



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	Guaxuma Renewable Irrigation Project in Brazil.
Project participants (Name(s))	Laginha Agro Industrial S.A. (Brazil) and EcoSecurities Ltd. (United Kingdom)
Sector in which project activity falls	Energy industries
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):	
<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 2006-1447, 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"> ○ (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"> ○ DNV's Validation Report (DNV report 2006-1447, rev. 01), including a validation protocol and a list of person interviewed by DNV during the validation process. <input checked="" 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 “Guaxuma Renewable Irrigation Project” involved the acquisition of new electric irrigation devices and the construction and installation of a new grid alongside the sugar cane fields. The electricity used by the new electric irrigation devices is generated by a bagasse fired combined heat and power plant of 5 MW installed at Guaxuma, located in Coruripe Municipality, Alagoas. Prior to the implementation of the project, the irrigation process involved the use of diesel fuel irrigation devices. Emission reductions are claimed from replacing diesel fuel irrigation devices with electric irrigation devices. The estimated amount of GHG emission reductions from the project is 40 604 tCO₂e during the first renewable 7-year crediting period (with the potential of being renewed twice), resulting in estimated average annual emission reductions of 5 801 tCO₂e.

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. 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:

- Laginha Agro Industrial S.A. and EcoSecurities Ltd Project Design Document for the “João Lyra Bagasse cogeneration project”. Version 1 (September 2005)
- Laginha Agro Industrial S.A. and EcoSecurities Ltd Project Design Document for the “João Lyra Bagasse cogeneration project”. Version 2 (29 June 2006)
- Laginha Agro Industrial S.A. and EcoSecurities Ltd Project Design Document for the “Guaxuma Renewable Irrigation Project”. Version 1 (dated 23 August 2006)
- João Lyra Group. Step 0 Evidence: Relatório de Viagem implementação do sistema de gestão ambiental ISO 14001 e como negociar créditos de carbonos. (04 October 2000)
- International Emission Trading Association (IETA) & the World Bank’s Prototype Carbon Fund (PCF): Validation and Verification Manual. <http://www.vvmanual.info>
- CDM Executive Board: Indicative simplified baseline and monitoring methodologies for selected small-scale CDM project activity categories. AMS-I.B – “Mechanical energy for the user’ for Type I – Renewable Energy Project, Version 08 of 03 March 2006.
- CDM Executive Board: Indicative simplified baseline and monitoring methodologies for selected small-scale CDM project activity categories: AMS-I.D – “Grid connected renewable electricity generation” for Type I – Renewable Energy Projects, Version 09 of 28 July 2006
- CDM Executive Board: Attachment A to 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 30 September 2005

The following persons were interviewed:

- Luis Filipe Kopp - EcoSecurities
- Marcelo Duque - EcoSecurities
- Stella Walter - EcoSecurities
- Pablo Fernandez - EcoSecurities

The validation team consisted of the following personnel:

- | | |
|--------------------------------|--------------------|
| • Mr Luis Filipe Aboim Tavares | DNV Rio de Janeiro |
| • Mr Vicente San Valero | DNV Rio de Janeiro |
| • Mr Michael Lehmann | DNV Oslo |

For further details, please refer to the “Introduction” Section of DNV’s Validation Report (DNV report 2006-1447, 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 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 PDD of the “João Lyra Bagasse cogeneration project” (Version 1 of September 2005) was assessed. In addition to the bagasse fired power plant at Guaxuma, located in Coruripe Municipality, Alagoas, this PDD also included the bagasse fired power plant Uruba, located in Atalaia Municipality, Alagoas. This PDD included also two components: 1) the displacement of grid electricity with electricity generated from bagasse applying AMS-I.D and 2) the replacement of diesel fuel irrigation pumps by electric pumps applying AMS-I.B. However, the project design was changed and the first component of the project was removed. Hence, a revised version of the PDD of the “João Lyra Bagasse cogeneration project” (Version 2 of 29 June 2006) submitted by Laginha Agro Industrial S.A. and EcoSecurities Ltd was assessed. This PDD only considered only the second component: the replacment of diesel fuel irrigation pumps by electric pumps applying AMS-I.B. Finally, since the aggregated installed renewable generation capacity at Guaxuma and Urubia (including renewable generation capacity already installed at the two sites prior to the project activity) was more than 15 MW, Laginha Agro Industrial S.A. and EcoSecurities Ltd decided to separate the units of Guaxuma and Uruba and present the project in two separate PDDs. A revised PDD for the Guaxuma unit, titled the “Guaxuma Renewable Irrigation Project” (Version 1 dated 23 August 2006), was thus assessed by DNV.

On 21 July 2006, DNV performed interviews with representatives of EcoSecurities Ltd. to confirm selected information 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 No. 2006-1447, rev. 01).

For further details, please refer to the “Methodology” Section of DNV’s Validation Report (DNV report 2006-1447, 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 published the PDD of the “João Lyra Bagasse cogeneration project” (Version 1 of September 2005) on the DNV’s Climate Change web site (<http://www.dnv.com/certification/ClimateChange>) and Parties, stakeholders and NGOs were through the UNFCCC CDM web site invited to provide comments during a 30 days period from 16 September 2005 to 15 October 2005. No comments were received.

Since all elements of the “Guaxuma Renewable Irrigation Project” were already described in the PDD of the “João Lyra Bagasse cogeneration project”, DNV did not consider it necessary to republish the PDD of the “Guaxuma Renewable Irrigation Project” and to again invite comments by Parties, stakeholders and NGOs.

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 “Guaxuma Renewable Irrigation Project” at Guaxuma, located in Coruripe Municipality, Alagoas 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 Laginha Agro Industrial S.A. and EcoSecurities Ltd. The participating Parties - Brazil as the host Party and the United Kingdom as Annex I Party - meet all relevant participation requirements.

The “Guaxuma Renewable Irrigation Project” involves the acquisition of new electric irrigation devices and the construction and installation of a new grid alongside the sugar cane fields. The electricity used by the new electric irrigation devices is generated by a bagasse fired combined heat and power plant. Emission reductions are claimed from replacing diesel fuel irrigation devices with electric irrigation devices.

The project applies the simplified baseline methodology for the small-scale CDM project activity category I.B. - Mechanical energy for the user (AMS-I.B, version 08). AMS-I.B is applicable as the project supplies mechanical energy used on-site by the user and the aggregated installed renewable generation capacity at Guaxuma, including renewable generation capacity already installed prior to the project activity, is less than 15 MW.

The baseline methodology AMS-I.B 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.

The monitoring methodology AMS-I.B has been applied correctly. The monitoring plan sufficiently specifies the monitoring requirements of the main project indicators.

By displacing diesel fuel in the sugar cane field irrigation with renewable electricity, the project is in line with the current sustainable development priorities of Brazil.

Local stakeholder comments were invited according to the Brazilian DNA Resolution 1. No comment was received. Comments by Parties, stakeholders and NGOs have also been invited via the UNFCCC web-site. No comments were received.

In summary, it is DNV's opinion that the "Guaxuma Renewable Irrigation Project", as described in the revised and resubmitted project design document of 23 August 2006, meets all relevant UNFCCC requirements for the CDM and all relevant Brazilian criteria and correctly applies the baseline and monitoring methodology for the small-scale CDM project activity category I.B (AMS-I.B, version 08). Hence, DNV will request the registration of the "Guaxuma Renewable Irrigation Project" 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 2006-1447, 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 voluntary participation from the DNA of Brazil and the United Kingdom, including a confirmation by the DNA of Brazil that the project assists it in achieving sustainable development.

Name of authorized officer signing for the DOE Michael Lehmann

Date and signature for the DOE 4 September 2006

Section below to be filled by UNFCCC secretariat

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