Validation Report

Cucaú Bagasse Cogeneration Project

CDM.Val0243

February 22nd, 2006

SGS Climate Change Programme
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ANNEX 1
REPORT ON COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

Cucaú Bagasse Cogeneration Project (CBCP)

Project No. CDM.Val0243

Date: 22/02/2006

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.

ANNEX 2
LIST OF DOCUMENTS ATTACHED

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

Project No. CDM.Val0243

Date: 22/02/2006

/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

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

CUCAÚ BAGASSE COGENERATION PROJECT (CBCP)

Project No. CDM.Val0243

Date: 22/02/2006

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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, Cucaú Bagasse Cogeneration Project (CBCP), version 2 January 5th 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 zera 90001642, 17/10/2003, issued by Celpe.
/8/	Ficha de Calibração – Padrão zera 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	16th and 17th November 2005
/2/	Gessenildo A. Almeida / Project Analist	Usina Cucaú	16th and 17th November 2005
/3/	Edmundo Jordão / Industrial Manager	Usina Cucaú	16th and 17th November 2005
/4/	David Freire da Costa / Project Engineer	Econergy	16th and 17th 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

	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 in this project.	Ok	Ok

REQUIREMENT	MoV	Ref	Comment	Draft finding	Concl
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					
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 *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*	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 *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*	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 *To this end, the project shall correctly apply approved baseline and monitoring methodologies. See Table 4 below*					
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 *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*	DR	PDD UNFCCC web site	The project was publicly available until 25-Nov-05 http://cdm.unfccc.int/Projects/Validation/view.html?ProjectId=MA6HTJDIM9YAO2KW4AT53Q2EB581IJ&OE=SGS-UKL 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 *See Table 8 below. Note requirements for regular and AR projects are different*	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. *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.*	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? *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*	DR	PDD	Yes. All references presented in the PDD were verified and confirmed.	Ok	Ok

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

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
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					
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	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. The comments received do not require any explanation or feedback.	Ok	Ok

Table 8 Other requirements All CDM project activities

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
8.1 Project Design Document *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* *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.* *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*					
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
8.2 Technology to be employed *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.*					
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
8.3 Duration of the Project/ Crediting Period *It is assessed whether the temporal boundaries of the project are clearly defined.*					
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
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 *Note this Appendix is regularly updated and the most recent should be obtained from the CDM website* *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.* *Please note the special requirements relating to:* *- 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* *- Debundling: As detailed in Appendix C of Annex II to Decision 21/CP.8 (first produced as Annex 7 to EB7)* *- Use of SSC Methodologies*					
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 = $BE_{electricity,y} - (L_y + PE_y)$ ER = 0,3958 tCO_2/MWh . 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 (http://cdm.unfccc.int/Projects/pac/ssclistmeth.pdf)	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	As described in the PDD, section B.4: Baseline energy grid: 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. Bagasse cogeneration plant: the bagasse cogeneration plant considered as boundary comprises the whole site where the cogeneration facility is located.	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	Monitoring shall consist of metering the electricity generated by the renewable technology. 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.	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	The structure for monitoring will basically consist of registering the quantity of energy exported to the grid (EG_y), 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. 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. 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. 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. The calibration of energy measurement instruments are made by CELP – Companhia Energética de Pernambuco,	Verify	Ok

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			which is the local concessionaire. The calibration 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
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. *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.* *The list may be quite long therefore avoid repetition.*					

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
Verify project installations like described in the PDD.	Site visit	Visit	It was verified all project cycle since delivery the sugar cane (biomass) until energy generation to the grid.	Ok	Ok
Verify documents that prove the start date of the project.	Site visit	DR	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. Verified the legal status of the company, "Caracterização da Empresa". Verified the Invoice # 20136, 24/08/2001 and # 19995, 17/08/2001, for Turbine Model DME-700. Verified "Registro de Medição para Pagamento" #001/2001, issued in October/2001. Verified the contract #AP-016 between Usina Cucaú and GCS Energia signed 05/09/2001 (contract of purchase of energy).	Ok	Ok
Verify the document "Notas de Reunião"	Site visit	DR	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. In 2001 the company participates in an International Seminar that discussed about Kyoto Protocol and CO2 market.	Ok	Ok
Verify calibration of the metering equipment.	Site visit	DR	Verified the calibration report: "Ficha de Calibração – Padrão Zera", issued on 17/10/2003, of the metering equipment ELO02180SP, number 90001642 and 90001643. The calibration occurs once a year.	Ok	Ok

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
Verify sales receipt.	Site visit	DR	Verified sales receipt: 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.	Ok	Ok
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 Álcool 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, alchool and energy procuder, 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 zera 90001642, 17/10/2003, issued by Celpe.	Calibration certificate of the energy metering.	Y
6	Ficha de Calibração – Padrão zera 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
16th and 17th November 2005	Afranio Tavares da Silva	Project Director	Usina Cucaú afranio@usinacucau.com.br	Project responsible, discussion about all process described in the PDD.
16th and 17th November 2005	Gessenildo A. Almeida	Project Analist	Usina Cucaú energia@usinacucau.com.br	Documentation related to the project.
16th and 17th November 2005	Edmundo Jordão	Industrial Manager	Usina Cucaú energia@usinacucau.com.br	Technical issues and operational issues.
16th and 17th November 2005	David Freire da Costa	Project Engineer	Econergy freire@econergy.com.br	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:22/02/2006 [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 has been closed out.			

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.	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. Verified the legal status of the company, "Caracterização da Empresa". Verified the Invoice # 20136, 24/08/2001 and # 19995, 17/08/2001, for Turbine Model DME-700. Verified "Registro de Medição para Pagamento" #001/2001, issued on October/2001. Verified the contract #AP-016 between Usina Cucaú and GCS Energia signed 05/09/2001, contract of purchase of energy.	Site visit/DR	Ok
Verify the document "Notas de Reunião"	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. In 2001 the company participates in an International Seminar	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 Zera", 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

F-CDM-REG

CDM Project Activity Registration and Validation Report Form
(By submitting this form, designated operational entity confirms that the proposed CDM project activity meets all validation and registration requirements and thereby requests its registration)

Section 1: Request for registration	
Name of the designated operational entity (DOE) submitting this form	SGS United Kingdom Ltd.
Title of the proposed CDM project activity (Section A.2 of the attached CDM-PDD) submitted for registration	Cucaú Bagasse Cogeneration Project (CBCP).
Project participants (Name(s))	Zihuatanejo do Brasil Açúcar e Álcool S.A. (Brazilian private entity) Econergy Brasil Ltda. (Brazilian private entity)
Sector in which project activity falls	1 Energy industries (renewable / non-renewable sources) 1.D Renewable Electricity Generation for a Grid.
Is the proposed project activity a small-scale activity?	**Yes** / No

Section 2: Validation report	
List of documents to be attached to this validation report (please check mark)*:*	

☒ The CDM-PDD of the project activity

☒ An explanation by the submitting designated operational entity of how it has taken due account of comments on validation requirements received, in accordance with the CDM modalities and procedures, from Parties, stakeholders and UNFCCC accredited non-governmental organizations;

☐ The written approval of voluntary participation from the designated national authority of each Party involved, including confirmation by the host Party that the project activity assists it in achieving sustainable development:

- ☐ (Attach a list of all Parties involved and attach the approval (in alphabetical order))

Host Party:

- ☐ Brazil

☒ Other documents, including any validation protocol used in the validation

- ☒ comprehensive list of documents attached clearly referenced
- ☒ List of persons interviewed by DOE validation team during the validation process
- ☒ Any other documents. Please refer to list of documents attached.

☒ Information on when and how the above validation report is made publicly available.

☐ Banking information on the payment of the non-reimbursable registration fee

☐ A statement signed by all project participants stipulating the modalities of communicating with the Executive Board and the secretariat in particular with regard to instructions regarding allocations of CERs at issuance allocations of CERs at issuance.

Executive Summary and Introduction, including

- **Description of the proposed CDM project activity**
- **Scope of validation process (include all documentation that has been reviewed and name persons that have been interviewed as part of the validation, as applicable)**
- **DOE Validation team (list of all persons involved in the validation, describing functions assumed in the validation)**

Description of the proposed CDM project activity

This report summarizes the results of the validation of the project Cucaú, performed on the basis of UNFCCC criteria. The validation has been performed as a desk review of the project documents presented by Econergy Brasil Ltda and a site visit to the sugar mill Zihuatanejo do Brasil Açúcar e Álcool S.A. (Cucaú). During site visit, carried out on 16th and 17th November, 2005, the staff from the company and its consultant were interviewed and relevant documents and records were verified.

The mill is located at Parque Industrial Engenho Cucaú (Artur Siqueira Highway, without number – Rural Zone), Rio Formoso, Southeast Region of Pernambuco State, Brazil. This project activity consists of increasing efficiency in the bagasse (a renewable fuel source, residue from sugarcane processing) cogeneration facility at Cucaú sugar mill.

The project is a combined steam and power system where steam will be produced for own consumption and for electricity generation. Cucáu had started to implement this project activity in 2001. This project consists on installation of additional equipments, refurbishing and upgrading others already installed, during the different phases (as described in the PDD):

- Phase 1 (2001):

- Installation of one additional 3 MW backpressure turbo-generator (NG/Toshiba);
- Deactivation of one 2 MW backpressure turbo generator (KKK).

- Phase 2 (2002):

- Refurbishment of one 21 kgf/cm² boiler (Dedini), upgrading it up to a capacity from 60 tsh (tonnes of steam per hour) to 70 tsh.

- Phase 3 (2003):

- Refurbishment of another one 21 kgf/cm² boiler (Dedini), upgrading it up to a capacity from 40 tsh to 60 tsh.

- Phase 4 (2004):

- Installation of one additional 5,6 MW backpressure turbo generator (TGM/WEG);
- Deactivation of one 1 MW backpressure turbo generator (Texas/AEG).

- Phase 5 (2006):

- Installation of one additional 2,4 MW condensing turbo generator (GE);
- Refurbishment of one 21 kgf/cm² boiler (Dedini), the same refurbished in Phase 2 (2002), upgrading it up to a capacity from 70 tsh to 100 tsh.

With the implementation of this project – investment for increasing in steam efficiency in the sugar and

alcohol production and for increasing in the efficiency of burning the bagasse - the mill generates surplus steam and uses it exclusively for electricity production.

The total installed capacity has expanded from 7 MW (before the project) to 15 MW (expected for 2006 year). The project will result in GHG emissions reductions as the result of the displacement of generation from fossil-fuel thermal plants that would have otherwise delivered to the interconnected grid.

Total emission reductions for the first crediting period are estimated to be 14.994 tCO_2e.
The expected operational lifetime of the project is 25 years.

Baseline Scenario:
No investment in clean power generation; the bagasse is not utilized to generate excess electricity to be supplied to the grid.

With-project scenario:
Investment for increasing efficiency in the Cucaú bagasse cogeneration facility. With this, the mill is able to sell electricity to the national grid, avoiding the dispatch of same amount of energy produced by fossil-fuelled thermal plants to that grid. By that, the initiative avoids CO_2 emissions.

Leakage:
As defined in the AMS 1, no leakage is to be considered. The energy generating equipment was not transferred from another activity nor the existing equipment was transferred to another activity.

Environmental and social impacts:
The bagasse cogeneration is a sustainable source of energy that brings advantages for mitigating global warming and also creates a sustainable competitive advantage for the sugarcane industry in Brazil. Using the available natural resources in a more efficient way, the CBCP activity helps to enhance the consumption of renewable energy. It can be used to demonstrate the feasibility of electricity generation as a side-business source of revenue for the sugar industry.

During site visit it was verified that the project meets all the environmental regulations as set out by CPRH – Agência Estadual de Meio Ambiente e Recursos Hídricos (Environmental and Water Resources State Agency).

In addition to the mandatory requirements, the project sponsor is working with local communities supporting programs which correspond to the company social and environmental responsibilities. No negative social impact was verified, as a result of the project implementation.

CBCP is expected to bring environmental, social and economic benefits, thus contributing to sustainable development objectives of the Brazilian Government.

Scope
The scope of the validation is the independent and objective review of the project design document, the baseline study and monitoring plan and other relevant documents of the Cucaú Bagasse Cogeneration Project (CBCP). The information in these documents is reviewed against the criteria defined in the Marrakech Accords (Decision 17) and the Kyoto Protocol (Article 12) and subsequent guidance from the CDM Executive Board.
The validation is not meant to provide any consulting towards the Client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project design.

Overview of documentation that has been reviewed and names of persons that have been

interviewed as part of the validation

Please refer to Annex 3.

DOE Validation team

Name	Role
Áurea Nardelli	Team leader / lead assessor
Fabian Gonçalves	Local assessor
John Miles	Technical reviewer

Description of methodology for carrying out validation

- **Review of CDM-PDD and additional documentation attached to it**
- **Assessment against CDM requirements (e.g. by use of a validation protocol)**
- **Report of findings by the DOE, e.g. by use of type of findings (e.g. corrective action requests, clarifications or observations). Please explain the way findings are "labelled" during validation.**
- **Include statements or assessments in the section "Conclusions, final comments and validation opinion" below.**

Review of CDM-PDD and additional documentation

The validation was performed primarily as a document review of the publicly available project documents (see Annex 2 for the list of documents). The assessment was carried out by trained assessors using a validation protocol.

A site visit was required to verify assumptions in the baseline. Additional information was required to complete the validation, which was obtained through telephone, e-mail and face-to-face interviews with the project developers and their consultants. These were performed by the local assessor, from the SGS Brazil. The results of the site visit carried out on 16th and 17th November, 2005 are summarized in Annex 6 to this report.

Assessment against CDM requirements

In order to ensure transparency, a validation protocol was customised for the project. The protocol shows requirements, means of verification and the results from validating the identified criteria. The validation protocol serves the following purposes:

- it organises, details and clarifies the requirements the project is expected to meet; and
- it documents both how a particular requirement has been validated and the result of the validation.

The validation protocol consists of several tables. The different columns in these tables are described below.

Checklist Question	*Means of verification (MoV)*	*Comment*	*Draft and/or Final Conclusion*

The various requirements are linked to checklist questions the project should meet.	*Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.*	*The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.*	*This is either acceptable based on evidence provided (**OK**), or a **Corrective Action Request (CAR)** due to non-compliance with the checklist question (See below). **New Information Request (NIR)** is used when the validation team has identified a need for further clarification.*

The completed validation protocol for this project is attached as Annex 4 to this report.

Report of findings and use of type of findings.

As an outcome of the validation process, the team can raise different types of findings.

Where insufficient or inaccurate information is available and clarification or new information is required the Assessor shall raise a **New Information Request (NIR)** specifying what additional information is required.

Where a non-conformance arises that requires the Project Developer to do something (for example correct something in the PDD) the Assessor shall raise a **Corrective Action Request (CAR).**

A CAR is issued, where:

. mistakes have been made with a direct influence on project results;

. validation protocol requirements have not been met; or

. there is a risk that the project would not be accepted as a CDM project or that emission reductions will not be verified.

The validation process may be halted until this information has been made available to the assessors' satisfaction. Failure to address a NIR may result in a CAR. Information or clarifications provided as a result of an NIR may lead to a CAR. Observations may also be raised which are for the benefit of future projects and future verification or validation actors. These have no impact upon the completion of the validation or verification activity.

Corrective Action Requests and New Information Requests are raised in the draft validation protocol and detailed in a separate form (Annex 5). In this form, the Project Developer is given the opportunity to "close" outstanding CARs and respond to NIRs and Observations.

Explanation by the submitting designated operational entity of how it has taken due account of comments on validation requirements received, in accordance with the CDM modalities and procedures, from Parties, stakeholders and UNFCCC accredited non-governmental organizations;

- **Description of how and when the PDD was made publicly available**
- **Description of how comments were received and made publicly available**
- **Explanation of how due account has been taken of comments received**
- **Compilation of all comments received (Identify the submitter)**

In accordance with the CDM modalities and procedures, the project design document of this proposed CDM project activity has been made publicly available and comments have been invited from Parties, stakeholders and UNFCCC accredited non-governmental organizations. This process is described in Annex 1 to this report, which is available as a separate document.

Conclusions, final comments and validation opinion

- **Provide conclusions on each requirement under paragraph 37 of the CDM modalities and procedures, describing how these requirements have been meet. This shall include assessments and findings (e.g. corrective action requests, clarifications or observations) in relation to each requirement, including a confirmation that all issues raised have been addressed to the satisfaction of the DOE.**
- **Final comments and validation opinion**

Participation requirements

The project participants are Zihuatanejo do Brasil Açúcar e Álcool S.A. (Cucaú) and Econergy Brasil Ltda.
Brazil is listed as the host Party. Brazil has ratified the Kyoto Protocol on 23rd August 2002 (http://unfccc.int/files/essential_background/kyoto_protocol/application/pdf/kpstats.pdf).
Annex I Party participants are not identified yet.

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. CAR1 has been closed out.

Eligibility as a small scale project activity

The project is a small scale project activity and falls under category Type 1– "*Renewable energy projects" - 1.D. "Renewable electricity generation for a grid",* that comprises renewable energy generation units that supply electricity to an electricity distribution system that is or would have been supplied by at least one fossil fuel or non-renewable biomass fired generation unit. Biomass co-generation systems that supply electricity to a grid are included in this category (Appendix B of the Simplified Modalities and Procedures for Small-Scale CDM project activities).

The categorization is justified by the following parameters:

1. The electricity output does not exceed the threshold of 15 MW for small scale CDM projects.
2. Fuel type is biomass: bagasse (a renewable fuel source, residue from sugarcane processing).

The CDM project only includes the electricity generation to the grid system and excludes the generation of electricity and steam for own consumption in the mill. The situation prevailing prior to such implementations has never been considered as a CDM project activity

The UNFCCC website does not show another registered project with the same characteristics. Therefore, this project is not considered a debundled component of a larger project activity.

CBCP is fully eligible as a small-scale project.

Baseline and monitoring methodology

The methodology applied to this Small Scale Project activity is *Type 1: Renewable energy projects. Category , I.D.: Renewable* Electricity *generation for a grid.*

The project fulfils the conditions under which the methodology is applicable, due to the fact that CBCP produces renewable energy from biomass co-generation and supplies renewable electricity to a grid. The electricity export to the grid system will avoid emissions in the electricity system by reducing the emissions from the existing power generation capacities.

The project boundary encompasses:
Baseline energy grid: 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.

Bagasse cogeneration plant: the bagasse cogeneration plant considered as boundary comprises the whole site where the cogeneration facility is located.

This project is boundary is acceptable.

In accordance with the methodology, the baseline should be calculated as the kWh produced by the renewable generating unit multiplied by an emission coefficient (measured in kg CO2e/kWh) calculated in a transparent and conservative manner as the average of the "approximate operating margin" and the "build margin", where:

- The "approximate operating margin" is the weighted average emissions (in kg CO2e/kWh) of all generating sources serving the system, excluding hydro, geothermal, wind, low-cost biomass, nuclear and solar generation;
- The "build margin" is the weighted average emissions (in kg CO2e/kWh) of recent capacity additions to the system, which capacity additions are defined as the greater (in MWh) of most recent 20% of existing plants or the 5 most recent plants.";

The baseline methodology considers the determination of the emissions factor for the grid to which the project activity is connected as the core data to be determined in the baseline scenario. In Brazil, there are two main grids, South-Southeast-Midwest (S-SE-CO) and North-Northeast (N-NE), therefore the North-Northeast Grid is the relevant one for this project.

In order to calculate the emission factor in the most accurate way, real dispatch data was necessary. Then, daily dispatch data from the Brazilian electricity system manager (ONS) needed to be gathered. For this purpose, ONS was contacted, as this entity does not regularly provide such information.

The information provided by ONS comprised years 2002, 2003 and 2004, and it has been the most recent information available at this stage. The ONS data as well as the spreadsheet data with the calculation of emission factors have been provided to the local assessor during the site visit.

A summary of the analysis is presented in the PDD. The baseline emission factor calculated for the first credit period is 0,3958 tCO2e/MWh

This project activity is not expected to result in GHG emissions due to the use of a renewable energy source (bagasse) for electricity generation.

According to the methodology, leakage calculation is only required if the energy generating equipment is transferred from another activity or if the existing equipment is transferred to another activity. In the case of CBCP, it is not applicable.

Additionality

According to simplified methodologies, project participants shall provide an explanation to show that the project activity would not have occurred anyway due to at least one pre-defined barrier.

The project demonstrated additionality using the option (d) of "Attachment A to Appendix B" of the simplified modalities and procedures for small-scale CDM project activities.

To proof additionality of the CBCP, the project proponents had provided detailed information (PDD, section B.3) which demonstrated that the project is not a likely baseline scenario. The following barriers

were analyzed:

a) Investment barrier

(b) Technological barrier: a less technologically advanced alternative to the project activity involves lower risks due to the performance uncertainly or low market share of the new technology adopted for the project activity and so would have led to higher emissions;

(c) Barrier due to prevailing practice

(d) Other barriers (such as institutional barriers or limited information, managerial resources, organizational capacity, financial resources, or capacity to absorb new technologies).

Given the mentioned above barriers which the project faces, the alternative to this project activity was to keep the current situation and focus strictly in its core business which is the production of sugar and alcohol.

Monitoring plan

Monitoring shall consist of metering the quantity of energy exported to the grid (EG_y), 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.
This monitoring methodology is in line with the monitoring methodology mentioned in category I.D.

There are two operations that must be performed in order to ensure data consistency: The monthly readings of the calibrated meter equipment shall be recorded in an electronic spreadsheet and the sales receipt shall be archived for double checking. In case of inconsistency, the last one information should be used.

The calibration of energy measurement instruments are made by CELP – Companhia Energética de Pernambuco, which is the local electricity company. The calibration shall be made annually.

The electricity baseline emission factor is determined ex-ante and will be updated at renewal of the crediting period. The data monitored in combination with an emission factor will be the information necessary to calculate the emission reductions.

No specific written procedure was prepared for the project. It was verified during site visit that operators know the process and their responsibilities relate to the CBCP.
The established measures reflect good monitoring and reporting practices.

Environmental Impacts

The potential environmental impacts were analyzed by the CPRH – Agência Estadual de Meio Ambiente e Recursos Hídricos (Environmental and Water Resources State Agency). The project meets all the environmental regulations as set out by this agency. The 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. The first chimney emissions sampling will be done in December 2005.

During the site visit, the following documents issued by CPRH were verified:

Operation License #1487/01 (28/08/2001); Operation License #1708/02 (28/08/2002), Operation License #1718/03 (26/08/2003), Installation License #0368/04 (29/03/2004), Operation License #2706/04 (29/10/2004) and Operation License #0107/05 (19/01/2005).

Comments by local stakeholders

Local stakeholders have been invited by letters to comment on the Cucaú project.

During the site visit, the local assessor verified the letters and a summary of the project that were sent to the stakeholders. Copy of the letters and delivery protocol were provided.

The invitation was sent to specific stakeholders, considered representative of the general public, as defined by Resolution 1 of the DNA. The following stakeholders were invited to comment:

- Prefeitura Municipal de Rio Formoso – PE / Municipality of Rio Formoso – PE;
- Câmara dos Vereadores de Rio Formoso – PE / Municipality Chamber of Rio Formoso – PE;
- Agência Estadual de Meio Ambiente e Recursos Hídricos – CPRH /Environment and Water Resources State Agency;
- Secretaria da Agricultura, Indústria, Comércio e Meio Ambiente / Agriculture, Industry, Commerce and Environment Secretary;
- Fórum Brasileiro de ONGs / Brazilian NGO Fórum;
- Ministério Público de Pernambuco / Public Ministry of Pernambuco;
- Associação Comunitária Unidos Por Rio Formoso – UCURF / Community Association United by Rio Formoso;
- Associação dos Moradores da Rua da Lama / Residents Association of Lama Street;
- Associação dos Deficientes Físicos do Rio Formoso / Physically Handicapped Associantion of Rio Formoso;
- Associação dos Moradores do Alto do Campo / Residents Association of Alto do Campo;
- Sindicato da Indústria do Açúcar e do Álcool no Estado de Pernambuco - Sindaçúcar / Sugar and Alcohol Industry Union of Pernambuco State;
- Sociedade dos Técnicos Açucareiros e Alcooleiros do Brasil / Brazilian Sugar and Alcohol Technician Society;
- Associação dos Moradores da Cohab de Rio Formoso / Residents Association of Cohab from Rio Formoso;
- Associação de Desenvolvimento do Distrito de Cucaú / Development Association District of Cucaú;
- Centro de Pesquisas Ambientais do Nordeste – CEPAN / Northeast Environment Research Centre;
- Instituto para Preservação da Mata Atlântica – IPMA / Atlantic Forest Preservation Institute.

Six comments were received. All the comments received were positive comments about Cucaú project. 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. The comments received did not require any specific explanation or feedback.

Other requirements

The project applies the correct PDD format and no modifications have been made to the format.

Final comments and validation opinion

The Validation Opinion is based on the current and emerging rules surrounding Article 12 of the Kyoto Protocol.

The DOE declares herewith that in undertaking the validation of this proposed CDM project activity it has no financial interest related to the proposed CDM project activity and that undertaking such a validation does not constitute a conflict of interest which is incompatible with the role of a DOE under the CDM.

By submitting this validation report, the DOE confirms that all validation requirements are met. Name of authorized officer signing for the DOE	The SGS will request the registration of the Cucaú Bagasse Cogeneration Project as a CDM project activity, once the written approval by the DNA of the participating Parties and the confirmation by the DNA of Brazil that the project assists in achieving sustainable development has been received. Áurea Nardelli
Date and signature for the DOE	22/02/2006

Section below to be filled by UNFCCC secretariat		
Date when the form is received at UNFCCC secretariat		
Date at which the registration fee has been received		
Date at which registration shall be deemed final		
Date of request for review, if applicable		
Date and number of registration	Date	Number