



**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

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| 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 | Iturama Bagasse Cogeneration Project (IBCP) |
| Project participants (Name(s)) | Coruripe Energética S.A. and Econergy Brasil Ltd. |
| Sector in which project activity falls | Energy Industry, renewable sources |
| Is the proposed project activity a small-scale activity? | No. |

Section 2: Validation report

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| List of documents to be attached to this validation report (please check mark): | |
| <ul style="list-style-type: none"> <input checked="" type="checkbox"/> The CDM-PDD of the Project activity <input checked="" type="checkbox"/> 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 2005-0587, rev. 01)); <input type="checkbox"/> The written approval of voluntary participation from the designated national authority of each Party involved, including confirmation by the host Party that the project activity assists it in achieving sustainable development: <ul style="list-style-type: none"> o (Attach a list of all Parties involved and attach the approval(in alphabetic order)) <input checked="" type="checkbox"/> Other documents, including any validation protocol used in the validation. <ul style="list-style-type: none"> o DNV's Validation Report (DNV report 2005-0587, rev. 01), including a validation protocol and a list of person interviewed by DNV validation team during the validation process. <input type="checkbox"/> Information on when and how the above validation report is made publicly available. <input type="checkbox"/> Banking information on the payment of the non-reimbursable registration fee. <input type="checkbox"/> A statement signed by all project participants stipulating the modalities of communicating with the Executive Board and the secretariat in particular with regard to instructions regarding 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 “Iturama Bagasse Cogeneration Project (IBCP)”, started operation in April 2002. The project involves the improvement of the energy efficiency and the increase of the cogeneration capacity at the Iturama sugarcane mill at Iturama Municipality; Minas Gerais State. Already prior to the implementation of the project, the Iturama sugarcane mill supplied in 2000-2001 on average 14 381 MWh of electricity per year to the grid. After project implementation, the electricity supply to the grid is expected to be at least 60 500 MWh per year. With the implementation of this project, Iturama is able to sell additional surplus electricity to the regional South-Southeast-Midwest (S-SE-CO) grid, avoiding thus the dispatch of the same amount of energy produced by fossil-fuelled thermal power plants supplying electricity to that grid. The estimated amount of GHG reduction from the project is 89 884 tCO₂e during the first crediting period (7 years), resulting in estimated average annual emission reductions of 12 841 tCO₂e.

The validation scope is an independent and objective review of the Project Design Document (PDD). The PDD was reviewed against Kyoto Protocol criteria for the CDM, the CDM modalities and procedures as agreed in the Marrakech Accords and relevant decision by the CDM Executive Board. The validation team has, based on 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:

Econergy: Project Design Document for the “Iturama Bagasse Cogeneration Project” (IBCP). Version 1 of 25 March, 2005

Econergy: Project Design Document for the “Iturama Bagasse Cogeneration Project” (IBCP). Version 2 of 06 December, 2005

Spreadsheet of Calculation of Combined Margin (ONS database SSC 2002-2004 v. 2005.09.23)

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

Approved Baseline and Monitoring Methodology AM0015: “Bagasse-based cogeneration connected to an electricity grid”. Version 01 of 22 September 2004.

CDM Executive Board: Tool for the demonstration and assessment of additionality. Version 02 of 28 November 2005.

Bosi, M., A. Laurence, P. Maldonado, R. Schaeffer, A. F. Simoes, H. Winkler and J.-M. Lukamba. Road testing baselines for greenhouse gas mitigation projects in the electric power sector. OECD and IEA information paper, October 2002.

The following persons were interviewed:

David Freire da Costa - Econergy

The validation team consisted of the following personnel:

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|-------------------------|--------------------|---|
| Mr. Luis Filipe Tavares | DNV Rio de Janeiro | Team leader, |
| Ms. Cintia Dias | DNV Rio de Janeiro | CDM auditor |
| Mr. Michael Lehmann | DNV Oslo | Energy sector expert/Technical reviewer |

For further details, please refer to the “Introduction” and “References” Sections of DNV’s Validation Report (DNV Report 2005-0587, rev. 01).

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 of the project started in June 2005. The Validation consisted of the following three phases:

- a desk review of the project design documents;
- follow-up interview with project stakeholders;
- the resolution of outstanding issues and the issuance of the preliminary validation report and opinion.

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

On 30 June 2005, DNV performed interviews with Econergy 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 and 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 requests for Clarification raised by the validation team were resolved through communications with the project participants. To guarantee the transparency of the validation process, the concerns raised by DNV and the response provided by the project participants are documented in Table 3 of the Validation Protocol in Appendix A of DNV’s Validation Report. (DNV report 2005-0587, rev. 01).

For further details, please refer to the “Methodology” Section of DNV’s Validation Report (DNV Report 2005-0587, rev. 01) and the IETA/PCF Validation and 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)

DNV Certification published the PDD of 25 March 2005 on the DNV Climate Change web site (<http://www.dnv.com/certification/ClimateChange>) and Parties, stakeholders and UNFCCC accredited NGOs were through the UNFCCC CDM web site invited to provide comments within a 30 days period from 09 April 2005 to 09 May 2005. No comments were received.

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 met. 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 "Iturama Bagasse Cogeneration Project (IBCP)" at Iturama Municipality, Minas Gerais State, Brazil. The validation was performed on the basis of UNFCCC criteria for CDM project activities and relevant Brazilian criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The project participants are Coruripe Energética SA and Econergy Brasil Ltda of Brazil. The host Party Brazil meets all relevant participation requirements. No Annex I Party is yet identified.

The project involves an increase of the bagasse cogeneration capacity at the "Iturama Bagasse Cogeneration Project" (IBCP)". With the implementation of this project, the mill is able to sell additional excess electricity to the regional South-Southeast-Midwest (S-SE-CO) grid, avoiding thus the dispatch of the same amount of electricity partly generated by thermal power plants supplying electricity to that grid.

The baseline scenario is that the current practice continues, i.e. the bagasse is only utilized to generate small amounts of excess electricity to be supplied to the grid. The quantity of electricity that has been supplied prior to project implementation, i.e. 14 381 MWh per year, was determined based on the average the electricity supplied to the grid in the years 2000-2001.

By promoting renewable energy, the project is in line with the current sustainable development priorities of Brazil.

The project applies the approved baseline and monitoring methodology AM0015, i.e. "Bagasse-based cogeneration connected to an electricity grid". The baseline methodology has been applied correctly 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.

A combined margin emission coefficient of 0.2677 tCO₂e/MWh is calculated ex-ante in accordance with AM0015, 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 2002-2004 for the South-Southeast-Midwest grid.

The monitoring methodology AM0015 has been applied correctly. The monitoring plan sufficiently specifies the monitoring requirements of the main project indicators.

By displacing fossil fuel-based electricity with electricity generated from a renewable source, the project results in reductions of CO₂ 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.

Local stakeholder comments were invited according to the Brazilian DNA Resolution 1. No comments were received. Public stakeholder input has also been invited via the UNFCCC web-site. No comments were received.

In summary, it is DNV's opinion that the "Iturama Bagasse Cogeneration Project" (IBCP)", as described in the revised and resubmitted project design document of 06 December 2005, meets all relevant UNFCCC requirements for the CDM and all relevant host country criteria and correctly applies the baseline and monitoring methodology AM0015. Hence, DNV will request the registration of the "Iturama Bagasse Cogeneration Project (IBCP)" as a 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 2005-0587, rev. 01).

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 the DNA of Brazil, including confirmation that the project assists in achieving sustainable development.

Name of authorized officer signing for the DOE Michael Lehmann

Date and signature for the DOE

Michael Lehmann

6 December 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