



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 (DNV Certification)
Title of the proposed CDM project activity (Section A.2 of the attached CDM-PDD) submitted for registration	IRANI Biomass Electricity Generation Project
Project participants (Name(s))	Celulose Irani (Brazil) EcoSecurities (UK) Shell Trading International Limited (UK) Showa Shell Sekiyu K.K. (Japan)
Sector in which project activity falls	Energy (renewable electricity generation) and methane avoidance
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; <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 assist 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"> ○ Preliminary Validation Report of 29 December 2004 (DNV report 2004-1301, version 02), including a validation protocol and a list of person interviewed by DOE 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 project activity consists of the construction and operation of a 9.43 MW biomass generation plant that will generate part of the electricity required by the Celulose Irani plant in the paper manufacturing process. The project activity involves displacing more carbon intensive electricity from the grid with electricity generated by GHG neutral biomass (wood chips and wood residue). The project also involves methane avoidance from biomass not being landfilled. In the absence of the project the wood residue, which will be used in the thermoelectric plant will continue to be landfilled.

The project participants are Celulose Irani (Brazil), EcoSecurities (UK), Shell Trading International Limited (UK) and Showa Shell Sekiyu K.K. (Japan).

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 validation team consists of the following personnel:

Mr Luis Filipe Aboim Tavares	DNV Rio de Janeiro
Mr Michael Lehmann	DNV Oslo
Mr Einar Telnes	DNV Oslo

For further details, please refer to the "Introduction" Section of DNV Certification's Preliminary Validation Report (DNV report 2004-1301, version 02).

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 July 2004. The validation consisted of the following three phases:

- a desk review of the Project design and the baseline and monitoring methodology;
- follow-up interview with Project stakeholders;
- the resolution of outstanding issues and the issuance of a preliminary validation report and opinion.

The original and revised versions of the PDD for the Irani Biomass Electricity Generation Project submitted by the project participants were reviewed. Additional background documents related to the

project design and the baseline were also consulted.

On 17 December 2004, a site visit and interviews with Irani and EcoSecurities was carried out to confirm selected information.

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. With the exception of one Corrective Action Request related to the approval of the project by the participating Parties, the three Corrective Action Requests and the seven 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 Certification and the response provided by the project participants are documented in Table 3 of the Validation Protocol in Appendix A of DNV Certification's Preliminary Validation Report (DNV report 2004-1301, version 02).

For further details, please refer to the "Methodology" Section of DNV Certification's Preliminary Validation Report (DNV report 2004-1301, version 02) 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 June 2004 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 19 September 2004 to 19 October 2004. One comment was received in this period. Both issues raised by the comment were considered in DNV's validation of the project.

For further details, please refer to the "Comments by Parties, stakeholders and NGOs" Section of DNV Certification's Preliminary Validation Report (DNV report 2004-1301, version 02).

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 (DNV) is currently making a validation of the Irani Biomass Electricity Generation Project from Celulose Irani and EcoSecurities, at Vargem Bonita Santa Catarina 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 proposed thermoelectric power project with a capacity of 9,43 MW will generate electricity utilizing biomass of wood chips and wood waste from eucalyptus and pinus production in Irani forests. Utilising the biomass waste instead of landfilling it, the project will avoid methane emissions.

The project is not expected to have considerable environmental impacts. A Preliminary Environmental License and Installation Environment License was received from the State Environment Agency FATMA as required by Brazilian law and the subsequent Operation Environment License is expected to be issued after project start.

By promoting renewable energy, the project is in line with the current sustainable development priorities of Brazil. Nevertheless, the Brazilian DNA has not yet confirmed that the project assists Brazil in achieving sustainable development.

Being a renewable energy project activity with an output capacity of less than 15 MW and having less than 15 000 tCO₂e 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 “that supply electricity to an electricity distribution system”. The electric energy generated by the project will be used by the Celulose Irani Plant and will reduce the imports from grid electricity and thus displace energy from the grid. As this project activity reduces grid electricity imports and thus avoids marginal fossil fuel based electricity generation, DNV is in favour of the project being considered under Category I.D. This is, however, subject to the final acceptance of the CDM Executive Board. The simplified modalities and procedures give no further guidance on which project emissions to include for determining whether the projects meet the small-scale eligibility threshold of project emissions being less than 15 kilo tCO₂e. The selected definition of project emissions being the CH₄ and N₂O emissions due to incomplete combustion of biomass and the exclusion of biogenic CO₂ emissions from the combustion of biomass is in line with other approved baseline and monitoring methodologies.

The project applies two of the simplified baseline methodologies proposed for this project activity category. The average of the approximate operating margin and the build margin is applied for the renewable electricity generation component of the project. The determination of the combined margin is based on an International Energy Agency (IEA) study for Brazil.. Considering that such study was carried out recently and that the necessary data for determining the operating and build margin is not public available in Brazil, the use of the data from the IEA study are deemed adequate for calculating the combined margin. For the methane avoidance component of the project, the amount of methane produced from decay of biomass landfilled in absence of the project is determined using adequate IPCC default emission factors.

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. DNV acknowledges that the project without CER revenues has an IRR lower than the levels regarded as acceptable for other investments in Brazil. Although Celulose Irani already operates two old biomass power plants, the new boiler has different conditions of operation, using the wood waste which is not readily utilised to generate electricity. Hence, it is sufficiently demonstrated that the project is not a likely baseline scenario and that emission reductions attributable to the project are additional.

By displacing fossil fuel-based electricity and avoidance of methane emission, 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.

The monitoring plan sufficiently specifies the monitoring requirements of the main project indicators.

Detailed responsibilities and authorities for project management, procedures for monitoring and reporting, and QA/QC procedures are assured through ISO 9001 certification of Celulose Irani, however these procedures were not implemented yet and should be assessed on verification phase.

In summary, the Irani Biomass Electricity Generation Project meets all present and relevant UNFCCC criteria and the simplified modalities and procedures for small-scale CDM project activities. However, the projects has not yet obtained approval by the participating Parties, including a confirmation by the host Party that the project contributes to sustainable development in Brazil.

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.

Note: The Irani Biomass Electricity Generation Project at Celulose Irany, Vargem Bonita, Brazil has not yet obtained written approval of the participating Parties, including a confirmation by the host Party that the project assists in achieving sustainable development.

Name of authorized officer signing for the DOE

Michael Lehmann

Date and signature for the DOE

29 December 2004, *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