



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	KUNAK BIO ENERGY PROJECT
Project participants (Name(s))	TSH Bio-Energy Sdn Bhd (authorized by Malaysia)
Sector in which project activity falls	1-Energy industries (renewable - / non-renewable sources)
Is the proposed project activity a small-scale activity?	<u>Yes</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 Validation Report (DNV Report 2004-0528, rev. 02)); <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"> ○ Letter of Approval by the DNA of Malaysia <input checked="" type="checkbox"/> Other documents, including any validation protocol used in the validation <ul style="list-style-type: none"> ○ Validation Report (DNV Report 2004-0528, rev. 02), including a validation protocol and a list of persons interviewed by the 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 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)**

This small-scale CDM project activity will install a power generation plant at the TSH Kunak Palm Oil Mill and utilise biomass waste, mainly consisting of empty fruit bunches as fuel for the plant and export the electricity to the local grid. The power generation capacity of the plant is 14 MW_e. In house power demand for the mill is 4 MW_e, resulting in 10 MW_e generation capacity for electricity exports to the local electricity grid.

The GHG emission reductions are estimated to be 51 200 tons CO_{2e} annually. The project will directly reduce greenhouse gas emissions produced by displacing the same amount of electricity from fossil fuel power plant that are currently in operation in the Sabah East Coast Grid.

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 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:

/1/ Danish Energy Management: Project Design Document (PDD) for Small-Scale CDM Activity – kunak Bio energy project. April 2004

/2/ Response to comments received by stakeholders during the period of call for inputs (7 May – 6 June, 2004), by Henrik Rytter Jensen, Danish Energy Management

/3/ Malaysian DNA, Letter of Approval, 21 February 2005.

/4/ IPCC: Good Practise Guidance and Uncertainty Management in National Greenhouse Gas Inventories. 2000

/5/ International Emission Trading Association (IETA) & Prototype Carbon Fund (PCF): Validation and Verification Manual. www.vvmanual.info

/6/ 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 06: 30 September 2005.

The following persons were interviewed:

- Mr Nadzri Yahya, Head of DNA. Malaysian Designated National Authority for CDM, Ministry of Science, Technology and the Environment, 19 May 2004, Putrajaya, Malaysia.
- Mr Abdul Rahim Yahya, Asst. General Manager, Corporate Finance & Planning, TSH Bio-Energy, 20 May 2004, Jalan, Malaysia
- Mr. Frederick Tan, Director, Operations & Planning, TSH Bio-Energy, 20 May 2004, Jalan, Malaysia
- Mr. Eugene Ding, Manager, Corporate Affairs, TSH Bio-Energy, 20 May 2004, Jalan, Malaysia
- Mr. Mohamand Adan Yusof of Mensilin Holdings Sdn. Bhd., consultant

The validation team consisted of the following personnel:

Haefeli Susanne	DNV Oslo	Team Leader, GHG auditor
Hao Xiang Jiang	DNV China	GHG auditor
Thivakaran Narayanan	DNV Kuala Lumpur	GHG auditor
Michael Lehmann	DNV Oslo	GHG auditor, energy sector expert
Einar Telnes	DNV Oslo	Technical verifier

For further details, please refer to the "Introduction" and "References" Section of DNV's Validation Report (DNV Report 2004-0528, rev. 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 consisted of the following three phases:

- I a desk review of the project design documentation
- II follow-up interviews with project stakeholders
- III the resolution of outstanding issues and the issuance of the final validation report and opinion.

The Project Design Document initial version of April 2004, and revised version of November 2005 submitted by Danish Energy Management, and additional background documents related to the project design and baseline were reviewed during the validation (refer to above list of documents).

In the period of 19-20 May 2004, interviews were held with Malaysian stakeholders to confirm selected information and to resolve issues identified in the protocol. Representatives of the Malaysian DNA and THS Bio-Energy were interviewed.

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 has been used where additional information is needed to fully clarify an issue.

The Corrective Action Request and request for Clarification raised by DNV 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 to the Validation Report (2004-0528, rev. 02).

For further details, please refer to the "Methodology" Section of DNV's Validation Report (DNV Report 2004-0528, rev. 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)

According to the modalities for the validation of CDM projects, the validator shall make publicly available the project design document and receive, within 30 days, comments on the validation requirements from Parties, stakeholders and UNFCCC accredited Non-governmental Organisations (NGO) and make them publicly available.

The PDD of April 2004 was made publicly available on www.dnv.com/certification/climatechange and Parties, stakeholders and NGOs were through the CDM website invited to provide comments during the period 7 May until 6 June 2004.

Four comments were received. All comments are reproduced in unedited form in Appendix B of DNV

Report 2004-0528, rev. 02. In summary, the comments addressed the following issues:

- Inclusion of emissions related to the transport of biomass
- Sustainable development criteria
- Environmental impact assessment
- Public consultation
- Additionality
- Eligibility as small-scale CDM project activity with regards to the threshold of 45 MWth for biomass combined heat and power (co-generation) systems.

DEM provided a response to the above comments, which is given in Appendix C of DNV Report 2004-0528, rev. 02.

The comments and DEM's responses were considered during the validation and the validation findings in chapter 3 of DNV Report 2004-0528, rev. 02 demonstrate that all issues raised by stakeholders were duly taken into account.

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 has validated the Kunak Bio Energy Project in Malaysia. The validation was performed on the basis of UNFCCC criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to the Kyoto Protocol criteria for the CDM, the CDM rules and modalities as agreed in the Marrakech Accords, the simplified modalities and procedures for small-scale CDM project activities and relevant decisions by the CDM Executive Board.

The project will generate electricity utilising biomass residues, i.e. empty fruit bunches, fibers and shells and will supply electricity to the Sabah East Coast Grid. With a generation capacity of 14 MW_e, the project qualifies as a small-scale CDM project activity according to category (i) defined in paragraph 6(c) of decision 17/CP.7 of the Marrakech Accords.

The project design is sound and the project will introduce state of the art technology developed in Denmark, resulting in technology and capacity transfer to Malaysia.

Social and environmental impacts of the project have been addressed and sufficient measures are identified to reduce adverse environmental effects, such as air emissions, noise and waste disposal. By promoting renewable energy and by using biomass residues from the palm oil industry, the project will contribute to Malaysia's sustainable development.

The host-Party is Malaysia and the project participant is TSH Bio-Energy Sdn Bhd. The host-Party, Malaysia, fulfills the participation criteria and has approved the project and authorized the project participant. A Letter of Approval has been received by the Malaysian DNA, including a confirmation that the project assists in achieving sustainable development. No Annex I Party is yet defined. The validation did not reveal any information that indicates that the project can be seen as a diversion of ODA funding towards Malaysia.

The project will be connected to the Sabah East Coast Grid, which is currently supplied by 100% diesel generated power from existing power plants. The baseline is thus the kWh generation by the bio-energy plant and exported to the electricity grid multiplied by the carbon emission coefficient of 0.8 kg CO₂eqv/kWh, as prescribed in Table I.D.1 in Appendix B of the simplified modalities and procedures for small-scale CDM project activities.

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. An analysis of relevant barriers demonstrates that the proposed project is not a likely baseline scenario and emission reductions are hence additional to any that would occur in its absence.

The monitoring plan sufficiently specifies the monitoring requirements of the main project indicators. Detailed responsibilities and authorities for project management, monitoring procedures and QA/QC procedures are in place.

A local consultation process with relevant agencies and ministries has been conducted and due account was taken of the comments received. Parties, stakeholders and NGOs were invited to provide comments and all issues raised by stakeholders were taken into account during the validation.

In summary, it is the validation team's opinion that the "Kunak Bio Energy Project", as described in the project design documentation of November 2005, meets all relevant UNFCCC requirements for the CDM and correctly applies the approved baseline and monitoring methodology AMS-I.D. Hence, DNV requests the registration of the "Kunak Bio Energy 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 2004-0528, rev. 02).

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 Mari Grooss Viddal

Date and signature for the DOE

22 November 2005

Mari G. Viddal

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

