

**Validation Report**

**Cucaú Bagasse Cogeneration Project**

**CDM.Val0243**

**June 12th, 2006**

**SGS Climate Change Programme**  
SGS United Kingdom Ltd  
SGS House  
217-221 London Road  
Camberley Surrey  
GU15 3EY  
United Kingdom



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# ANNEX 1

## REPORT ON COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

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### Cucaú Bagasse Cogeneration Project (CBCP)

**Project No.** CDM.Val0243

**Date:** 12/06/2006

## **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**

Cucaú Bagasse Cogeneration Project (CBCP).

### **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 27 Oct 05 until 25 Nov 05 on the website

<http://cdm.unfccc.int/Projects/Validation/view.html?ProjectId=MA6HTJDIM9YAO2KW4AT53Q2EB581IJ&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.



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## ANNEX 2

# LIST OF DOCUMENTS ATTACHED

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### Cucaú Bagasse Cogeneration Project (CBCP)

**Project No.** CDM.Val0243

**Date:** 12/06/2006

- /1/ Annex 1: Report on Comments by Parties, Stakeholders and NGOs
- /2/ Annex 2: Comprehensive list of documents attached
- /3/ Annex 2: List of persons interviewed
- /4/ Annex 4: Validation Protocol (UK.AU4.CDM.Val0243)
- /5/ Annex 5: Overview of findings (UK.Findings.CDM.VAL0243)
- /6/ Annex 6: Answers from local assessor
- /7/ Annex 7: Validation Report (UK.AR6.SSC.CDM.VAL0243)
- /8/ Annex 8: Modalities of communication
- /9/ Letter of Approval from the Government of Brazil



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## ANNEX 3

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

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# CUCAÚ BAGASSE COGENERATION PROJECT (CBCP)

**Project No.** CDM.Val0243

**Date:** 12/06/2006

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 interviewed as part of the validation.

#### List of documents reviewed

- /1/ Project Design Document, Cucaú Bagasse Cogeneration Project (CBCP), version 2 January 5<sup>th</sup> 2006, version 3 April 28<sup>th</sup> 2006, version 4 June 12<sup>th</sup> 2006.
- /2/ Simplified baseline and monitoring methodology for selected small scale CDM project activity category, ID-Grid connected renewable electricity generation, 20 September 2005, version 06.
- /3/ Projeto de Cogeração com Bagaço Cucaú – Sumário Executivo.
- /4/ Resolution #370, 08/11/2004 issued by ANEEL.
- /5/ Legal status of the company.
- /6/ Notas de Reunião, 16/10/2000
- /7/ Ficha de Calibração – Padrão zero 90001642, 17/10/2003, issued by Celpe.
- /8/ Ficha de Calibração – Padrão zero 90001643, 17/10/2003, issued by Celpe.
- /9/ Invoices # 20136, 24/08/2001 and #19995, 17/08/2001
- /10/ Registro de Medição para pagamento 001/2001, issued by GCS energia.
- /11/ Invoices #6, 30/11/01 and #75, 18/10/05 issued by Usina Cucaú.
- /12/ Spreadsheet , October/2005
- /13/ Operation License #1487/01, 28/08/01 issued by CPRH.
- /14/ Operation License #1708/02, 28/08/02 issued by CPRH.
- /15/ Operation License #1718/03, 26/08/03 issued by CPRH.
- /16/ Installation License#0368/04, 29/03/04 issued by CPRH.
- /17/ Operation License #2706/04, 29/10/04 issued by CPRH.
- /18/ Operation License #0107/05, 19/01/05 issued by CPRH.
- /19/ Contract #AP-016 between Usina Cucaú and GCS Energia signed 05/09/2001.
- /20/ Spreadsheets 2001, 2002, 2003, 2004

#### List of persons interviewed

	Name and position	Company name	Date interviewed
/1/	Afranio Tavares da Silva / Project Director	Usina Cucaú	16 <sup>th</sup> and 17 <sup>th</sup> November 2005
/2/	Gessenildo A. Almeida / Project Analyst	Usina Cucaú	16 <sup>th</sup> and 17 <sup>th</sup> November 2005
/3/	Edmundo Jordão / Industrial Manager	Usina Cucaú	16 <sup>th</sup> and 17 <sup>th</sup> November 2005
/4/	David Freire da Costa / Project Engineer	Econergy	16 <sup>th</sup> and 17 <sup>th</sup> November 2005

## 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 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	Covered in Table 7



Other requirements	operational entity on how due account was taken of any comments has been received; 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
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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 in this project.	Ok	Ok

REQUIREMENT	MoV	Ref	Comment	Draft finding	Concl
<i>To this end, the DNA of an Annex 1 Party shall submit a letter of approval consistent with the requirements of Annex 6 to EB 16. This also requires that the non-host party has nominated a DNA to the UNFCCC</i>					
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 <i>To this end, the DNA of a Non-Annex 1 Party shall submit a letter of approval consistent with the requirements of Annex 6 to EB 16, also confirming that the project contributes to sustainable development. This also requires that the host party has nominated a DNA to the UNFCCC</i>	DR	PDD	At time of the draft validation, no Letter of Approval from the host country had been provided. The Letter of Approval will be signed when the DNA of Brazil has received the validation report.	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 <i>Check UNFCCC website for most recent list – some countries could be excluded from participation if they have failed to fulfil other inventory and reporting requirements</i>	DR	PDD	Yes, Brazil – date of ratification 23-August-2002	Ok	Ok
1.4 The project results in reductions of GHG emissions or increases in sequestration when compared to the	DR	PDD	Yes, the project activity uses renewable biomass for electricity generating unit to substitute fossil fuel.	Ok	Ok

REQUIREMENT	MoV	Ref	Comment	Draft finding	Concl
baseline; and the project can be reasonably shown to be different from the baseline scenario <i>To this end, the project shall correctly apply approved baseline and monitoring methodologies. See Table 4 below</i>					
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 <i>These will have resulted from the publishing of the PDD during the validation process. Note that regular and SSC projects are to be displayed for 30 days, "normal" AR projects are to be displayed for 45 days</i>	DR	PDD UNF CCC web site	The project was publicly available until 25-Nov-05 <a href="http://cdm.unfccc.int/Projects/Validation/view.html?Projectd=MA6HTJDIM9YAO2KW4AT53Q2EB581IJ&amp;OE=SGS-UKL">http://cdm.unfccc.int/Projects/Validation/view.html?Projectd=MA6HTJDIM9YAO2KW4AT53Q2EB581IJ&amp;OE=SGS-UKL</a> 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 <i>See Table 8 below. Note requirements for regular and AR projects are different</i>	DR	PDD	Yes; CDM SSC-PDD (version 2).	Ok	Ok
1.7 The project shall not make use of Official Development Assistance (ODA), nor result in the diversion of such ODA	DR	PDD	No ODA has been provided for this project, as confirmed by local assessor. The project was financed by BNDES in 2003; all other financial resource come from the project's own source.	Ok	Ok

REQUIREMENT	MoV	Ref	Comment	Draft finding	Concl
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	N/A	N/A	N/A	N/A
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	DR	PDD	Yes (see table 9).	Ok	Ok
1.10 Is the current version of the PDD complete and does it clearly reflect all the information presented during the validation assessment. <i>Project Documentation should be complete and should also reflect information presented in the course of the validation assessment so this information is available to other stakeholders. Alternatively, information provided will need to be discussed in detail in the validation report.</i>	DR	PDD	The current version of the PDD is used. To be confirmed by local assessor if PDD reflect all information about the project. During site visit it was possible to confirm the information presented in the PDD.	Verify	Ok
1.11 Does the PDD use accurate and reliable information that can be verified in an objective manner? <i>All information must be verified, this includes all the default factors and parameters used in the calculations. For example for a Landfill Gas project, all factors used in the calculation</i>	DR	PDD	Yes. All references presented in the PDD were verified and confirmed.	Ok	Ok

REQUIREMENT	MoV	Ref	Comment	Draft finding	Concl
<i>of the Methane Correction Factor should be discussed and verified</i>					

**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**

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

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
<i>Project developers need to invite comments by local stakeholders and a summary of the comments received should be provided. The project developer will need to show that due account was taken of any comments that have been received</i>					
7.1 Have relevant stakeholders been consulted?	PDD	DR	Verify invitation for local stakeholders. During the site visit, it was verified the letters and a summary of the project that were sent to the stakeholders.	Verify	Ok
7.2 Have appropriate media been used to invite comments by local stakeholders?	PDD	DR	To be confirmed by local assessor. Yes, the letters and the summary were sent in a 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 according to Brazilian Resolution #1, 2003/09/11. Copy of the letters and delivery protocol was provided during validation assessment.	Verify	Ok

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			The list of local stakeholders invited to comment was provided on the PDD.		
7.4 Is a summary of the stakeholder comments received provided?	PDD	DR	Yes. Six comments were received (See PDD, section G.2).	Ok	Ok
7.5 Has due account been taken of any stakeholder comments received?	PDD	DR	<p>All the comments received were positive comments about CBCP. They enhance the importance of the Global Climate Change associated with the Global Warming Potential and the contribution, by the Cucaú Bagasse Cogeneration Project, for the mitigation of Greenhouse Gases effects.</p> <p>The comments received do not require any explanation or feedback.</p>	Ok	Ok

**Table 8 Other requirements All CDM project activities**

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
<b>8.1 Project Design Document</b> <i>The project needs to correctly complete a Project Design Document, using the current version and exactly following the guidance – note that regular, SSC, AR and AR SSC each use different PDD templates, but to date, the ARSSC PDD is not available</i> <i>Obtain a copy from the CDM website, and a copy of the guidance to accompany the PPD. See Tables 9 and 11 for guidance on how to find the correct version of the PDD guidance for SSC and SSC AR projects. Perform a section by section / line by line check on the contents of the PDD.</i> <i>In a WORD version of the PDD, use track changes mode to note any deviations (however minor) from the PDD. Save this document with tracked changes showing and append it to the Validation report as evidence of the auditing process. Compile a list of the differences in UK.Findings.CDM. Split these into Editorial and Substantive comments. Editorial issues can be listed on one CAR; substantive findings can be listed as individual findings</i>					
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. No changes to the PDD format have been observed.	Ok	Ok
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	Yes.	Ok	Ok
<b>8.2 Technology to be employed</b> <i>COP 10 Re-emphasized that clean development mechanism project activities should lead to the transfer of environmentally safe and sound technologies and know-how. The validator should ensure that environmentally safe and sound technology and know-how is used.</i>					
8.2.1 Does the project design engineering reflect current good practices?	PDD	DR	Yes. The project design reflects current good practices.	Ok	Ok

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
8.2.2 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	The predominant technology in all parts of the world today for generating megawatt (MW) levels of electricity from biomass is the steam-Rankine cycle, which consists of direct combustion of biomass in a boiler to generate steam, which is then expanded through a turbine.  The steam-Rankine cycle involves heating pressurized water, with the resulting steam expanding to drive a turbine-generator, and then condensing back to water for partial or full recycling to the boiler.	Ok	Ok
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	To be confirmed by local assessor.  No specific training has been required for the project. It was verified during site visit that the project operation are part of the routine of the workers.	Verify	Ok
<b>8.3 Duration of the Project/ Crediting Period</b> <i>It is assessed whether the temporal boundaries of the project are clearly defined.</i>					
8.3.1 Are the project's starting date and operational lifetime clearly defined and reasonable?	PDD	DR	Yes.  Section C.1.1 – starting date 05/09/2001 Section C.1.2 – lifetime 25 years	Ok	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	PDD	DR	Renewable crediting period: first period 7 years.	Ok	Ok



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
years)?					
8.3.3 Does the project's operational lifetime exceed the crediting period	PDD	DR	Yes.	Ok	Ok

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

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
<p>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</p> <p><i>Note this Appendix is regularly updated and the most recent should be obtained from the CDM website</i></p> <p><i>SSC projects havemuch in common woth normal CDM project activites, but there are some exceptions which are tested in the section below. Where these questions contradict questions elsewhere in the checklist, these questions shall prevail.</i></p> <p><i>Please note the special requirements relating to:</i></p> <ul style="list-style-type: none"> <li>- Eligibility: Renewable energy project activities with a maximum.... see para 6 c of Decision 17 CP7 and the descriptions for each methodology in Appendix B</li> <li>- Debundling: As detailed in Appendix C of Annex II to Decision 21/CP.8 (first produced as Annex 7 to EB7)</li> <li>- Use of SSC Methodologies</li> </ul>					
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?	PDD	DR	Yes, renewable electricity generation for a grid with maximum 15MW capacity.	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 – renewable energy projects for electricity generation for a system.	Ok	Ok

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
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 is not a debundled component of a larger activity.	Verify	Ok
9.4 PDD has been prepared in accordance with appendix A of Annex II to Decision 21/CP8	PDD	DR	They use the current version (CDM-SSC PDD, version 2).	Ok	Ok
9.5 The project uses a simplified baseline and monitoring methodology specified in Appendix B. If not, they may propose changes to the meths or a new SSC project category	PDD	DR	They use the Attachment A to Appendix B. “Renewable Electricity Generation for a Grid”, Type I.D in Appendix B of the Simplified Modalities and Procedures for Small-Scale CDM project activities	Ok	Ok
9.6 Are the emission reductions determined in accordance with the methodology described	PDD	DR	Yes. $ER = BE_{\text{electricity},y} - (L_y + PE_y)$ $ER = 0, 3850 \text{ tCO}_2/\text{MWh} \cdot EG_y$	Ok	Ok
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	PDD	DR	No.	Ok	Ok
9.8 Is EIA required by host party? If not, none is required irrespective of SHC. If yes, has one been performed	PDD	DR	Verify environmental license and check if state environmental agency requires an EIA. During site visit, the environmental licenses were verified	Verify	Ok

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
consistent with local requirements?			(see list of licenses consulted at the end of this checklist). The potential environmental impacts were analyzed by the CPRH – Agência Estadual de Meio Ambiente e Recursos Hídricos (Environmental and Hydrous Resources State Agency). Cucaú is in compliance with the environmental legislation. A license covering the extension of its electric system generation from biomass has been issued. As defined by state environmental agency, the project shall be in compliance with some conditions when the entrepreneurship operate in full charge, as collection of chimney emissions samples by isokinetic process and reporting the results to CPRH.		
9.9 The project results in emission reductions that are additional in 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	PDD	DR	The project use simplified baseline.  The barriers detailed in attachment A to appendix B are described in the PDD.  To be confirmed by local assessor: Verified that emissions are reduced below those in the absence of the project.	Verify	Ok

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
9.10 Leakage is calculated according to the provisions of the SSC methodologies in Appendix B ( <a href="http://cdm.unfccc.int/Projects/pac/ssclistmeth.pdf">http://cdm.unfccc.int/Projects/pac/ssclistmeth.pdf</a> )	PDD	DR	Leakage is not considered. The energy generating equipment was not transferred from another activity nor the existing equipment was transferred to another activity.	Ok	Ok
9.11 The project boundary shall be constructed in accordance with the requirements of the SSC meths in Appendix B	PDD	DR	<p>As described in the PDD, section B.4:</p> <p><u>Baseline energy grid</u>: For CBCP, the North-Northeast subsystem of the Brazilian grid is considered as a boundary, since it is the system to which Cucaú is connected and therefore receives all the bagasse-based produced electricity.</p> <p><u>Bagasse cogeneration plant</u>: the bagasse cogeneration plant considered as boundary comprises the whole site where the cogeneration facility is located.</p>	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	<p>Monitoring shall consist of metering the electricity generated by the renewable technology.</p> <p>The quantity of energy exported to the grid will be monitored through the energy invoice emitted by Cucaú to GCS Energia, the energy distributor. The archiving will occur up to two years after the end of the crediting period or the last issuance of CERs for this project activity, whatever occurs later. The amount of energy will be registered in the spreadsheet "CBCP.xls", which shall be the instrument for the further Verification.</p>	Ok	Ok

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
9.13 The monitoring plan shall present good monitoring practice appropriate to the circumstances of the project activity (para 33)	PDD	DR	<p>The structure for monitoring will basically consist of registering the quantity of energy exported to the grid (EG<sub>y</sub>), from year 2001 up to the end of the last crediting period. Since no leakage nor any off-grid emissions change were identified in this project activity, there will be no need to monitor the variables for these cases.</p> <p>There are two operations that the project operators must perform in order to ensure data consistency, despite the fact that this will actually consist of the monitoring of one single variable: The monthly readings of the calibrated meter equipment must be recorded in an electronic spreadsheet; Sales receipt must be archived for double checking the data. In case of inconsistency, these are the data to be used.</p> <p>According to the law, the metering equipment shall be periodically calibrated to comply with the regulations for independent power producers connected to the regional grid.</p> <p>No specific written procedure was prepared for the project. It was verified during site visit that employees know the process and how the project and the energy generation works. The applicable procedure to energy generation and controls are described in sections D.3, D.4 and D.5 of the PDD.</p> <p>The calibration of energy measurement instruments are made by CELP – Companhia Energética de Pernambuco, which is the local concessionaire. The calibration</p>	Verify	Ok

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			procedures shall be made annually.		
9.14 If project activities are bundled, separate monitoring plan shall be prepared for each of the activities or an overall plan reflecting good monitoring practice will be prepared, consistent with the above requirements	PDD	DR	The project is not bundled.	Ok	Ok

**Table 10 Additional requirements for AR projects – N/A**

**Table 11 Additional requirements for SSC AR projects – N/A**

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

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
<p><i>Key assumptions and data presented in the PDD must be verified, usually by local assessors or during a site visit. Where the baseline is constructed from historic emissions data, a site visit by an Assessor or Lead Assessor will be necessary; where the baseline is constructed from an economically attractive course of action, a local assessor may be sufficient. Where the baseline uses 48c (measure of best practice) any combination of Assessor / Lead Assessor / Local Assessor and Expert may be required.</i></p> <p><i>During the line by line review of the PDD, identify all statement / facts / assumptions / variables etc that need to be verified. List them below and then ensure that the team verifies the data and provides references / supporting documentation where necessary.</i></p> <p><i>The list may be quite long therefore avoid repetition.</i></p>					
Verify project installations like described	Site	Visit	It was verified all project cycle since delivery the sugar	Ok	Ok

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
in the PDD.	visit		cane (biomass) until energy generation to the grid.		
Verify documents that prove the start date of the project.	Site visit	DR	<p>Verified the Resolution #370, 08/11/2004 that authorize the company Zihuatanejo do Brasil Açúcar e Alcool Ltda, as a energy producer through Cucaú thermoelectric, in operation since September 2001.</p> <p>Verified the legal status of the company, “Caracterização da Empresa”.</p> <p>Verified the Invoice # 20136, 24/08/2001 and # 19995, 17/08/2001, for Turbine Model DME-700.</p> <p>Verified “Registro de Medição para Pagamento” #001/2001, issued in October/2001.</p> <p>Verified the contract #AP-016 between Usina Cucaú and GCS Energia signed 05/09/2001 (contract of purchase of energy).</p>	Ok	Ok
Verify the document “Notas de Reunião”	Site visit	DR	<p>It was verified the original document and copy were provided. The document describes the investments done at Cucaú and that the carbon credits will aggregate value to the Cucaú activity.</p> <p>In 2001 the company participates in an International Seminar that discussed about Kyoto Protocol and CO2 market.</p>	Ok	Ok
Verify calibration of the metering equipment.	Site visit	DR	<p>Verified the calibration report:</p> <p>“Ficha de Calibração – Padrão Zero”, issued on 17/10/2003, of the metering equipment ELO02180SP, number 90001642 and 90001643.</p> <p>The calibration occurs once a year.</p>	Ok	Ok
Verify sales receipt.	Site	DR	Verified sales receipt:	Ok	Ok

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
	visit		Invoice 6, 30/11/2001, related to energy generated in September/2001 (when the project starts). Invoice 75, 18/10/2005, related to energy generated in September/2005.		
Verify electronic spreadsheet of the monthly readings.	Site visit	DR	Verified the electronic spreadsheet of the monthly readings: "Monthly energy production" from 2001, 2002, 2003, 2004 and October 2005 and "Day control of energy production".	Ok	Ok
Verify licenses: environmental, implanting and operational. Verify if have any issue relates to the use of biomass.	Site visit	DR	Verified licenses since the project start; the project don't have any issue constraining or requiring the use of biomass. Operation License #1487/01, 28/08/01 issued by CPRH. Operation License #1708/02, 28/08/02 issued by CPRH. Operation License #1718/03, 26/08/03 issued by CPRH. Installation License#0368/04, 29/03/04 issued by CPRH. Operation License #2706/04, 29/10/04 issued by CPRH. Operation License #0107/05, 19/01/05 issued by CPRH.	Ok	Ok
Verify analysis of the chimney samples and how results are reported.	Site visit	DR	The chimney analysis will occur in December/2005, the analysis was requested in the last operation license issued by CPRH.	Ok	Ok
Verify certificate ISO 14001, scope.	Site visit	DR	The project doesn't have any ISO certificate.	Ok	Ok



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	Projeto de Cogeração com Bagaço Cucaú – Sumário Executivo.	Summary of the project sent to local stakeholders during consultation process.	Y
2	Resolution #370, 08/11/2004 issued by ANEEL.	Authorization to the company Zihuatanejo do Brasil Açúcar e Alcool Ltda to perform as an energy producer through Cucaú thermoelectric, in operation since September 2001.	Y
3	Legal status of the company.	Register of the company as a Sugar, alcohol and energy producer, 02/05/2000.	Y
4	Notas de Reunião, 16/10/2000	The document describes the meeting between Directors of Cucaú and Koblitz about investments at Cucaú and that the carbon credits will aggregate value to the Cucaú activity.	Y
5	Ficha de Calibração – Padrão zero 90001642, 17/10/2003, issued by Celpe.	Calibration certificate of the energy metering.	Y
6	Ficha de Calibração – Padrão zero 90001643, 17/10/2003, issued by Celpe.	Calibration certificate of the energy metering.	Y
7	Invoices # 20136, 24/08/2001 and #19995, 17/08/2001	Invoice related to the purchase of the turbine model DME-700.	Y
8	Registro de Medição para pagamento 001/2001, issued by GCS energia.	Measured data for payments.	Y

9	Invoices #6, 30/11/01 and #75, 18/10/05 issued by Usina Cucaú.	Energy sold.	Y
10	Spreadsheet , October/2005	Monthly energy produced at Cucaú.	Y
11	Operation License #1487/01, 28/08/01 issued by CPRH.	Environmental license	Y
12	Operation License #1708/02, 28/08/02 issued by CPRH.	Environmental license	Y
13	Operation License #1718/03, 26/08/03 issued by CPRH.	Environmental license	Y
14	Installation License#0368/04, 29/03/04 issued by CPRH.	Environmental license	Y
15	Operation License #2706/04, 29/10/04 issued by CPRH.	Environmental license	Y
16	Operation License #0107/05, 19/01/05 issued by CPRH.	Environmental license	Y
17	Contract #AP-016 between Usina Cucaú and GCS Energia signed 05/09/2001.	Contract of purchase of energy.	Y
18	Spreadsheets 2001, 2002, 2003, 2004	Monthly energy produced at Cucaú.	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
16 <sup>th</sup> and 17 <sup>th</sup> November 2005	Afranio Tavares da Silva	Project Director	Usina Cucaú <a href="mailto:afranio@usinacucau.com.br">afranio@usinacucau.com.br</a>	Project responsible, discussion about all process described in the PDD.
16 <sup>th</sup> and 17 <sup>th</sup> November 2005	Gessenildo A. Almeida	Project Analist	Usina Cucaú <a href="mailto:energia@usinacucau.com.br">energia@usinacucau.com.br</a>	Documentation related to the project.
16 <sup>th</sup> and 17 <sup>th</sup> November 2005	Edmundo Jordão	Industrial Manager	Usina Cucaú <a href="mailto:energia@usinacucau.com.br">energia@usinacucau.com.br</a>	Technical issues and operational issues.
16 <sup>th</sup> and 17 <sup>th</sup> November 2005	David Freire da Costa	Project Engineer	Econergy <a href="mailto:freire@econergy.com.br">freire@econergy.com.br</a>	PDD developer: PDD, monitoring plan, baseline.

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## ANNEX 5 - FINDINGS OVERVIEW

### FINDINGS FROM VALIDATION OF CUCAÚ BAGASSE COGENERATION PROJECT (CBCP)

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:11/11/2005

Raised by:Fabian/Aurea

No.	Type	Issue	Ref
1	CAR	No letter of approval from host country (Brazil).	1.2
Date: [Comments]			
Date:12/06/2006 [Acceptance and close out] At time of the draft validation, no Letter of Approval from the host country had been provided. The Letter of Approval will be signed when the DNA of Brazil has received the validation report. CAR 1 was cancelled.			

Observations:



## Annex 6 Local assessment checklist

### Cucaú Bagasse Cogeneration Project (CBCP), (CDM.VAL0243)

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 project installations like described in the PDD.	It was verified all project cycle since delivery the sugar cane (biomass) until energy generation to the grid.	Site visit/visit	Ok
Verify documents that prove the start date of the project.	<p>Verified the Resolution #370, 08/11/2004 that authorize the company Zihuatanejo do Brasil Açúcar e Álcool Ltda, as a energy producer through Cucaú thermoelectric, in operation since September 2001.</p> <p>Verified the legal status of the company, “Caracterização da Empresa”.</p> <p>Verified the Invoice # 20136, 24/08/2001 and # 19995, 17/08/2001, for Turbine Model DME-700.</p> <p>Verified “Registro de Medição para Pagamento” #001/2001, issued on October/2001.</p> <p>Verified the contract #AP-016 between Usina Cucaú and GCS Energia signed 05/09/2001, contract of purchase of energy.</p>	Site visit/DR	Ok
Verify the document “Notas de Reunião”	<p>It was verified the original document and copy were provided. The document describes about investments at Cucaú and that the carbon credits will aggregate value to the Cucaú activity.</p> <p>In 2001 the company participates in an International Seminar</p>	Site visit/DR	Ok

Issue	Findings	Source /Means of Verification	Further action / clarification / information required?
	that discussed about Kyoto Protocol and CO2 market.		
Verify calibration of the metering equipment.	Verified the calibration report: “Ficha de Calibração – Padrão Zero”, issued on 17/10/2003, of the metering equipment ELO02180SP, number 90001642 and 90001643. The calibration will occur once a year.	Site visit/DR	Ok
Verify sales receipt.	Verified sales receipt: Invoice 6, 30/11/2001. Relates to energy generated in September/2001 (when the project starts). Invoice 75, 18/10/2005. Relates to energy generated in September/2005.	Site visit/DR	Ok
Verify electronic spreadsheet of the monthly readings.	Verified the electronic spreadsheet of the monthly readings: “Monthly energy production” from 2001, 2002, 2003, 2004 and October 2005 and “Day control of energy production”.	Site visit/DR	Ok
Verify licenses: environmental, implanting and operational. Verify if have any issue relates to the use of biomass.	Verified licenses since the project start and the project don't have any issue constraining the use of biomass. Operation License #1487/01, 28/08/01 issued by CPRH. Operation License #1708/02, 28/08/02 issued by CPRH. Operation License #1718/03, 26/08/03 issued by CPRH. Installation License#0368/04, 29/03/04 issued by CPRH. Operation License #2706/04, 29/10/04 issued by CPRH. Operation License #0107/05, 19/01/05 issued by CPRH.	Site visit/DR	Ok
Verify analysis of the chimney samples and how results are reported.	The chimney analysis will occur in December/2005, the analysis was requested in the last operation license issued by CPRH.	Site visit/visit	Ok



Issue	Findings	Source /Means of Verification	Further action / clarification / information required?
Verify certificate ISO 14001, scope.	The project doesn't have any ISO certificate.	Site visit/visit	Ok