



**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	Pesqueiro Energia Small Hydroelectric Project (PESHP)
Project participants (Name(s))	Pesqueiro Energia S.A. (Brazil)
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 2005-0595, rev 03); <input checked="" 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 assist it in achieving sustainable development: <ul style="list-style-type: none"> ○ Comissão Interministerial de Mudança Global do Clima (DNA of Brazil): Letter of Approval. 22 December 2005 <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 2005-0595, rev 03), including a validation protocol and a list of person interviewed by DNV validation team during the validation process. <input checked="" type="checkbox"/> Information on when and how the above validation report is made publicly available. <input checked="" type="checkbox"/> Banking information on the payment of the non-reimbursable registration fee. <input checked="" 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 project is located in the South of Brazil. The project consists of a run-of-river small-hydro power plant (12.44 MW) and a small reservoir (0.33 km²) located in the Jaguariaíva River, in the city of Jaguariaíva, Paraná State. The project has already been implemented and started operation 27 January 2003. It delivers about 80 000 MWh/year to the South-Southeast-Midwest interconnected grid, with an estimated minimum capacity factor of 75%. Emission reductions are claimed from displacing grid electricity with electricity generated by the small hydroelectric power plant and supplied to the grid. The estimated amount of GHG emission reductions from the project is 294 061 tCO₂e during the first crediting period (7 years), resulting in estimated average annual emission reductions of 42 009 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 and the relevant decisions by the CDM Executive Board. The validation team has, based on the recommendations in the Validation and Verification Manual employed a risk-based approach, focusing on the identification of significant risks for project implementation and the generation of CERs.

The following documents were reviewed:

Project Design Document for the Pesqueiro Energia Small Hydroelectric Project (PESHP). Version 1 (April 2005)

Project Design Document for the Pesqueiro Energia Small Hydroelectric Project (PESHP). Version 2 (June 2005)

Project Design Document for the Pesqueiro Energia Small Hydroelectric Project (PESHP). Version 3 (September 2005)

Project Design Document for the Pesqueiro Energia Small Hydroelectric Project (PESHP). Version 3B (03 January 2006)

Spreadsheet of Calculation of Combined Margin (ONS Emission Factor SSECO 2002-2004 v 2005-11-29)

Comissão Interministerial de Mudança Global do Clima (DNA of Brazil): Letter of Approval. 22 December 2005

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

CDM Executive Board: 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 07: 28 November 2005.

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:

Fernando Souza Machado – Ecoinvest

Luis Alfredo Teixeira Strickert - Coord. Adm. Com - Pesqueiro Energia S.A.

Rosmir César de Oliveira - Coordenador Geral - Pesqueiro Energia S.A

The validation team consisted of the following personnel:

Mr Luis Filipe Aboim Tavares	DNV Rio de Janeiro
Ms Cintia Dias	DNV Rio de Janeiro
Mr Michael Lehmann	DNV Oslo

For further details, please refer to the “Introduction” and “References” Sections of DNV’s Validation Report (DNV report 2005-0595, 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, baseline and monitoring plan;
- 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 Project Design Document (PDD) submitted by Pesqueiro Energia S.A. and Ecoinvest were assessed.

On 13 June 2005 DNV performed interviews with Pesqueiro Energia S.A. and Ecoinvest representatives 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 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 2005-0595, rev 03).

For further details, please refer to the “Methodology” Section of DNV’s Validation Report (DNV report 2005-0595, rev 03) 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 initial PDD of April 2005 on the DNV Climate Change web site (<http://www.dnv.com/certification/ClimateChange>) and stakeholders were through the UNFCCC CDM web site invited to provide comments within a 30 days period from 30 April 2005 to 30 May 2005.

One comment was received in this period and made publicly available on the DNV Climate Change

web stie. 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 2005-0595, 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 “Pesqueiro Energia Small Hydroelectric Project –PESH” at Jaguariaíva Municipality; Paraná State, Brazil, (hereafter called “the project”). The validation was performed on the basis of UNFCCC criteria for small-scale CDM project activities and relevant Brazilian criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The project participant is Pesqueiro Energia S.A. No participating Annex I Party is yet identified for the project. The host Party Brazil meets all relevant participation requirements and the DNA of Brazil has provided written approval of voluntary participation in the project.

The run-of-river small hydro power plant with a capacity of 12.44 MW and with a small reservoir is not expected to have considerable environmental impacts. An Environmental Impact Study as required by Brazilian law has been carried out and the project has received the environmental licences by IAP.

By promoting renewable energy, the project is in line with the current sustainable development priorities of Brazil. The DNA of Brazil confirmed that the project assists in achieving sustainable development.

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

The project applies the simplified baseline and monitoring methodology for type I.D small-scale CDM project activities (AMS-I.D). The baseline methodology has been applied correctly and the assumptions made for the selected baseline scenario are sound. 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 0.5258 tCO₂e/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 2002- 2004 in the South/Southeast/Midwest grid and according to the conservative plant efficiencies recommended by the CDM Executive Board at its 22nd meeting for the calculation of the build margin emission coefficient.

The additionality of the project is demonstrated through a barrier test. The presented barriers demonstrate that the project is not a likely baseline scenario.

By displacing fossil fuel-based electricity, 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 operated as designed, the project is likely to achieve the estimated amount of emission reductions.

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

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. One comment has been received and was taken into account in the validation of the project.

In summary, it is DNV's opinion that the "Pesqueiro Energia Small Hydroelectric Project (PESHP)" as described in the revised and resubmitted project design document of 03 January 2006, meets all relevant UNFCCC requirements for the CDM and all relevant host country criteria and correctly applies the baseline and monitoring methodology for category I.D small-scale CDM project activities. Hence, DNV requests the registration of the "Pesqueiro Energia Small Hydroelectric Project (PESHP)" 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 2005-0595, 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.

Name of authorized officer signing for the DOE Michael Lehmann

Date and signature for the DOE

05 January 2006

Michael Lehmann

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