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	Det Norske Veritas Certification Ltd. (DNV)
Title of the proposed CDM project activity (Section A.2 of the attached CDM-PDD) submitted for registration	Imbituva Biomass Project
Project participants (Name(s))	Usina Termoelétrica Winimport, S.A. (Brazil) EcoSecurities (United Kingdom)
Sector in which project activity falls	Energy industries Waste handling and disposal Agriculture
Is the proposed project activity a small-scale activity?	Yes

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 (Note: Included in DNV's Validation Report (DNV report 2005-0295, rev 03));
- ❑ The written approval of voluntary participation from the designated national authority of each Party involved, including confirmation by the host Party hat the project activity assist it in achieving sustainable development:
  - (Attach a list of all Parties involved and attach the approval(in alphabetic order))
- ☑ Other documents, including any validation protocol used in the validation.
  - DNV's Validation Report (DNV report 2005-0295, rev 03), including a validation protocol and a list of person interviewed by DNV during the validation process.
- ❑ 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 Border and the secretariat in particular with regard to instructions regarding allocation 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)**

The objective of this proposed small-scale CDM project activity is the construction of a new biomass electricity generation unit with 12.33 MW of installed capacity using climate change neutral biomass residues as fuel and exporting all the electricity produced to the grid.

The project is expected to displace carbon intensive electricity (renewable energy component) and to avoid that biomass is left to decay (methane avoidance component) and is instead used as an energy source in the project. The biomass used is wood residues derived from third parties.

The project's expected annual emission reductions from the grid-electricity displacement component is 50 550 tCO_2e. The annual emission reductions for the methane avoidance component of the proposed project activity is estimated as 247 501 tCO_2e.

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 CDMM project activities and the relevant decisions by the CDM Executive Board. The validation team has, base done the recommendation in the IETA/PCF Validation and Verification Manual, employed a risk-based approach, focusing on the identification of significant risks for the project implementation and the generation of CERs.

The following documents were reviewed:

EcoSecurities, PDD of the Imbituva Biomass Project, August 2004

EcoSecurities, PDD of the Imbituva Biomass Project, May 2005

EcoSecurities, Spreadsheet of Calculation of Combined Margin (ONS database SSC 2001-2003 v.05.xls), Excel sheets, May 2005.

EcoSecurities, Financial Analysis, Excel sheets, May 2005

Martina Bosi: Road-Testing Baselines for Greenhouse Gas Mitigation Projects in the Electric Power Sector (OECD and IEA Information Paper COM/ENV/EPOC/IEA/SLT(2002)6). October 2002. Available at http://www.oecd.org.

IPCC: Good Practise Guidance and Uncertainty Management in National Greenhouse Gas Inventories. 2000

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

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 activity categories (Version 05 of 25 February 2005).

The following persons were interviewed:

Marcelo Augusto Bornia – Winimport - Administrative Manager

Marcos Aurèlio Reami – Transer Ltda - Administrative Manager

Flavia Resende – EcoSecurities - Consultant

The validation team consist of the following personnel:

Cintia Dias	DNV Oslo	Team Leader, GHG auditor
Luis Filipe Tavares	DNV Brazil	GHG auditor
Michael Lehmann	DNV Oslo	Internal verifier, Energy sector expert

For further details, please refer to the "Introduction" Section of DNV's Validation Report (DNV report 2005-0295, rev 03).

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.**

The validation consisted of the following three phases:

i) a desk review of the Project design documents

ii) follow-up interview with project stakeholders;

iii) the resolution of outstanding issues and the issuance of a validation report and opinion.

The original and revised versions of the PDD for the project submitted by the project participants were reviewed. Additional background documents related to the project design and the baseline were also consulted.

On 11 January 2005 DNV performed interviews with Winimport, Transer and EcoSecurities at Imbituva, Paraná State, to confirm and to resolve issues identified in the document review.

In order to ensure transparency, a validation protocol has been customized for the Project, according to the Validation ad Verification Manual. The protocol shows, in a transparent manner, criteria (requirements), means of verification and the results from validation the identified criteria.

Findings established during the validation can either be seen as a non- fulfilment of validation criteria or where a risk to the fulfilment of project objectives is identified. Such findings are termed Corrective Action Requests (CAR). The term Clarification may be used where additional information is needed to fully clarify an issue. The Corrective Action Requests and the requests for Clarification raised by the validation team were resolved through communications with the project participants. To guarantee the transparency of validation process, the concerns raised by DNV and the response provided by the project participants is documented in Table 3 of the Validation Protocol in Appendix A of DNV's Validation Report (DNV report 2005-0295, rev 03).

For further details, please refer to the "Methodology" Section of DNV's Validation Report (DNV report 2005-0295, rev 03) and the IETA/PCF Validation ad Verification Manual (www.vvmanual.info)

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)**

The PDD was published on http://www.dnv.com/certification/ClimateChange and was open for comments from 6 December 2004 to 5 January 2005. Parties, stakeholders and NGOs were through the CDM website invited to provide comments on the validation requirement.

One comment was received on 29 December 2004. The comment (in unedited form) and how DNV has taken due account of the comment received is given in the "Comments by Parties, stakeholders and NGOs" Section of DNV's Validation Report (DNV report 2005-0295, rev 03).

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**

Det Norske Veritas Certification Ltd. (DNV) has performed a validation of the "Imbituva Biomass Project" in Brazil (hereafter called "the project"). The validation was performed on the basis of UNFCCC criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to the Kyoto Protocol criteria for the CDM, the CDM modalities and procedures as agreed in the Marrakech Accords, the simplified modalities and procedures for small-scale CDM project activities and relevant decisions by the CDM Executive Board.

The project design engineering reflects good practice. By promoting renewable energy and by using biomass residues from sawmill industries, the project is likely to contribute to sustainable development in Brazil.

Being a renewable energy project activity with an output capacity of less than 15 MW and having less than 15 000 tCO_2e project emissions, the project meets the criteria for Renewable electricity generation for the grid (Type I.D) and Methane avoidance (Type III.E) as defined in Appendix B of the simplified modalities and procedures for small-scale CDM project activities.

Category I.D comprises projects "that supply electricity to an electricity distribution system". The electric energy generated by the project will be supplied to an independent energy consumer which currently purchases electricity from the national grid. Hence, as this project activity avoids marginal fossil fuel based electricity generation by the grid in the same way as projects supplying all their electricity to the grid, it is DNV's opinion that the project can apply the simplified baseline and monitoring methodology for category I.D small-scale CDM project activities.

The simplified modalities and procedures give no further guidance on which project emissions to include for determining whether a project meets the small-scale eligibility threshold for category III.E, i.e. the project emissions shall be less than 15 000 tCO_2e per year. The selected definition of the project emissions being the CH_4 and N_2O emissions due to incomplete combustion of biomass with an exclusion of biogenic CO_2 emissions from the combustion of biomass is in line with other

approved CDM baseline and monitoring methodologies.

The project applies the appropriate simplified baseline methodologies proposed for these small-scale project activity categories. A combined margin emission coefficient of 0.521 tCO_2e/MWh is calculated in accordance with the simplified baseline methodology for category I.D small-scale CDM project activities, i.e. the average of the approximate operating margin and the build margin. The determination of this combined margin emission coefficient is based on actual electricity generation data provided by the National Electricity System Operator (ONS) for the years 2001- 2003 in the South-Southeast-Midwest (S-SE-CO) grid.

The second baseline component is established according to the simplified baseline methodology for category III.E small-scale CDM project activities. The amount of methane produced from decay of biomass landfilled in absence of the project is determined using adequate IPCC default emission factors.

An analysis of relevant barriers demonstrates that the proposed project is not a likely baseline scenario and emission reductions are hence additional to any that would occur in its absence of this proposed CDM project activity. The additionality of the project is demonstrated through a barrier test. Upon request, an investment analysis considering all savings and expenses associated to the project was presented. It was sufficiently demonstrated that the project without CER revenues faces investment barriers and that there are technological barriers for the proposed project technology.

By displacing fossil fuel-based electricity with electricity generated from a renewable source and by avoiding landfilling of biomass, the project results in reductions of CO2 emissions and the avoidance of CH4 emissions that are real, measurable and give long-term benefits to the mitigation of climate change. Given that the project is implemented as designed, the project is likely to achieve the estimated amount of emission reductions.

The project applies the simplified monitoring methodologies described for category I.D and III.E small-scale CDM project activities. Detailed responsibilities and authorities for project management, monitoring procedures and QA/QC procedures have not been presented during interviews with Imbituva. They are foreseen to be established during the second quarter of 2005 and their implementation should be checked during the first periodic verification of emission reductions.

A consultation process with relevant local stakeholders has been conducted and no comments were received during the consultation process.

Parties, stakeholders and NGOs were invited to provide comments and all issues raised by stakeholders were taken into account during the validation.

In summary, it is DNV's opinion that the "Imbituva Biomass Project", as described in the revised and resubmitted project design document of May 2005, meets all relevant UNFCCC requirements for the CDM and all relevant host country criteria and correctly applies the simplified baseline and monitoring methodologies for category I.D and III.E small-scale CDM project activities. Hence, DNV requests the registration of the "Imbituva Biomass Project" as CDM project activity.

For further details, please refer to the "Validation Findings" Section and Table 1 of the Validation Protocol in Appendix A of DNV's Validation Report (DNV report 2005-0295, rev 03).

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.	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 the participating Parties, including confirmation by the DNA of Brazil that the project assists in achieving sustainable development..		
Name of authorized officer signing for the DOE	Michael Lehmann		
Date and signature for the DOE	30 May 2005		
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