



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	Nueva Aldea Biomass Power Plant Phase 2
Project participants (Name(s))	Celulosa Arauco y Constitución S.A.
Sector in which project activity falls	Sectoral scope 1: Energy industries
Is the proposed project activity a small-scale activity?	Yes / <u>No</u> (underline as applicable)

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 No. 2005-1193, rev. 01)) <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 assists it in achieving sustainable development: <ul style="list-style-type: none"> ○ CONAMA (DNA of Chile): Letter of Approval, 12 October 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 No. 2005-1193, rev. 01), including a validation protocol and a list of persons interviewed by DNV during the validation process and including an explanation of how DNV has taken due account of comments on validation requirements received. <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 allocations 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 “Nueva Aldea Biomass Power Plant Phase 2” project activity consists of the installation of a biomass power plant at the the Nueva Aldea industrial complex at Ránquil, Chile. The power plant consist of two 70 MW turbogenerators and is implemented as part of the construction of a pulp mill at the the Nueva Aldea industrial complex. The power plant will use black liquor as primary fuel. Black liquor is an organic by-product of the pulp production Kraft cycle. While modern pulp mills currently are designed to utilise black liquor for the co-generation of heat and electricity in order to be self-sufficient in terms of steam and electricity needs, the project will result in 37 MW surplus capacity for electricity generation which will allow the power plant to deliver electricity to the grid.

Emission reductions are generated by displacing fossil-fuel based grid-electricity. Over a 21 years crediting period, starting on 1 August 2006, the project’s expected annual emission reductions will be on average 125 424 tonnes of CO₂ equivalents (tCO₂e). Actual emission reductions will depend on actual amounts of electricity supplied to the grid and the annual updated baseline grid emission factor to be calculated from data provided by CDEC-SIC (Dispatch Centre for the Central Interconnected System of Chile).

The validation scope is an independent and objective review of the Project Design Document (PDD). The PDD was reviewed against the criteria stated in Article 12 of the 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 one the recommendation in the IETA/PCF Validation and Verification Manual, and 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:

Celulosa Arauco y Constitución S.A.: CDM-PDD for the “Nueva Aldea Biomass Power Plant Phase 2 (Nueva Aldea Power Plant Phase 2)” project, Version N°1 of August 2005, Version N°2 of 24 October 2005 and Version N°3 of 05 January 2006.

CONAMA (DNA of Chile): Letter of Approval, 12 October 2005.

Nueva Aldea, Combined Margin Calculation for Nueva Aldea (Excel spreadsheet), 11 October 2005.

CONAMA, Regional Commission of Bio-Bio: Environmental licenses number 76/2005.

CO2e.com: Proposal to Mr. Alejandro Perez, CEO of Arauco, 10 September 2003.

OECD, UM/ECLAC: Evaluation of the Environmental Performance, 2005.

National Energy Commission of Chile: Node Price Report, September 2005.

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

Approved Baseline Methodology ACM0006: “Consolidated baseline methodology for grid-connected electricity generation from biomass residues”, Version 1 of 30 September 2005 and version 02 of 3 March 2006.

Approved Monitoring Methodology ACM0006: “Consolidated monitoring methodology for grid-connected electricity generation from biomass residues”, Version 01 of 30 September 2005 and version 02 of 3 March 2006.

Approved Baseline Methodology ACM0002: “Consolidated baseline methodology for grid-

connected electricity generation from renewable sources”, Version 05 of 3 March 2005.

IPCC: Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories,
<http://www.ipcc.ch/>

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

The following persons were interviewed:

Gerardo Soto Hidalgo – Arauco supervisor responsible for buying fuels
 Fernando Alvarez – Forestal Arauco Research and Development Analyst
 Sergio Vives – Lawyer, Urquidi, Riesco & Compañía (CDM Consultant)
 Cristian Vásquez – Arauco supervisor for power plant maintenance
 Cristian Patrickson – Development Manager of Arauco Generación S.A.
 Germán Vargas Torres – Arauco risk manager
 Claudia Flores – Consultant for Applus Programme

The validation team consisted of the following personnel:

Mr Michael Lehmann	DNV Oslo, Norway	Team leader, Energy sector expert, Technical reviewer
Mr Santhosh Jayaram	DNV Colombo, Sri Lanka	CDM auditor
Ms Cintia Dias	DNV Rio de Janeiro, Brazil	CDM auditor
Mr Mario Epstein	DNV Porto Alegre, Brazil	CDM auditor

For further details, please refer to the “Introduction” and “References” Sections of DNV’s Validation Report (DNV Report No. 2005-1193, 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, baseline and monitoring plan
- ii) follow-up interview with project stakeholders
- iii) the resolution of outstanding issues and the issuance of the validation report and opinion

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

On 11-12 October 2005 DNV performed interviews with Arauco in Chile and visited the Nueva Aldea industrial complex to confirm selected information and to resolve issues identified during 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 of 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 DNV were resolved through communication 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. 2005-1193, rev. 01).

For further details, please refer to the "Methodology" Section of DNV's Validation Report (DNV Report No. 2005-1193, 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)

The PDD of 24 October 2005 was made publicly available on DNV's climate change website (www.dnv.com/certification/climatechange) and Parties, stakeholders and NGOs were through the CDM website invited to provide comments during a 30 days period from 26 October 2005 to 24 November 2005.

One comment was received on 24 November 2005. The comment received and how DNV has taken due account of the comment received is documented in the "Comments by Parties, Stakeholders and NGOs" Section of DNV's Validation Report (DNV Report No. 2005-1193, rev. 01).

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 "Nueva Aldea Biomass Power Plant Phase 2" project in Chile. The validation was performed on the basis of UNFCCC criteria for the Clean Development Mechanism (CDM) as well as criteria given to provide for consistent project operations, monitoring and reporting. The review of the project design document and the subsequent follow-up interviews have provided DNV with sufficient evidence to determine the fulfilment of stated criteria.

While modern pulp mills are currently designed to utilise black liquor for the co-generation of heat and electricity in order to be self-sufficient, the project will install 37 MW surplus capacity for electricity generation at a new pulp mill installed at the Nueva Aldea industrial complex at Ránquil, Chile. This will allow the power plant to deliver electricity to the grid.

The only project participant is Celulosa Arauco y Constitución S.A. of Chile. The host Party Chile meets all relevant participation requirements. No participating Annex I Party has yet been identified. The DNA of Chile has provided written approval of voluntary participation.

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

The project applies the approved consolidated baseline methodology ACM0006 "Consolidated baseline methodology for grid-connected electricity generation from biomass residues". The baseline methodology has been correctly applied and the assumptions made for the selected baseline scenario are sound. The selected baseline scenario is the construction of a conventional "business as usual" power plant utilising black liquor which will co-generate heat and electricity to meet the pulp mill's energy demand without surplus electricity generation. It is sufficiently demonstrated that the project is not a likely baseline scenario and that emission reductions attributable to the project are thus additional.

The monitoring methodology ACM0006 has been correctly applied. The monitoring plan provides for monitoring of the indicators necessary for the ex-post determination of project and baseline emissions. The combined margin emission coefficient will be updated on an annual basis.

By displacing fossil fuel-based electricity with electricity generated from a renewable source, the project will result in emission reductions that are real, measurable and will give long-term benefits to the mitigation of climate change. The emission reductions forecast stated in the PDD is a likely estimate.

Local stakeholders' comments were consulted and comments received were taken into account in the project design. Comments by Parties, stakeholders and NGOs were also invited via the UNFCCC web-site and the comments received were taken into account in the validation.

In summary, it is DNV's opinion that the project, as described in the project design document of 5 January 2006, meets all relevant UNFCCC requirements for the CDM and correctly applies the approved baseline and monitoring methodology ACM0006. Hence, DNV requests the registration of the "Nueva Aldea Biomass Power Plant Phase 2" project in Chile 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 No. 2005-1193, 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.

Name of authorized officer signing for the DOE Michael Lehmann

Date and signature for the DOE

24 March 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