VALIDATION REPORT

GEEA BIOMASS 5 MW POWER PLANT PROJECT IN BRAZIL

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DET NORSKE VERITAS

VALIDATION REPORT

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Summary:

Det Norske Veritas Certification Ltd. (DNV) has performed a validation of the GEEA Biomass 5 MW Power Plant Project in Brazil on the basis of UNFCCC criteria for the CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM modalities and procedures, the simplified modalities and procedures for small-scale CDM project activities and the subsequent decisions by the CDM Executive Board. The validation consisted of the following three phases: i) a desk review of the project design documents, ii) follow-up interviews with project stakeholders and iii) the resolution of outstanding issues and the issuance of the final validation report and opinion.

In summary, it is DNV's opinion that the "GEEA Biomass 5 MW Power Plant Project" as described in the revised PDD of 01 March 2007 meets all relevant UNFCCC requirements for the CDM and all relevant host country criteria and correctly applies the baseline and monitoring methodologies AMS-I.D (Version 10 of 23 December 2006) and AMS-III.E (Version 10 of 23 December 2006). Hence, DNV will request the registration of the "GEEA Biomass 5 MW Power Plant Project" as a CDM project activity.

Prior to the submission of this validation report to the CDM Executive Board, DNV will have to receive the written approval of voluntary participation from the DNA of Brazil and DNA of Japan, including the confirmation that the project assists it in achieving sustainable development.

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Abbreviations

BM	Build margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CEF	Carbon Emission Factor
CER	Certified Emission Reduction
CH_4	Methane
CL	Clarification request
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
DNV	Det Norske Veritas
DNA	Designated National Authority
GEEA	Geradora de Energia Elétrica Alegrete Ltda
GHG	Greenhouse gas(es)
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
MP	Monitoring Plan
N_2O	Nitrous oxide
NGO	Non-governmental Organisation
ODA	Official Development Assistance
PDD	Project Design Document
UNFCCC	United Nations Framework Convention on Climate Change

1 INTRODUCTION

Mitsubishi has commissioned Det Norske Veritas Certification Ltd. (DNV) to perform a validation of the GEEA Biomass 5 MW Power Plant Project CDM project, located in the municipality of Alegrete, Rio Grande do Sul State, Brazil (abbreviated as GEEA Biomass Power Plant Project). This report summarises the findings of the validation of the project, performed on the basis of UNFCCC criteria for small-scale CDM projects, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The validation team consists of the following personnel:

Mr. Raphael de Souza Tavares	DNV Certification Rio de Janeiro	Team leader, CDM validator
Ms. Andrea Leiroz	DNV Certification Rio de Janeiro	GHG auditor
Mr. Michael Lehmann	DNV Certification Oslo	Energy sector expert
Mr Einar Telnes	DNV Certification Oslo	Technical reviewer

1.1 Validation Objective

The purpose of a validation is to have an independent third party assessing the project design. In particular, the project's baseline, the monitoring plan, and the project's compliance with relevant UNFCCC and host Party criteria are validated in order to confirm that the project design as documented is sound and reasonable and meets the identified criteria. Validation is a requirement for all CDM projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of certified emission reductions (CERs).

1.2 Scope

The validation scope is defined as an independent and objective review of the project design document (PDD). The PDD is reviewed against the criteria stated in Article 12 of the Kyoto Protocol, the CDM modalities and procedures as agreed in the Marrakech Accords, the simplified modalities and procedures for small-scale CDM project activities and the relevant decisions by the CDM Executive Board, including the approved baseline and monitoring methodologies AMS-I.D (Version 10 of 23 December 2006) and AMS-III.E (Version 10 of 23 December 2006 /8/). The validation team has, based on the recommendations in the Validation and Verification Manual /6/ employed a risk-based approach, focusing on the identification of significant risks for project implementation and the generation of CERs.

The validation is not meant to provide any consulting towards the project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the project design.

1.3 Description of Proposed CDM Project

The "GEEA Biomass Power Plant Project" CDM project activity involves the installation of 100% biomass power plant. This plant will utilize residual biomass, such as rice husks as the biomass fuel for power generation. The biomass residues will be burned in a modified boiler in normal conditions of operation, without any previous chemical treatment. The power generated

will be used internally in the rice mill and supplied to the South-Southeast-Midwest Grid. Thus, preventing the generation of GHG by the decay of rice husk and substituting energy supplied to grid from fossil fuelled power plants.

The forecasted amount of GHG emission reductions from the project is projected to be 194 859 tonnes CO_2 equivalents (tCO_2e) during the fixed 10-year crediting period, resulting in forecasted average annual emission reductions of 19 486 tCO_2e.

2 METHODOLOGY

The validation consisted of the following three phases:

I a desk review of the project design documents;

II follow-up interviews with project stakeholders;

III the resolution of outstanding issues and the issuance of the final validation report and opinion.

In order to ensure transparency, a validation protocol was customised for the project, according to the Validation and Verification Manual. The protocol shows in transparent manner criteria (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 a CDM project is expected to meet;
- It ensures a transparent validation process where the validator will document how a particular requirement has been validated and the result of the validation.

The validation protocol consists of three tables. The different columns in these tables are described in Figure 1.

The completed validation protocol for the GEEA Biomass 5 MW Power Plant Project is enclosed in Appendix A to this report.

Findings established during the validation can be seen as a non-fulfilment of validation protocol criteria or where a risk to the fulfilment of project objectives is identified. *Corrective action requests* (CARs) are issued, where:

i) Mistakes have been made with a direct influence on project results;

ii) Validation protocol requirements have not been met; or

iii) There is a risk that the project would not be accepted as a CDM project or that emission reductions will not be certified.

The term request for *clarification* (CL) is used where additional information is needed to fully clarify an issue.

Validation Protocol Table 1: Mandatory Requirements for CDM Project Activities			
Requirement	***Reference***	***Conclusion***	***Cross reference***
The requirements the project must meet.	*Gives reference to the legislation or agreement where the requirement is found.*	*This is either acceptable based on evidence provided (**OK**), a **Corrective Action Request (CAR)** of risk or non-compliance with stated requirements or a request for **Clarification (CL)** where further clarifications are needed.*	*Used to refer to the relevant checklist questions in Table 2 to show how the specific requirement is validated. This is to ensure a transparent Validation process.*

Validation Protocol Table 2: Requirement Checklist				
Checklist Question	***Reference***	***Means of verification (MoV)***	***Comment***	***Draft and/or Final Conclusion***
The various requirements in Table 1 are linked to checklist questions the project should meet. The checklist is organised in seven different sections. Each section is then further sub-divided. The lowest level constitutes a checklist question.	*Gives reference to documents where the answer to the checklist question or item is found.*	*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).A request for **Clarification (CL)** is used when the validation team has identified a need for further clarification.*

Validation Protocol Table 3: Resolution of Corrective Action Requests and Requests for Clarification			
Draft report corrective action requests and requests for clarifications	***Ref. to Table 2***	***Summary of project participants' response***	***Final conclusion***
If the conclusions from the draft Validation are either a Corrective Action Request or a Clarification Request, these should be listed in this section.	*Reference to the checklist question number in Table 2 where the Corrective Action Request or Clarification Request is explained.*	*The responses given by the project participants during the communications with the validation team should be summarised in this section.*	*This section should summarise the validation team's responses and final conclusions. The conclusions should also be included in Table 2, under "Final Conclusion".*

Figure 1 Validation protocol tables

2.1 Review of Documents

The Project Design Document (version 2 of 26 December 2006) /1/ submitted by Mitsubishi Securities was assessed by DNV. The documentation was formatted according to version 02 of the CDM-SSC-PDD and was based on the proposed baseline and monitoring methodology AMS-I.D and AMS-III.E. Finally, a version 3 dated 01 March 2007 was submitted by Mitsubishi Securities and subsequently assessed by DNV. /2/

Additional documents such as the emission reductions calculations /3/, environmental licences /4/ and the letters sent to local stakeholders /5/ were assessed during the validation process.

2.2 Follow-up Interviews

On 20-23 November 2006, DNV performed the site visit and interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of Mitsubishi Securities were interviewed. The main topics of the interviews are summarised in Table 1.

Table 1 Interview topics

Interviewed organisation	Interview topics
Mitsubishi	➢ Environment licenses and legal compliance; ➢ Local Stakeholders consultation process; ➢ Installed equipments; ➢ Additionality of the project; ➢ Baseline emission calculations; ➢ Emission factor calculation

2.3 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the validation was to resolve any outstanding issues which needed to be clarified for DNV's positive conclusion on the project design.

The initial validation of the project identified 12 (twelve) requests for *clarification.* The project participant's response to DNV's draft validation report findings and the final version of the PDD of 01 March 2007 addressed the requests for *clarification* to DNV's satisfaction.

To guarantee the transparency of the validation process, the concerns raised are summarised in chapter 3 below and documented in more detail in the validation protocol in Appendix A.

2.4 Internal Quality Control

The draft validation report including the initial validation findings underwent a technical review before being submitted to the project participants. The final validation report underwent another technical review before requesting registration of the project activity. The technical review was performed by a technical reviewer qualified in accordance with DNV's qualification scheme for CDM validation and verification.

3 VALIDATION FINDINGS

The findings of the validation of the GEEA Biomass 5 MW Power Plant Project are stated in the following sections. The validation criteria (requirements), the means of verification and the results from validating the identified criteria are documented in more detail in the validation protocol in Appendix A.

The validation findings relate to the project design as documented and described in the PDD of 01 March 2007. /2/

3.1 Participation Requirements

The project participants are Geradora de Energia Elétrica Alegrete Ltd. and Clean Energy Finance Committee, Mitsubishi Securities. The participating Parties – Brazil as host Party and Japan as Annex I Party - meet all relevant participation requirements.

Prior to the submission of this validation report to the CDM Executive Board, DNV will have to receive the written approval of voluntary participation from the DNA of Brazil and DNA of Japan, including the confirmation that the project assists it in achieving sustainable development.

3.2 Project Design

The “GEEA Biomass Power Plant Project” CDM project activity involves the installation of 100% biomass power generation plant with 5MW maximum generation capacity using a biomass boiler technology.

The technology used in the project activity will allow the plant to be operated solely on residual biomass such as rice husk. The rice husk is supplied by Pilecco Rice Mill and by other external sources. The biomass will be transported in trucks adapted with a compactor. The technology utilized will be a thermal power plant with a vertical water-tube boiler with a mobile rotary grate for easy ash removal. The boiler is specially designed to operate for 8,000 hours a year to avoid fouling, slagging, erosion, and corrosion. Solid combustion residues such as fly-ash and grate ash are provided to Silica Sul Brasil (SBS), which is located beside the plant, therefore no road transport of combustion residues is necessary. The transport of residues between GEEA and SBS is done using screw conveyors.

The rice husk is supplied mainly by external sources using road transport, whose transportation emissions are accounted. The amount of biomass supplied by external sources will be measured with a stationary scale at the entrance of the factory. The amount of biomass supplied by Pilecco Rice Mill will be measured by a flow meter located at the conveyor. Another scale at the entrance of the boiler measures the total amount of rice husks combusted by GEEA. By using biomass as fuel, the project will also avoid methane emissions due to the decay of unutilized rice husks.

A fixed 10-year crediting period is selected, starting on 01 July 2007. The starting date of the project activity is 05 May 2006. The expected operational lifetime of the project is 25 years.

No public funding is involved, and the validation did not reveal any information that indicates that the project can be seen as a diversion of ODA funding towards.

The project is expected to bring increase in employment opportunities, increase diversity and quantity of energy supply, decrease environment impacts, use of clean technologies and conserve natural resources, thus contributing to the sustainable development objectives of the Brazilian Government.

The project participant has provided information about the main equipments that are being installed in the project plant and which are related with the CDM project activity.

3.3 Baseline Determination

The project correctly applies simplified baseline methodologies for selected small-scale CDM project activity AMS-I.D (Version 10 of 23 December 2006) – "*Grid connected renewable electricity generation*" for Type I – *Renewable Energy Projects* and AMS-III.E (Version 10 of 23 December 2006) - "Avoidance of methane production from *biomass decay through controlled combustion"* for Type III – *Other Project Activities* as outlined in the "Appendix B of the "Simplified modalities and procedures for small-scale CDM project activities" - Indicative simplified baseline and monitoring methodologies for selected small-scale CDM project activities and Decision 17/CP.7. The project fulfils the conditions under which AMS-I.D and AMS-III.E are applicable.

The AMS-I.D is applicable for the project activity since the electricity generation capacity is less than the eligibility limit of 15MW and the sum of all forms of energy output does not exceed the limit of 45$MW_{thermal}$. The electricity generation capacity is 5 MW and the thermal capacity is equivalent to 29.7 $MW_{thermal}$.

The AMS-III.E is applicable for the project activity since the emission reduction is less than 60 $ktCO_2e/y$. The annual project emissions are estimated to be equal or lower than 786 tonnes of CO_2 equivalent. The project activity does not recover or combust methane.

The project activity presents the following scenarios based on the currents local practices.

Scenario 1A: Supply by the grid

Scenario 2A: Supply by thermal power plant only (based on fossil fuels)

Scenario 1B: Disposal in open air

Scenario 2B: Open-air burning

Scenario 3: The project without the CDM

Scenario 4: Biomass treatment (the project)

The power supply by the grid for rice mills and other industries is the most probable practice in Brazil. Since the south region of Brazil has no recorded problems with power supply, there are no regulations or other issues that would incentivize the mills to generate their own electricity.

The electricity supply by thermal power plant only based on fossil fuels is not common practice in the south of Brazil, since the interconnected grid provides electricity cheaper than this kind of power plant.

Disposal the biomass residue in open air landfills is presented as a common practice of Pilecco Rice Mill and several other mills in south region of Brazil. There is no regulation that constrains this practice.

Disposal of rice husk by burning it in the open air is not common practice in Rio Grande do Sul State. This scenario is unlikely due to the State regulation that does not allow open air burning without permission. As the project developers are concerned about the environment and about their image, they have not requested authorization for open-air burning; but even if they did they would not obtain such authorization.

The project activity will not be implemented without the CDM incentives as there are no sufficient legal or economic incentives to install of a biomass power plant.

The methodology application firstly involves an identification of possible baseline scenarios, and eliminates those that would not qualify. As a result the only feasible baseline is a continuation of the *status quo*, which meets current regulations, and requires neither additional investments nor additional running costs. Therefore disposal the biomass in open air and power supply by the grid can be selected as the baseline scenario.

The baseline for grid connected renewable electricity generation is a combination of operating margin (OM) and built margin (BM) according to the procedures prescribed in the approved methodology ACM0002.

The baseline emissions related to the avoidance of methane are the amount of methane from the decay of the biomass content of the waste treated in the project activity. The yearly methane generation potential is calculated using the First Order Decay model based on the discrete time estimate method of the IPCC Guidelines as described in AMS-III.G (Version 4 of 23 December 2006) and the "Tool to determine methane emissions avoided from dumping waste at a solid waste disposal site".

The project boundary is defined as the physical, geographical site of the renewable generation source and where the treatment of biomass takes place. So, in accordance with AMS-I.D and AMS-III.E, the project boundary includes the rice husks power plant generation, the landfill site where the solid waste would have been disposed and the avoided methane emission occurs, respectively and the itineraries of the transportation.

3.4 Additionality

The additionality of the project is demonstrated through an analysis of barriers, by applying the Attachment A to the Appendix B of the simplified modalities and procedures for CDM small-scale project activities.

(a) Investment barriers: Since there currently are no direct subsides or promotional support for the implementation of biomass power plants and there are higher costs required to implement a renewable energy plant that as would be represented by the baseline scenario, the project faces financial/economic barriers. In spite of the project receiving funding of 80% of the capital cost from the National Bank of Social and Economic Development (BNDES), obtaining loans for the activities represented by the project from the banking institutions in Brazil is difficult and loans are only given with high interest rates and with sufficient collateral. Hence, the project would not be implemented without the revenues from CERs.

(b) Technological barriers: Although the technology involved in this scenario is available in the Brazilian market, the project activity implementation involves risks due to the lower performance for rice husks based power generation as compared to other residual biomass.

(c) Prevailing business practice barriers: DNV is able to confirm that the common practice for mills is the import of electricity from the grid and the landfilling of industrial residues, as rice husks.

No other barriers are presented. Given the above, it is deemed sufficiently demonstrated that the project is not a likely baseline scenario and that emission reductions are thus additional.

3.5 Monitoring Plan

The project applies the approved monitoring methodologies AMS-I.D (Version 10 of 23 December 2006) – "*Grid connected renewable electricity generation*" for Type I – *Renewable Energy Projects* and AMS-III.E (Version 10 of 23 December 2006) - "Avoidance *of methane production from biomass decay through controlled combustion"* for Type III – *Other Project Activities*, according to the *"Appendix B of the "Simplified modalities and procedures for small-scale CDM project activities" - Indicative simplified baseline and monitoring methodologies for selected small-scale CDM project activities*. The project also applies the monitoring methodologies AMS-III.G (Version 4 of 23 December 2006) and ACM0002 (Version 06, 19 May 2006).

For category I.D, the monitoring shall consist of metering the electricity generated by the renewable technology and the amount of biomass input.

For category III.E, the main parameters to monitor are the amount of biomass combusted, the composition of the biomass through representative sampling, the auxiliary fuel used, the non-biomass carbon in the waste combusted, the total quantity of waste combusted, the average truck capacity, the power consumption and generation and the distance for transporting the waste in baseline and the project scenario.

The project participants will demonstrate annually that the amount of waste combusted in the project activity facilities would have been disposed in a solid waste disposal site without methane recovery in the absence of the project activity.

The monitoring plan consists of the monitoring the following parameters:

a) Electricity generated.
b) Electricity delivered to the grid
c) Electricity delivered to Pilecco Rice Mill
d) Electricity delivered to SBS
e) Amount of biomass combusted in power plant
f) Composition of biomass combusted in power plant
g) Amount of biomass transported
h) Truck capacity for biomass transportation
i) Amount of fuel spent for compacting biomass
j) Documentation on transportation transactions

Concerning leakage, no sources of emission were identified according to AMS-I.D and AMS-III.E.

Detailed monitoring procedures, including responsibilities for project management, procedures for QA/QC of monitoring reports, frequency and calibration are described.

The monitoring management system and training are clearly established in the PDD.

The procedures for emergency preparedness for cases where emergencies can cause unintended emissions have not been identified in monitoring plan. It was observed that there are no unintended emissions. All the processes are controlled.

3.6 Calculation of GHG Emissions

The calculations of baseline emissions related to the electricity supplied and/or not consumed are established according to paragraph 9, option (a), A MS-I.D v.10, of the combined margin (CM), consisting of the combination of operating margin (OM) and build margin (BM). According to the procedures prescribed in the approved methodology ACM0002. For the calculation of the OM, option (b) simple adjusted OM was utilized. Besides, Option (1) was selected in order to calculate the BM emission factor EFBM ex-ante. The values calculated for build margin (BM) and operating margin (OM) is 0.0872 tCO2equiv/MWh and 0. 4349 tCO2equiv/MWh, respectively. The emission factor is 0.2611 tCO2/MWh. The calculations are based on the National Electricity System Operator (ONS) for the electricity generated in the South-Southeast-Midwest grid in the years 2003-2005.

The baseline calculations are according to the simplified methodology for category III.E small-scale CDM project activities.

The Yearly Methane Generation Potential is calculated using the first order decay model based on the discrete time estimate method of the IPCC Guidelines, as described in category AMS-I.D.

The methane avoidance was determined using IPCC default MCF for unmanaged, deep (> 5 m waste) landfills of 0.4, a DOC of 0.43 for wood and wood products and a IPCC default DOC_f of 0.5. The value adopted for k is 0.03 and for f is zero. As the site does not receive soil as cover, the OX is zero. The selection of these factors is deemed reasonable.

Project activity emissions are calculated according to the simplified baseline methodology for category III.E small-scale CDM project activities. The emissions consist in sum of CO_2 emissions through combustion of non-biomass carbon in the year "y", CO_2 emissions through incremental transportation in the year "y" and CO_2 emissions through electricity or diesel consumption in the year "y".

Emissions resulting from the transportation of the biomass are accounted for, and correspond to the transport itself and the compacting process. There are no combustion residues.

The emissions related to power consumption will be null since all power needs will be met by the in-house power generation.

The PDD estimated amount of GHG emission reductions from the project is 19 486 tCO_2e during the first crediting period (10 years), resulting in estimated average annual emission reductions of 19 486 tCO_2e.

A spreadsheet used for the calculation of the emission reductions was assessed by DNV and is found to be correct.

3.7 Environmental Impacts

GEEA has been granted an Operating License # 86/2006-DL, in 09 February 2006 issued by FEPAM (State Environmental Protection Foundation), being valid until 25 October 2010 for the project and its facilities. A copy of the environmental license were sent and assessed.

In order to obtain the license, the project developers showed evidence that no negative environmental impact is incurred by this activity.

Environment Licenses are issued after all possible impacts are analyzed by the State Environmental Foundation Protection, FEPAM. No adverse environmental impacts are identified, which seems reasonable given the nature of the project design. Transboundary environmental impacts are not foreseen.

The positive environment impacts arising from the project are the reduction in dumping of rice husk and of methane.

3.8 Comments by Local Stakeholders

Local stakeholders, such as the Municipal Government, the state and municipal agencies, the Brazilian forum of NGOs, neighbouring communities and the office of the attorney general, were invited to comment on the project, in accordance with the requirements of Resolution 1 of the Brazilian DNA.

The local stakeholders are listed in the Appendix 3 of the PDD. The letters sent to the local stakeholders and the received comments were assessed.

Twelve comments were received, however due contend (commendation) the project design did not require any significant modification. Two comments requesting more information about the project were sufficiently taken into account by the project participant.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

The PDD of 26 December 2006 was published on the UNFCCC CDM website, www.dnv.com/certification/ClimateChange, and Parties, stakeholders and NGOs were invited to provide comments on the validation requirement during a period of 30 days, from 28 December 2006 to 26 January 2007. No comments were received.

5 VALIDATION OPINION

Det Norske Veritas Certification Ltd. (DNV) has performed a validation of the "GEEA Biomass 5 MW Power Plant Project" in Brazil. The validation was performed on the basis of UNFCCC criteria for the Clean Development Mechanism and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The project participants are Geradora de Energia Elétrica Alegrete Ltd. and Clean Energy Finance Committee, Mitsubishi Securities. The participating Parties – Brazil as host Party and Japan as Annex I Party - meet all relevant participation requirements.

The "GEEA Biomass Power Plant Project*" CDM project activity involves the installation of 100% biomass power plant. This plant will utilize residual biomass, such as rice husks as the biomass fuel for power generation. The power generated will be used internally in the rice mill and supplied to the South-Southeast-Midwest Grid. Thus, preventing the generation of GHG by the decay of rice husk and substituting energy supplied to grid from fossil fuelled power plants.*

The project applies the simplified baseline methodologies for selected small-scale CDM project activity categories, category "I.D – "Grid connected renewable electricity generation" and III.E – "Avoidance of methane production from biomass decay through controlled combustion"". The baseline methodology has been correctly applied and the assumptions made for the selected baseline scenario are sound. It is sufficiently demonstrated that the project is not a likely baseline scenario and that emission reductions attributable to the project are additional to any that would occur in the absence of the project activity.

The monitoring methodology has been correctly applied. The monitoring plan sufficiently specifies the monitoring requirements.

By the using of a renewable energy source, the project results in reductions of CO_2 emissions that give long-term benefits to the mitigation of climate change. Emission reductions are directly monitored and calculated ex-post, through of fuel oil consumption, and using the approach indicated in AMS-I.D and AMS-III.E.

Local stakeholders, such as the Municipal Government, the state and municipal agencies, the Brazilian forum of NGOs, neighbouring communities and the office of the attorney general, were invited to comment on the project, in accordance with the requirements of Resolution 1 of the Brazilian DNA. Twelve comments were received.

In summary, it is DNV's opinion that the GEEA Biomass 5 MW Power Plant Project, as described in the revised and resubmitted project design document of 01 March 2007 meets all relevant UNFCCC requirements for the CDM and all relevant host country criteria and correctly applies the baseline and monitoring methodologies AMS-I.D (Version 10 of 23 December 2006) and AMS-III.E (Version 10 of 23 December 2006). Hence, DNV will request the registration of the GEEA Biomass 5 MW Power Plant Project as a CDM project activity.

Prior to the submission of this validation report to the CDM Executive Board, DNV will have to receive the written approval of voluntary participation from the DNA of Brazil and DNA of Japan, including the confirmation that the project assists it in achieving sustainable development.

REFERENCES

Documents provided by the project proponent that relate directly to the project:

/1/ *Project Design Document for the* "GEEA Biomass 5 MW Power Plant Project" – Version 02 of 26 December 2006.

/2/ *Project Design Document for the* "GEEA Biomass 5 MW Power Plant Project" – Version 03 of 01 March 2007.

/3/ Spreadsheet (Pilecco_PDD_biopower 090207.xls)

/4/ Mitsubishi - Operation License # 86/2006-DL issued on 9 February 2006.

/5/ Mitsubishi - Copy of letters sent to local stakeholders.

Background documents related to the design and/or methodologies employed in the design or other reference documents:

/6/ International Emission Trading Association (IETA) & the World Bank's Prototype Carbon Fund (PCF): *Validation and Verification Manual*. http://www.vvmanual.info

/7/ *"Appendix B of the "Simplified modalities and procedures for small-scale CDM project activities"* - Indicative simplified baseline and monitoring methodologies for selected small-scale CDM project activities: AMS-I.D – "*Grid connected renewable electricity generation"* for Type I –*Renewable Energy Projects*. Version 10 of 23 December 2006.

/8/ *"Appendix B of the "Simplified modalities and procedures for small-scale CDM project activities"* - Indicative simplified baseline and monitoring methodologies for selected small-scale CDM project activities: AMS-III.E – "*Avoidance of methane production from biomass decay through controlled combustion"* for Type III – *Other Project Activities*. Version 10 of 23 December 2006.

/9/ *"Appendix B of the "Simplified modalities and procedures for small-scale CDM project activities"* - Indicative simplified baseline and monitoring methodologies for selected small-scale CDM project activities: AMS-III.G – "*Landfill methane recovery"* for Type III – *Other Project Activities*. Version 4 of 23 December 2006.

/10/ "Tool to determine methane emissions avoided from dumping waste at a solid waste disposal site". Annex 14.

/11/ Attachment A to the *"Appendix B of the "Simplified modalities and procedures for small-scale CDM project activities" - Indicative simplified baseline and monitoring methodologies for selected small-scale CDM project activities*. Version 06 of September 2005.

/12/ UNFCCC. "ACM0002 - Consolidated baseline methodology for grid-connected electricity generation from renewable sources". Version 06, 19 May 2006.

Persons interviewed during the validation, or persons who contributed with other information that are not included in the documents listed above:

/13/ Mara Regina Mendes - Mitsubishi UFJ Securities Co. Ltd.

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APPENDIX A

VALIDATION PROTOCOL
FOR SMALL-SCALE CDM PROJECT ACTIVITIES

Table 1 Mandatory Requirements for Small Scale Clean Development Mechanism (CDM) Project Activities

Requirement	Reference	Conclusion	Cross Reference/ Comment
1. The project shall assist Parties included in Annex I in achieving compliance with part of their emission reduction commitment under Art. 3	Kyoto Protocol Art. 12.2	OK	Table 2, Section E.4.1. The PDD identifies Clean Energy Finance Committee, Mitsubishi Securities (Japan) as Annex I project participants.
2. The project shall assist non-Annex I Parties in achieving sustainable development and shall have obtained confirmation by the host country thereof	Kyoto Protocol Art. 12.2, Simplified Modalities and Procedures for Small Scale CDM Project Activities §23a	--	Table 2, Section A.3. Prior to the submission of this validation report to the CDM Executive Board, DNV will have to receive the written approval of voluntary participation from the DNA of Brazil and DNA of Japan, including the confirmation that the project assists it in achieving sustainable development.
3. The project shall assist non-Annex I Parties in contributing to the ultimate objective of the UNFCCC	Kyoto Protocol Art. 12.2.	OK	Table 2, Section E.4.1
4. The project shall have the written approval of voluntary participation from the designated national authority of each party involved	Kyoto Protocol Art. 12.5a, Simplified Modalities and Procedures for Small Scale CDM Project Activities §23a	--	Prior to the submission of this validation report to the CDM Executive Board, DNV will have to receive the written approval of voluntary participation from the DNA of Brazil and DNA of Japan.
5. The emission reductions should be real, measurable and give long-term benefits related to the mitigation of climate change	Kyoto Protocol Art. 12.5b	OK	Table 2, Section E.1 to E.4
6. Reduction in GHG emissions must be additional to any that would occur in absence of the project activity, i.e. a CDM project activity is additional if anthropogenic emissions of greenhouse gases by sources are	Kyoto Protocol Art. 12.5.c, Simplified Modalities and Procedures for Small	OK	Table 2, Section B.2.1

Requirement	Reference	Conclusion	Cross Reference/ Comment
reduced below those that would have occurred in the absence of the registered CDM project activity	Scale CDM Project Activities §26		
7. In case public funding from Parties included in Annex I is used for the project activity, these Parties shall provide an affirmation that such funding does not result in a diversion of official development assistance and is separate from and is not counted towards the financial obligations of these Parties.	Decision 17/CP.7, CDM Modalities and Procedures Appendix B, § 2	OK	No public funding is involved, and the validation did not reveal any information that indicates that the project can be seen as a diversion of ODA funding towards Brazil.
8. Parties participating in the CDM shall designate a national authority for the CDM	CDM Modalities and Procedures § 29	OK	Brazil : Comissão Interministerial de Mudança Global do Clima. Japan: Liaisons committee for the Utilization of the Kyoto Mechanisms.
9. The host Party and the participating Annex I Party shall be a Party to the Kyoto Protocol	CDM Modalities and Procedures § 30, 31b	OK	Brazil ratified the protocol on 23 August 2002, and Japan ratified the protocol on 04 June 2002.
10. The participating Annex I Party's assigned amount shall have been calculated and recorded	CDM Modalities and Procedures §31b	OK	The assigned amount of Japan is 94% of the emissions in 1990.
11. The participating Annex I Party shall have in place a national system for estimating GHG emissions and a national registry in accordance with Kyoto Protocol Article 5 and 7	CDM Modalities and Procedures §31b	OK	Japan has in place a national registry and reported in May 2005 the latest inventory for the years 1990-2003.
12. The proposed project activity shall meet the eligibility criteria for small scale CDM project activities set out in § 6 (c) of the Marrakesh Accords and shall not be a debundled component of a larger project activity	Simplified Modalities and Procedures for Small Scale CDM Project Activities §12a,c	OK	Table 2, Section A.1
13. The project design document shall conform with the Small Scale CDM Project Design Document format	Simplified Modalities and Procedures for Small Scale CDM Project Activities, Appendix A	OK	The PDD is in line with the CDM-PDD for small-scale CDM project activities (version 02 of 21 March 2006).

Requirement	Reference	Conclusion	Cross Reference/ Comment
14. The proposed project activity shall confirm to one of the project categories defined for small scale CDM project activities and uses the simplified baseline and monitoring methodology for that project category	Simplified Modalities and Procedures for Small Scale CDM Project Activities §22e	OK	Table 2, Section A.1.3, B and D.
15. Comments by local stakeholders are invited, and a summary of these provided	Simplified Modalities and Procedures for Small Scale CDM Project Activities §22b	OK	Table 2, Section G.
16. If required by the host country, an analysis of the environmental impacts of the project activity is carried out and documented	Simplified Modalities and Procedures for Small Scale CDM Project Activities §22c		Table 2, Section F.
17. Parties, stakeholders and UNFCCC accredited NGOs have been invited to comment on the validation requirements and comments have been made publicly available	Simplified Modalities and Procedures for Small Scale CDM Project Activities §23b,c,d	OK	The PDD of 26 December 2006 was published on the UNFCCC CDM website, www.dnv.com/certification/ClimateChange, and Parties, stakeholders and NGOs were invited to provide comments on the validation requirement during a period of 30 days, from 28 December 2006 to 26 January 2007.

Table 2 Requirements Checklist

Checklist Question	Ref.	MoV*	Comments	Draft Concl.	Final Concl.
A. **Project Description** The project design is assessed.					
A.1. Small scale project activity It is assess whether the project qualifies as small scale CDM project activity.					
A.1.1. 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?	/1/	DR	The project activity electricity generation capacity is less than the eligibility limit of 15MW and the total sum of all sums of energy output does not exceed the limit of 45$MW_{thermal}$ and is thus eligible as type I.D small-scale CDM project activity "*Grid connected renewable electricity generation*"/Type I – *Renewable Energy Projects*. The electricity generation capacity is 5 MW and the thermal capacity is equivalent to 29.7 MWthermal. Also, the project avoids methane emissions from rice husks through controlled combustion with an emission reduction (786 kt CO_2) of less than 60 kt CO_2 and is thus eligible as type III.E small-scale CDM project activity "Avoidance *of methane production from biomass decay through controlled combustion"*/Type III – *Other Project Activities* as outlined in the *"Appendix B of the "Simplified modalities and procedures for small-scale CDM project activities" - Indicative simplified baseline and monitoring methodologies for selected small-scale CDM project activities* and Decision 17/CP.7.		OK
A.1.2. The small scale project activity is not a	/1/	DR	The project is not a debundled component of a		OK

* MoV = Means of Verification, DR= Document Review, I= Interview

Checklist Question	Ref.	MoV*	Comments	Draft Concl.	Final Concl.
debundled component of a larger project activity?			large project activity. Although GEEA is planning another CDM project with Silica Sul Brasil Ltda., the project participants, project category and technology are different.		
A.1.3. Does proposed project activity confirm to one of the project categories defined for small scale CDM project activities?	/1/	DR	Yes. The project activity is included in the Type I – *Renewable Energy Projects*, AMS-I.D - *Grid connected renewable electricity generation* and Type III – *Other Project Activities*, AMS-III.E - "Avoidance *of methane production from biomass decay through controlled combustion"*.		OK
A.2. Project Design Validation of project design focuses on the choice of technology and the design documentation of the project.					
A.2.1. Are the project's spatial (geographical) boundaries clearly defined?	/1/	DR	Yes. The project is located in the municipality of Alegrete, Rio Grande do Sul State, Brazil. In the project boundary of AMS-III.E (Version 10 of 23 December 2006) there are only three points in this item, not four as reported in the PDD.	~~CL 8~~	OK
A.2.2. Are the project's system (components and facilities used to mitigate GHG's) boundaries clearly defined?	/1/	DR	The Project will displace grid electricity by generating renewable energy to be used internally in the rice mill and supplied to the South-Southeast-Midwest Grid. Thus, preventing the generation of GHG by the decay of rice husk in opened air and substituting energy supplied to grid from fossil fuelled power plants. The project participant should provide more information about main equipments that are being installed in the project plant and are related with the CDM.	~~CL 3~~	OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl.	Final Concl.
A.2.3. Does the project design engineering reflect current good practices?	/1/	DR	Yes. The technology of biomass power generation reflects current good practices.		OK
A.2.4. Will the project result in technology transfer to the host country?	/1/	DR	The technology will be transferred to other project developers that wish to use biomass residues.		OK
A.2.5. Does the project require extensive initial training and maintenance efforts in order to work as presumed during the project period? Does the project make provisions for meeting training and maintenance needs?	/1/	DR	The training program for the works will cover basic plant operations, safety and engineering, environmental management and awareness, wastewater and water treatment operations, process engineering and control systems and fire safety and evacuation.		OK
A.3. Contribution to Sustainable Development The project's contribution to sustainable development is assessed					
A.3.1. Will the project create other environmental or social benefits than GHG emission reductions?	/1/	DR	The project is expected to bring increase in employment opportunities, increase diversity and quantity of energy supply, decrease environment impacts, use of clean technologies and conserve natural resources, thus contributing to sustainable development objectives of the Brazilian Government.		OK.
A.3.2. Will the project create any adverse environmental or social effects?	/1/	DR	No.		OK
A.3.3. Is the project in line with sustainable development policies of the host country?	/1/	DR	Prior to the submission of this validation report to the CDM Executive Board, DNV will have to receive the written approval of voluntary participation from the DNA of Brazil and DNA of Japan, including the confirmation that the project assists it in achieving sustainable development.	--	

Checklist Question	Ref.	MoV*	Comments	Draft Concl.	Final Concl.
A.3.4. Is the project in line with relevant legislation and plans in the host country?	/1/	DR	GEEA has been granted the Operating License # 86/2006-DL, in 09 February 2006 issued by FEPAM (State Environmental Protection Foundation) and valid until 25 October 2010 for the project and its facilities. In order to obtain the license, the project developers showed evidence that no negative environmental impact is incurred by this activity. Environment Licenses are issued after all possible impacts are analyzed by the State Environmental Foundation Protection, FEPAM. No adverse environmental impacts are identified, which seems reasonable given the nature of the project design. Transboundary environmental impacts are not foreseen. The positive environment impacts arising from the project are the reduction in dumping of rice husk and of methane.		OK
B. **Project Baseline** The validation of the project baseline establishes whether the selected baseline methodology is appropriate and whether the selected baseline represents a likely baseline scenario.					
B.1. Baseline Methodology It is assessed whether the project applies an appropriate baseline methodology.					
B.1.1. Is the selected baseline methodology in line with the baseline methodologies provided for the relevant project category?	/1/	DR	The project applies the simplified baseline methodologies for type I.D small-scale CDM project activities (AMS-I.D, Version 10 of 23 December 2006) and type III.E small-scale CDM project	~~CL 7~~ ~~CL 10~~	OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl.	Final Concl.
			activities (AMS-III.E, Version 10 of 23 December 2006), i.e. the methane emissions from biomass that would have otherwise been left to decay. Also, the project applies the methodologies AMS-III.G and ACM0002 and the "Tool to determine methane emissions avoided from dumping waste at a solid waste disposal site". The methodology AMS-III.G and the "Tool to determine methane emissions avoided from dumping waste at a solid waste disposal site" were not addressed in the item "*B.1. Title and reference of the approved baseline and monitoring methodology applied to the small-scale project activity*" of the PDD. The methodology ACM0002 was not addressed in the item "*B.1. Title and reference of the approved baseline and monitoring methodology applied to the small-scale project activity*" of the PDD.		
B.1.2. Is the baseline methodology applicable to the project being considered?	/1/	DR	The category I.D and III.E methodologies are applicable for the project. The applicability criteria stated in the PDD not correspond to the last version of AMS-III.E.	~~CL 4~~	OK
B.2. Baseline Determination It is assessed whether the project activity itself is not a likely baseline scenario and whether the selected baseline represents a likely baseline scenario.					
B.2.1. Is it demonstrated that the project activity itself is not a likely baseline scenario due	/1/	DR	The additionality of the project is demonstrated through an analysis of barriers, by applying the		OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl.	Final Concl.
to the existence of one or more of the following barriers: investment barriers, technology barriers, barriers due to prevailing practice or other barriers?			Attachment A to the Appendix B of the simplified modalities and procedures for CDM small-scale project activities. *(a) Investment barriers*: Since there currently are no direct subsides or promotional support for the implementation of biomass power plants and there are higher costs required to implement a renewable energy plant that as would be represented by the baseline scenario, the project faces financial/economic barriers. In spite of the project receiving funding of 80% of the capital cost from the National Bank of Social and Economic Development (BNDES), obtaining loans for the activities represented by the project from the banking institutions in Brazil is difficult and loans are only given with high interest rates and with sufficient collateral. Hence, the project would not be implemented without the revenues from CERs. *(b) Technological barriers*: Although the technology involved in this scenario is available in the Brazilian market, the project activity implementation involves risks due to the lower performance for rice husks based power generation as compared to other residual biomass. *(c) Prevailing business practice barriers*: DNV is able to confirm that the common practice for mills is the import of electricity from the grid and the landfilling of industrial residues, as rice husks. No other barriers are presented. Given the above, it is deemed sufficiently demonstrated that the project is not a likely baseline scenario and that emission		

Checklist Question	Ref.	MoV*	Comments	Draft Concl.	Final Concl.
			reductions are thus additional.		
B.2.2. Is the application of the baseline methodology and the discussion and determination of the chosen baseline transparent and conservative?	/1/	DR	Yes, the selected baseline is the CH4 emissions from disposing the solid waste on a landfill and leaving it to decay and power supply by the grid.		OK
B.2.3. Are relevant national and/or sectoral policies and circumstances taken into account?	/1/	DR	Yes.		OK
B.2.4. Is the baseline selection compatible with the available data?	/1/	DR	Yes.		OK
B.2.5. Does the selected baseline represent the most likely scenario describing what would have occurred in absence of the project activity?	/1/	DR	Yes. In the absence of the project the rice husk is disposed in landfill sites until it is naturally decomposed and the electricity is supply by the grid. The project participant should provide information why they do not request permission to burn the biomass residues	~~CL 6~~	OK
C. **Duration of the Project / Crediting Period** It is assessed whether the temporary boundaries of the project are clearly defined.					
C.1.1. Are the project's starting date and operational lifetime clearly defined?	/1/	DR	The project's starting date is 05 May 2006 with an expected operational lifetime of 25 years. The length of the crediting period and the expected operational lifetime of the project activity should be stated in years and months	~~CL 1~~	OK
C.1.2. Is the assumed crediting time clearly defined (renewable crediting period of seven years with two possible renewals or fixed crediting period of 10 years with no	/1/	DR	A fixed 10-year crediting period is selected, starting on 01 July 2007. The length of the crediting period and the expected	~~CL 1~~	OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl.	Final Concl.
renewal)?			operational lifetime of the project activity should be stated in years and months.		
D. **Monitoring Plan** The monitoring plan review aims to establish whether all relevant project aspects deemed necessary to monitor and report reliable emission reductions are properly addressed.					
D.1. Monitoring Methodology It is assessed whether the project applies an appropriate monitoring methodology.					
D.1.1. Is the selected monitoring methodology in line with the monitoring methodologies provided for the relevant project category?	/1/	DR	Yes. The project applies the approved monitoring methodologies AMS-I.D (Version 10 of 23 December 2006) – "*Grid connected renewable electricity generation*" for Type I – *Renewable Energy Projects* and AMS-III.E (Version 10 of 23 December 2006) - "Avoidance *of methane production from biomass decay through controlled combustion"* for Type III – *Other Project Activities*, according to the *"Appendix B of the "Simplified modalities and procedures for small-scale CDM project activities" - Indicative simplified baseline and monitoring methodologies for selected small-scale CDM project activities*. The project also applies the monitoring methodologies AMS-III.G (Version 4 of 23 December 2006) and ACM0002 (Version 06, 19 May 2006).		OK
D.1.2. Is the monitoring methodology applicable to the project being considered?	/1/	DR	Yes, it complies with the monitoring requirements for small scale CDM project category I.D and III.E.		OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl.	Final Concl.
D.1.3. Is the application of the monitoring methodology transparent?	/1/	DR	See D.1.2		OK
D.1.4. Will the monitoring methodology give opportunity for real measurements of achieved emission reductions?	/1/	DR	See D.1.2		OK
D.2. Monitoring of Project Emissions It is established whether the monitoring plan provides for reliable and complete project emission data over time.					
D.2.1. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for estimation or measuring the greenhouse gas emissions within the project boundary during the crediting period?	/1/	I	See D.1.2.		OK
D.2.2. Are the choices of project GHG indicators reasonable?	/1/	DR	See D.1.2.		OK
D.2.3. Will it be possible to monitor / measure the specified project GHG indicators?	/1/	DR	See D.1.2.		OK
D.2.4. Will the indicators give opportunity for real measurements of project emissions?	/1/	DR	The PDD is clear about the monitoring practices.		OK
D.3. Monitoring of Leakage If applicable, it is assessed whether the monitoring plan provides for reliable and complete leakage data over time.					
D.3.1. Does the monitoring plan provide for the collection and archiving of all relevant data	/1/	I	If the energy generating equipment is transferred from another activity or if the existing equipment is		OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl.	Final Concl.
necessary for determining leakage?			transferred to another activity, AMS-I.D states that leakage is to be considered. And if the controlled combustion technology is equipment transferred from another activity or if the existing equipment is transferred to another activity, AMS-III.E states that leakage is to be considered. The project will be implemented with new equipment. Hence, no leakage is expected.		
D.3.2. Are the choices of leakage indicators reasonable?	/1/	DR	See D.3.1		OK
D.3.3. Will it be possible to monitor / measure the specified leakage indicators?	/1/	DR	See D.3.1		OK
D.3.4. Will the indicators give opportunity for real measurements of leakage effects?	/1/	DR	See D.3.1		OK
D.4. Monitoring of Baseline Emissions It is established whether the monitoring plan provides for reliable and complete project emission data over time.					
D.4.1. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for determining baseline emissions during the crediting period?	/1/	I	See D.1.2		OK
D.4.2. Is the choice of baseline indicators, in particular for baseline emissions, reasonable?	/1/	DR	Methane avoidance is simply calculated based on amount biomass used as combustible. See D.1.2		OK
D.4.3. Will it be possible to monitor / measure the specified baseline indicators?	/1/	DR	See D.1.2.		OK
D.4.4. Will the indicators give opportunity for real measurements of baseline emissions?	/1/	DR	See D.1.2.		OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl.	Final Concl.
D.5. Project Management Planning It is checked that project implementation is properly prepared for and that critical arrangements are addressed.					
D.5.1. Is the authority and responsibility of project management clearly described?	/1/	DR	Yes.		OK
D.5.2. Is the authority and responsibility for registration monitoring measurement and reporting clearly described?	/1/	DR	Yes.		OK
D.5.3. Are procedures identified for training of monitoring personnel?	/1/	DR	Yes.		OK
D.5.4. Are procedures identified for emergency preparedness for cases where emergencies can cause unintended emissions?	/1/	DR	The procedures for emergency preparedness for cases where emergencies can cause unintended emissions have not been identified in monitoring plan. DNV requests further clarifications about the procedures.	~~CL 9~~	OK
D.5.5. Are procedures identified for calibration of monitoring equipment?	/1/	DR	All equipment is calibrated. This mainly comprises the electricity meters and the scales, which are calibrated according to the national standards.		OK
D.5.6. Are procedures identified for maintenance of monitoring equipment and installations?	/1/	DR	Yes. Maintenance of the equipments will be carried out according to the national standards.		OK
D.5.7. Are procedures identified for monitoring, measurements and reporting?	/1/	DR	Yes.		OK
D.5.8. Are procedures identified for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation)	/1/	DR	The data will be collected continuously and archived in electronic form, during the whole crediting period plus 2 years.		OK
D.5.9. Are procedures identified for dealing with possible monitoring data adjustments and	/1/	DR	No uncertainties are foreseen.		OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl.	Final Concl.
uncertainties?					
D.5.10. Are procedures identified for internal audits of GHG project compliance with operational requirements as applicable?	/1/	DR	Yes.		OK
D.5.11. Are procedures identified for project performance reviews?	/1/	DR	Yes		OK
D.5.12. Are procedures identified for corrective actions?	/1/	DR	Yes.		OK
E. **Calculation of GHG emission** It is assessed whether all material GHG emission sources are addressed and how sensitivities and data uncertainties have been addressed to arrive at conservative estimates of projected emission reductions.					
E.1. Project GHG Emissions The validation of ex-ante estimated project GHG emissions focuses on transparency and completeness of calculations.					
E.1.1. Are all aspects related to direct and indirect project emissions captured in the project design?	/1/	DR	Yes.		OK
E.1.2. Have all relevant greenhouse gases and sources been evaluated?	/1/	DR	Yes.		OK
E.1.3. Do the methodologies for calculating project emissions comply with existing good practice?	/1/	DR	The calculation of the emission reductions is in accordance with AMS-I.D and AMS-III.E and takes into account all relevant factors of the project technology.		OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl.	Final Concl.
E.1.4. Are the calculations documented in a complete and transparent manner?	/1/	DR	Yes, all the sources and calculations are well documented. However, the emissions estimated due to fossil fuel use for compacting biomass are not correct. There is a unit inconsistency in the spread sheet received.	~~CL 11~~	OK
E.1.5. Have conservative assumptions been used?	/1/	DR	See E.1.4.	~~CL 11~~	OK
E.1.6. Are uncertainties in the project emissions estimates properly addressed?	/1/	DR	See E.1.4.	~~CL 11~~	OK
E.2. Leakage It is assessed whether there leakage effects, i.e. change of emissions which occurs outside the project boundary and which are measurable and attributable to the project, have been properly assessed and estimated ex-ante.					
E.2.1. Are leakage calculation required for the selected project category and if yes, are the relevant leakage effects assessed?	/1/	DR	No leakage calculation is required for this specific situation. See D.3.1.		OK
E.2.2. Are potential leakage effects properly accounted for in the calculations (if applicable)?	/1/	DR	See D.3.1.		OK
E.2.3. Do the methodologies for calculating leakage comply with existing good practice (if applicable)?	/1/	DR	See D.3.1		OK
E.2.4. Are the calculations documented in a complete and transparent manner and (if applicable)?	/1/	DR	See D.3.1.		OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl.	Final Concl.
E.2.5. Have conservative assumptions been used (if applicable)?	/1/	DR	See D.3.1		OK
E.2.6. Are uncertainties in the leakage estimates properly addressed (if applicable)?	/1/	DR	See D.3.1		OK
E.3. Baseline GHG Emissions The validation of ex-ante estimated baseline GHG emissions focuses on transparency and completeness of calculations.					
E.3.1. Are the baseline emission boundaries clearly defined and do they sufficiently cover sources for baseline emissions?	/1/	DR	The project boundaries are defined as the physical, geographical site where encompasses the renewable generation source and, for the treatment of the biomass, where the project takes place. See A.2.1.	~~CL 8~~	OK
E.3.2. Are all aspects related to direct and indirect baseline emissions captured in the project design?	/1/	DR	Yes.		OK
E.3.3. Have all relevant greenhouse gases and sources been evaluated?	/1/	DR	Yes.		OK
E.3.4. Do the methodologies for calculating baseline emissions comply with existing good practice?	/1/	DR	The MCF factor considered is 0.4 based on the IPCC default for unmanaged shallow waste disposal sites with depths less than 5 meters. This was checked during the follow up interview and this factor was deemed appropriate for the estimations.		OK
E.3.5. Are the calculations documented in a complete and transparent manner?	/1/	DR	Yes. However the baseline calculation is not stated in the item 10 of AMS-I.D (Version 10 of 23 December 2006) as reported in the PDD.	~~CL 5~~	OK
E.3.6. Have conservative assumptions been used?	/1/	DR	Yes.		OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl.	Final Concl.
E.3.7. Are uncertainties in the baseline emissions estimates properly addressed?	/1/	DR	No uncertainties are foreseen.		OK
E.4. Emission Reductions Validation of ex-ante estimated emission reductions.					
E.4.1. Will the project result in fewer GHG emissions than the baseline case?	/1/	DR	The project is forecasted to reduce CO_2 emissions to the extent of 194 859 tCO_2e (19 486 tCO_2e / year average) over the defined fix 10-year crediting period.		OK
***F.* Environmental Impacts** It is assessed whether environmental impacts of the project are sufficiently addressed.					
F.1.1. Does host country legislation require an analysis of the environmental impacts of the project activity?	/1/	DR	GEEA has been granted the Operating License # 86/2006-DL, in 09 February 2006 issued by FEPAM (State Environmental Protection Foundation) and valid until 25 October 2010 for the project and its facilities. In order to obtain the license, the project developers showed evidence that no negative environmental impact is incurred by this activity. Environment Licenses are issued after all possible impacts are analyzed by the State Environmental Foundation Protection, FEPAM. No adverse environmental impacts are identified, which seems reasonable given the nature of the project design. Transboundary environmental impacts are not foreseen.		OK
F.1.2. Does the project comply with	/1/	DR	See F.1.1		OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl.	Final Concl.
environmental legislation in the host country?					
F.1.3. Will the project create any adverse environmental effects?	/1/	DR	See F.1.1		OK
F.1.4. Have environmental impacts been identified and addressed in the PDD?	/1/	DR	Yes. The positive environment impacts arising from the project are the reduction in dumping of rice husk and of methane. No negative effects were detected.		OK
***G.* Comments by Local Stakeholder** Validation of the local stakeholder consultation process.					
G.1.1. Have relevant stakeholders been consulted?	/1/	DR	Local stakeholders, such as the Municipal Government, the state and municipal agencies, the Brazilian forum of NGOs, neighbouring communities and the office of the attorney general, were invited to comment on the project, in accordance with the requirements of Resolution 1 of the Brazilian DNA. The local stakeholders are listed in the Appendix 3 of the PDD. The letters sent to the local stakeholders and the received comments were assessed. However, the project participant did not send a copy of all the letters sent to the stakeholders. Twelve comments were received, however due contend (commendation) the project design did not require any significant modification. Two comments requesting more information about the project were sufficiently taken into account by the project	~~CL 12~~	OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl.	Final Concl.
			participant.		
G.1.2. Have appropriate media been used to invite comments by local stakeholders?	/1/	DR	See G.1.1.	~~CL 12~~	OK
G.1.3. 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?	/1/	DR	See G.1.1.	~~CL 12~~	OK
G.1.4. Is a summary of the comments received provided?	/1/	DR	Yes. See G.1.1.	~~CL 12~~	OK
G.1.5. Has due account been taken of any comments received?	/1/	DR	See G.1.1.	~~CL 12~~	OK

Table 3 Resolution of Corrective Action and Clarification Requests

Draft report corrective action requests and requests for clarification	Ref. to Table 2	Summary of project participants' response	Final conclusion
CL 1 The length of the crediting period and the expected operational lifetime of the project activity should be stated in years and months.	C.1.1 C.1.2	Corrected in version 3.	The last version of the PDD was assessed and the changes done are enough. This CL is closed.
CL 2 No answers should be addressed in the item C.2.2 of the PDD.	C.1.2	Corrected in version 3.	The last version of the PDD was assessed. This CL is closed.
CL 3 The project participant should provide more information about main equipments that are being installed in the project plant and are related with the CDM.	A.2.2	Corrected in version 3 of the PDD. Documents with explanation about equipments and processes as well as layouts were provided to DNV.	The information about the equipments was assesses by DNV. This CL is closed.
CL 4 The applicability criteria stated in the PDD not correspond to the last version of AMS-III.E.	B.1.2	Corrected in version 3.	The last version of the PDD was assessed. This CL is closed.
CL 5 The baseline calculation is not stated in the item 10 of AMS-I.D (Version 10 of 23 December 2006) as reported in the PDD.	E.3.5	Corrected in version 3.	The last version of the PDD was assessed. This CL is closed.
CL 6 The project participant should provide information why they do not request permission to burn the biomass residues.	B.2.5	Disposal of rice husk by burning it in the open air is not an acceptable practice in Rio Grande do Sul State anymore. In the past, it was a common practice; however, this leads to air pollution and it is not acceptable. Therefore, it was completely forbidden by the State regulation and State environmental agencies. As the project developers are concerned about the environment and	The last version of the PDD was assessed. This CL is closed.

Draft report corrective action requests and requests for clarification	Ref. to Table 2	Summary of project participants' response	Final conclusion
		about their image, they have not requested authorization for open-air burning; but even if they did would not obtain the authorization. The scenario of open air burning (scenario 2, section B.3) was edited in the version 3 of the PDD to inform the reader that this practice is completely unacceptable by society and forbidden by law.	
CL 7 The methodology AMS-III.G and the "Tool to determine methane emissions avoided from dumping waste at a solid waste disposal site" were not addressed in the item "*B.1. Title and reference of the approved baseline and monitoring methodology applied to the small-scale project activity*" of the PDD.	B.1.1	Corrected in version 3.	The methodology and the tool were included in the last version of the PDD. This CL is closed.
CL 8 In the project boundary of AMS-III.E (Version 10 of 23 December 2006) there are only three points in this item, not four as reported in the PDD.	A.2.1 E.3.1	Corrected in version 3.	The last version of the PDD was assessed and the changes done are enough. This CL is closed.
CL 9 The procedures for emergency preparedness for cases where emergencies can cause unintended emissions have not been identified in monitoring plan. DNV requests further clarifications about the procedures.	D.5.4	The project combusts biomass residues (rice husk), whose combustion does not generate anthropogenic CO_2 emissions. The project emissions are only due to biomass transport. Therefore, even in case of case of an emergency, the project will not have extra GHG emissions or leakage.	It was observed that there is no unintended emission. All the processes are controlled. This CL is closed.

Draft report corrective action requests and requests for clarification	Ref. to Table 2	Summary of project participants' response	Final conclusion
CL 10 The methodology ACM0002 was not addressed in the item "B.1. Title and reference of the approved baseline and monitoring methodology applied to the small-scale project activity" of the PDD.	B.1.1	Corrected in version 3.	The methodology was included in the last version of the PDD. This CL is closed.
CL 11 The emissions estimated due to fossil fuel use for compacting biomass are not correct. There is a unit inconsistency in the spread sheet received.	E.1.4 E.1.5 E.1.6	Corrected in version 3.	The last version of the PDD and the new spreadsheet were assessed. This CL is closed.
CL 12 The project participant did not send a copy of all the letters sent to the stakeholders.	G.1.1 G.1.2 G.1.3 G.1.4 G.1.5	Missing letters were sent.	A copy of all the letters were sent to DNV. This CL is closed.

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APPENDIX B

CERTIFICATES OF COMPETENCE

CERTIFICATE OF COMPETENCE

Michael Lehmann

Qualification in accordance with DNV's Qualification scheme for CDM/JI (ICP-9-8-i1-CDMJI-i1

GHG Auditor:	Yes		
CDM Validator:	Yes	***JI Validator:***	Yes
CDM Verifier:	Yes	***JI Verifier:***	Yes
Industry Sector Expert for Sectoral Scope(s):	Sectoral scope 1,2,3 & 9		
Technical Reviewer for (group of) methodologies:			
ACM0001, AM0002, AM0003, AM0010, AM0011, AM0012, AMS-III.G	Yes	*AM0021*	Yes
ACM002, AMS-I.A-D, AM0019, AM0026, AM0029	Yes	*AM0023*	Yes
ACM003, ACM0005, AM0033, AM0040	Yes	*AM0024*	Yes
ACM0004	Yes	*AM0027*	Yes
ACM0006, AM0007, AM0015, AM0036, AM0042	Yes	*AM0028, AM0034*	Yes
ACM0007	Yes	*AM0030*	Yes
ACM0008	Yes	*AM0031*	Yes
ACM0009, AM0008, AMS-III.B	Yes	*AM0032*	Yes
AM0006, AM0016, AMS-III.D	Yes	*AM0035*	Yes
AM0009, AM0037	Yes	*AM0038*	Yes
AM0013, AM0022, AM0025, AM00379, AMS-III.H, AMS-III.I	Yes	*AM0041*	Yes
AM0014	Yes	*AM0034*	Yes
AM0017	Yes	*AMS-II.A-F*	Yes
AM0018	Yes	*AMS-III.A*	Yes
AM0020	Yes	*AMS-III.E, AMS-III.F*	Yes

CERTIFICATE OF COMPETENCE

Einar Telnes

Qualification in accordance with DNV's Qualification scheme for CDM/JI (ICP-9-8-i1-CDMJI-i1

GHG Auditor:	Yes		
CDM Validator:	Yes	***JI Validator:***	Yes
CDM Verifier:	Yes	***JI Verifier:***	Yes
Industry Sector Expert for Sectoral Scope(s):	Sectoral scope 1,2,3 & 9		
Technical Reviewer for (group of) methodologies:			
ACM0001, AM0002, AM0003, AM0010, AM0011, AM0012, AMS-III.G	Yes	*AM0021*	Yes
ACM002, AMS-I.A-D, AM0019, AM0026, AM0029	Yes	*AM0023*	Yes
ACM003, ACM0005, AM0033, AM0040	Yes	*AM0024*	Yes
ACM0004	Yes	*AM0027*	Yes
ACM0006, AM0007, AM0015, AM0036, AM0042	Yes	*AM0028, AM0034*	Yes
ACM0007	Yes	*AM0030*	Yes
ACM0008	Yes	*AM0031*	Yes
ACM0009, AM0008, AMS-III.B	Yes	*AM0032*	Yes
AM0006, AM0016, AMS-III.D	Yes	*AM0035*	Yes
AM0009, AM0037	Yes	*AM0038*	Yes
AM0013, AM0022, AM0025, AM00379, AMS-III.H, AMS-III.I	Yes	*AM0041*	Yes
AM0014	Yes	*AM0034*	Yes
AM0017	Yes	*AMS-II.A-F*	Yes
AM0018	Yes	*AMS-III.A*	Yes
AM0020	Yes	*AMS-III.E, AMS-III.F*	Yes

CERTIFICATE OF COMPETENCE

Raphael de Souza Tavares

Qualification in accordance with DNV's Qualification scheme for CDM/JI (ICP-9-8-i1-CDMJI-i1

GHG Auditor:	Yes		
CDM Validator:	Yes	***JI Validator:***	No
CDM Verifier:	Yes	***JI Verifier:***	No
Industry Sector Expert for Sectoral Scope(s):	Sectoral scope		
Technical Reviewer for (group of) methodologies:			
ACM0001, AM0002, AM0003, AM0010, AM0011, AM0012, AMS-III.G	No	*AM0021*	No
ACM002, AMS-I.A-D, AM0019, AM0026, AM0029	No	*AM0023*	No
ACM003, ACM0005, AM0033, AM0040	No	*AM0024*	No
ACM0004	No	*AM0027*	No
ACM0006, AM0007, AM0015, AM0036, AM0042	No	*AM0028, AM0034*	No
ACM0007	No	*AM0030*	No
ACM0008	No	*AM0031*	No
ACM0009, AM0008, AMS-III.B	No	*AM0032*	No
AM0006, AM0016, AMS-III.D	No	*AM0035*	No
AM0009, AM0037	No	*AM0038*	No
AM0013, AM0022, AM0025, AM00379, AMS-III.H, AMS-III.I	No	*AM0041*	No
AM0014	No	*AM0034*	No
AM0017	No	*AMS-II.A-F*	No
AM0018	No	*AMS-III.A*	No
AM0020	No	*AMS-III.E, AMS-III.F*	No

CERTIFICATE OF COMPETENCE

Andrea Teixeira Leiroz

Qualification in accordance with DNV's Qualification scheme for CDM/JI (ICP-9-8-i1-CDMJI-i1

GHG Auditor:	Yes		
CDM Validator:	No	***JI Validator:***	No
CDM Verifier:	No	***JI Verifier:***	No
Industry Sector Expert for Sectoral Scope(s):	Sectoral scope		
Technical Reviewer for (group of) methodologies:			
ACM0001, AM0002, AM0003, AM0010, AM0011, AM0012, AMS-III.G	No	*AM0021*	No
ACM002, AMS-I.A-D, AM0019, AM0026, AM0029	No	*AM0023*	No
ACM003, ACM0005, AM0033, AM0040	No	*AM0024*	No
ACM0004	No	*AM0027*	No
ACM0006, AM0007, AM0015, AM0036, AM0042	No	*AM0028, AM0034*	No
ACM0007	No	*AM0030*	No
ACM0008	No	*AM0031*	No
ACM0009, AM0008, AMS-III.B	No	*AM0032*	No
AM0006, AM0016, AMS-III.D	No	*AM0035*	No
AM0009, AM0037	No	*AM0038*	No
AM0013, AM0022, AM0025, AM00379, AMS-III.H, AMS-III.I	No	*AM0041*	No
AM0014	No	*AM0034*	No
AM0017	No	*AMS-II.A-F*	No
AM0018	No	*AMS-III.A*	No
AM0020	No	*AMS-III.E, AMS-III.F*	No

Høvik, 6 November 2006

Einar Telnes
Director, International Climate Change Services

Michael Lehmann
Technical Director