	PDD	DR	Verify environmental license and check if state environmental agency requires an EIA.	Verify	Ok



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
If yes, has one been performed consistent with local requirements?			Verified the environmental study "Diagnóstico Ambiental Prévio da PCH – Braço Norte III", March 1999 and September 1999, issued by TD Engenharia Ltda.		
			Verified Previous license number 035/99, 13/04/1999 issued by FEMA.		
			Verified Installation license number 121/2002, 18/04/2002 issued by FEMA.		
			Verified Operation license number 1948/2005, 22/11/2005 issued by FEMA.		
9.9 The project results in emission reductions that area additional in	PDD	DR	The emissions are reduced below in the absence of the project.	Ok	Ok
accordance with the following requirements: (para 26) The project is additional if emissions are reduced below those in the absence of the project (Para 27) Simplified baseline can be used; if not, baseline proposed shall cover all gases, sectors and sources listed in Annex A to the KP Para 28) One or more barriers as detailed in attachment A to Appendix B to Annex II will be used to demonstrate that the project would not proceed without the CDM			For the discussion of additionality, it was used the "Tool for the demonstration and assessment of additionality". References and spreadsheets were provided to support the discussion. The project participant provided the following explanation about the project additionality: - The investment analysis showed that without CER revenues, the project would reach lower rates of return than the benchmark rate (IRR values of 15.0% without CER revenues and 16.6% including them), concluding that CER revenues will be one of the important points for the project's feasibility. The most likely alternative presented would have been not to build Braço Norte III SHP.		
			- Barrier due to prevailing practice: considering the "Commom practices analysis", it was discussed that the projects such as Braço Norte III are not widely observed and commonly carried out in the country. It was informed		



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			that less than 1.5% of the country's installed capacity is located in small plants.		
9.10 Leakage is calculated according to the provisions of the SSC methodologies in Appendix B ( <u>http://cdm.unfccc.int/Projects/pac/ss</u> <u>clistmeth.pdf</u> )	PDD	DR	Leakage is not applicable.	Ok	Ok
9.11 The project boundary shall be constructed in accordance with the requirements of the SSC meths in Appendix B	PDD	DR	The boundary of project activities encompasses the Braço Norte III plant and the South-Southeast-Midwest national system.	Ok	Ok
9.12 The Monitoring plan shall be consistent with the requirements of the SSC methodology in Appendix B and shall provide for the collection and archiving of data needed to determine project emissions, baseline emissions and leakage.	PDD	DR	Yes.	Ok	Ok
9.13 The monitoring plan shall present good monitoring practice appropriate	PDD	DR	No information about procedure for calibration of meters was provided.	Verify NIR 5	Ok
to the circumstances of the project activity (para 33)			NIR 5 was raised.		
			It was informed and verified during the site visit that calibration of meter follows the ONS procedure (see Ref. 7). The section D.5 of the PDD was revised to present this information.		
9.14 If project activities are bundled, separate monitoring plan shall be prepared for each of the activities or	PDD	DR	It was confirmed that the project is not bundled.	Ok	Ok



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
an overall plan reflecting good monitoring practice will be prepared, consistent with the above requirements					

### Table 10 Additional requirements for AR projects

### Table 11 Additional requirements for SSC AR projects

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

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
Check the starting date of the project activity: verify documents that evidence the start date of construction and	Site visit	DR/I	Verified contract between Guarantã Energética and Alstom Brasil, 03/05/2001 (contract for purchasing and installation of the turbines) – Ref.1.	Ok	Ok
operation start up.			Verified contract between Guarantã Energética and Gevisa, 02/10/2001(contract for purchasing and installation of the generators) – Ref.2.		
			Verified the energy invoices issued by the company since the project start (October 2003 – December 2005).		



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
Verify if the project is licensed by the	Site	DR/I	Resolution n° 374, 20 September 2000, ANEEL (Ref.3).	Ok	Ok
national agencies (Energy):	visit		Despacho n° 603, 30 September 2002, ANEEL (Ref. 4).		
Verify operation licence issued by			Despacho n° 715, 3 October 2003, ANEEL (Ref.5).		
ANEEL			Despacho n° 854, 11 November 2003, ANEEL (Ref.6).		
Verify the analysis of IRR (premises	Site	DR/I	The spreadsheet was provided (Ref.12).	Verify	Ok
adopted, cash flow etc). Ask copy of the spreadsheet used for calculations.	visit		The analysis was discussed with the project developers.		
Confirm the reservoir area informed in	Site	DR/	The project installation was confirmed during site visit.	Ok	Ok
the PDD. Verify maps.	visit	visit	Verified map of the reservoir. The area 1.3 km <sup>2</sup> was		
Confirm project implementation as described in the PDD.			confirmed by the local assessor.		
Verify calibration procedure for the electricity meter.	visit	DR/I	It was informed that calibration of meter follows the ONS procedure (see Ref. 7).	Verify	Ok
			The section D.5 of the PDD was revised to present this information.		
Verify evidences about the baseline <sup>v</sup> emission factor (data sources and calculation).		DR/I	Data were checked by the local assessor during onsite visit. The PDD was revised to include additional information; the emission factor (0.5364 t CO2 e/MWh) is calculated according to the most recent data available from ONS (years 2002 to 2004).	Verify	Ok
Verify environmental requirements (local and national). Verify environmental licenses issued by the state agency.		DR/I/ visit	Verified the environmental study "Diagnóstico Ambiental Prévio da PCH – Braço Norte III", March 1999 and September 1999, issued by TD Engenharia Ltda (Ref.8).	Ok	Ok
			Verified Previous license n° 035/99, 13/04/1999 issued by FEMA (Mato Grosso State Environmental Agency) – Ref.9.		



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			Verified Installation license n° 121/2002, 18/04/2002 issued by FEMA (Ref.10).		
			Verified Operation license n° 1948/2005, 22/11/2005 issued by FEMA (Ref.11).		

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	Contract between Guarantã Energética and Alstom Brasil, 03/05/2001.	Turbines purchasing/installation contract.	Y
2	Contract between Guarantã Energética and Gevisa, 02/10/2001.	Electricity generators purchasing/installation contract.	Y
3	Resolution number 374, 20 September 2000, ANEEL.	Authorization to generate energy, small hydro power Braço Norte III.	Y
4	Despacho n° 603, 30 September 2002, ANEEL.	Authorization to generate 14.16MW.	Y
5	Despacho nº 715, 3 October 2003, ANEEL.	Authorization to start energy generation in the unit 1.	Y
6	Despacho nºr 854, 11 November 2003, ANEEL.	Authorization to start energy generation in the unit 2.	Y
7	Módulo 12 – Medição para Faturamento (ONS).	ONS procedures for installation, measuring, calibration, maintenance, certification. (ONS – Operator of the Electricity National System)	Y
8	Diagnóstico Ambiental Prévio da PCH – Braço Norte III, March 1999 and September 1999, issued by TD Engenharia Ltda.	Environmental study.	Y



9	Previous license number 035/99, 13/04/1999 issued by FEMA.	Environmental license – preliminary	Y
10	Installation license number 121/2002, 18/04/2002 issued by FEMA.	Environmental license – construction	Y
11	Operation license number 1948/2005, 22/11/2005 issued by FEMA.	Environmental license – operation	Y
12	DCP BN3 version 1 Financial analysis.	Spreadsheet (Excel) used for IRR analysis.	Y
13	Ata de Reunião, 10/09/2001.	Meeting notes of Guarantã Energética board (Documented evidence for the step 0).	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
9 <sup>th</sup> and 10 <sup>th</sup> March 2006	Edno Negrini	Executive Director	Guarantã Energética. enegrini@grupoamper.com.br	Technical information, procedures, contracts, licenses.
9 <sup>th</sup> and 10 <sup>th</sup> March 2006	Clóvis Badaró	Director	Lumina Energia. <u>Clovis.badaro@luminaenergia.com.br</u>	Baseline study, PDD, monitoring plan.
9 <sup>th</sup> and 10 <sup>th</sup> March 2006	Pedro Geraldo	Energy Coordinator	Guarantã Energética.	Contracts and licenses.
9 <sup>th</sup> and 10 <sup>th</sup> March 2006	Luis Battaini	Engineer	Eletram. +55 (66) 552-1127	Technical information, site visit, plant installation and construction.



### **ANNEX 5 - FINDINGS OVERVIEW**

### FINDINGS FROM VALIDATION OF BRAÇO NORTE III SMALL HYDRO PLANT - VAL0338

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:

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.
Details the content of the finding
refers to the item number in the Validation Protocol
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:	08/03/2	2006 Raised by: Fabian Gonçalves/Aurea	Vardelli	
No.	Туре	Issue	Ref	
1	NIR	It is not clear the information in Section B.3 of the PDD where Proinfa is mentioned, as the project did not apply for that programme. Section E.1.2.4 of the PDD mentioned a non-registered PDD (other project) as reference for Emission factor calculation, which was not clear.	1.11	
Date:	05/06/2	2006		
[Com	ments]:	See revised PDD		
Date:	05/06/2	2006		
As	[Acceptance and close out]: To clarify the NIR, the text in the PDD was revised. It was included " As other similar projects, despite its attractiveness, the Braço Norte III project did not apply for participation in Proinfa." NIR 1 was closed out.			

Date:	08/03/2	2006 Raised by: Fabian Gonçalves/Aur	ea Nardelli
No.	Туре	Issue	Ref
2	NIR	It was not clearly presented how the baseline emission factor was calculated (data and formulas).	1.11
Date:	05/06/2	2006	
[Com	ments] :	: Information was provided to the local assessor. See also the revised PD	D.
Date: 05/06/2006			
[Acceptance and close out]: Data were checked by the local assessor on site. The PDD was revised to include additional information about baseline emissions; the emission factor (0.5364 t CO2 e/MWh) was calculated according to the most recent data available from ONS (2002-2004). NIR 2 was closed out.			



Date:	08/03/2	006 Raised by: Fabian Gonçalves/Aurea	Nardelli		
No.	No. Type Issue				
3	CAR	The stakeholder consultation process should be carried out in accordance with Resolução n° 1 (DNA requirement). The Public Attorney and local community were not included in the list of stakeholders invited to comment on the project.	7.3		
Date:	05/06/2				
[Com	ments]:	Letters will be sent to Public Attorney and to a local association.			
Date:	Date: 20/06/2006				
[Acce	[Acceptance and close out]: To close out CAR 3, it was verified the letter sent on 15 May 2006 to				
Public Attorney and on 9 June 2006 to a local organization. Documented evidences of invitation were sent to SGS.					

Date: 08/03/2006

Raised by: Fabian Gonçalves/Aurea Nardelli

No.	Туре	Issue	Ref	
4	CAR	Table in section A.4.3.1 (PDD) did not present the correct period of credits. Year 2003 started on 3rd October and the end of the first crediting period should be on 2 <sup>nd</sup> October 2010. The annual estimation of ERs should be calculated for the correct period (for each year).	8.3.2	
Date:	05/06/2	006		
[Com	ments]:	The PDD was revised.		
Date: 18/07/2006				
[Acceptance and close out]: It was confirmed that the PDD was revised. The values for each year				
prese	presented in the new table were checked. A spreadsheet with monthly data of energy generation			
was p	was provided to check the total of CERs presented.			

Date:	08/03/2	006 Raised by: Fabian Gonçalves/Aurea	Nardelli
No.	Туре	Issue	Ref
5	NÎR	The monitoring plan shall present good monitoring practice. It was not provided information about calibration of the electricity meter installed in the plant. This meter is an important component of the monitoring system of the project activity.	9.1.3
Date:	05/06/2	006	
[Com	ments]:	Information was provided during the site visit.	
Date:	05/06/2	006	
meter		and close out]: It was informed and verified during the site visit that calibration the ONS procedure (see Ref. 7). The section D.5 of the PDD was revised toon.	

Observations:

(1) - The PDD did not include its version number (Section A, item A.1);



### Annex 6 - Local assessment checklist

### Braço Norte III Small Hydro Plant - CDM.VAL0338

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 a local assessor of SGS Brazil

Issue	Findings	Source /Means of Verification	Further action / clarification / information required?
Check the starting date of the project activity: verify documents that evidence	Verified contract between Guarantã Energética and Alstom Brasil, 03/05/2001 (contract for purchasing/installation of the turbines).	Site visit/DR	ОК
the start date of construction and operation start up.	Verified contract between Guarantã Energética and Gevisa, 02/10/2001(contract for purchasing/installation of the generators).		
	Verified the energy invoices issued by the company since the project start (October 2003 – December 2005).		



Issue	Findings	Source /Means of Verification	Further action / clarification / information required?
Verify if the project is	Resolution n° 374, 20 September 2000, ANEEL.	Site visit/DR	Ok
licensed by the national	Despacho n° 603, 30 September 2002, ANEEL.		
agencies (Energy):	Despacho n° 715, 3 October 2003, ANEEL.		
Verify operation licence issued by ANEEL	Despacho n° 854, 11 November 2003, ANEEL.		
Verify the analysis of IRR	The spreadsheet was provided.	DR/I	Ok
(premises adopted, cash flow etc). Ask copy of the spreadsheet used for calculations.	The analysis was discussed with the project developers.		
Confirm the reservoir area	The project installation was confirmed during site visit.	Site visit/DR	Ok
informed in the PDD. Verify maps.	Verified map of the reservoir. The area 1,3 km <sup>2</sup> was confirmed by the local assessor.		
Confirm project implementation as described in the PDD.			
Verify calibration procedure for the electricity meter.	It was informed that calibration of meter follows the ONS procedure. Copy of the procedure was provided to the auditor.	DR/I	Ok
	The section D.5 of the PDD was revised (see version 2) to present the complete information.		
Verify evidences about the baseline emission factor (data sources and calculation).	Data were checked by the local assessor during onsite visit. The PDD was revised to include additional information; the emission factor (0.5364 t CO2 e/MWh) is calculated according to the most recent data available from ONS.	DR/I	Ok
Verify environmental	Verified the environmental study "Diagnóstico Ambiental	DR/Site visit	Ok



Issue	Findings	Source /Means of Verification	Further action / clarification / information required?
requirements (local and national). Verify	Prévio da PCH – Braço Norte III", March 1999 and September 1999, issued by TD Engenharia Ltda.		
environmental licenses issued by the state agency.	Verified Previous license n° 035/99, 13/04/1999 issued by FEMA (Mato Grosso State Environmental Agency).		
	Verified Installation license n° 121/2002, 18/04/2002 issued by FEMA.		
	Verified Operation license n° 1948/2005, 22/11/2005 issued by FEMA.		