



## 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

<b>Name of the designated operational entity (DOE) submitting this form</b>	Det Norske Veritas Certification Ltd. (DNV)
<b>Title of the proposed CDM project activity (Section A.1 of the attached CDM-PDD) submitted for registration</b>	Perpetual 7.5 MW Non-Conventional Renewable Sources Biomass Power Project
<b>Project participants (Name(s))</b>	Perpetual Energy Systems Private Limited
<b>Sector in which project activity falls</b>	Sectoral Scope Nr. 01: Energy Industries.
<b>Is the proposed project activity a small-scale activity?</b>	<u>Yes</u> / <del>No</del> (underline as applicable)

### Section 2: Validation report

**List of documents to be attached to this validation report (please check mark):**

- ☒ The CDM-PDD of the project activity
- ☒ 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;
- ☒ 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:
  - (Attach a list of all Parties involved and attach the approval (in alphabetical order))
- ☒ Other documents, including any validation protocol used in the validation
  - Validation Report including a validation protocol and a list of persons interviewed by the validation team during the validation process
- ☒ Information on when and how the above validation report is made publicly available.
- ☒ Banking information on the payment of the non-reimbursable registration fee
- ☒ 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)***

- **Description of the proposed CDM project activity:**

The project is a 7.5 MW (gross) capacity grid-connected biomass based power project. The project was commissioned in March 2003. The project utilises the available biomass in the region where the plant is located, such as rice husk, Prosopis juliflora, bagasse, cotton stalks etc, for generation of electricity that is exported to Andhra Pradesh state electricity grid. It uses a condensing type steam turbo generator with a matching boiler of travelling grate technology, capable of firing multiple fuels. The technology used in this project is indigenous.

The objective of the project is to reduce anthropogenic GHG emissions by displacing fossil fuel based electricity generation with renewable biomass. The project thereby helps in reducing the power deficit in the state of Andhra Pradesh and also contributes towards natural resources conservation such as coal.

Based on a baseline emission factor determined to be to be 0.830 kgCO<sub>2</sub> per kWh, the project is expected to result in emission reductions of 20 300 tonnes of CO<sub>2</sub> per year during the first renewable seven years crediting period.

- **Scope of validation process:**

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 employed a risk-based approach, focusing on the identification of significant risks for project implementation and the generation of CERs.

The validation is not meant to provide any consulting towards the project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the project design.

- **Documents reviewed:**

- ☑ Perpetual Energy Systems Private Limited, Perpetual 7.5 MW Non-Conventional Renewable Sources Biomass Power Project, CDM PDD, Version 01, dated 7<sup>th</sup> August 2005 and final version 02, dated 6<sup>th</sup> February 2006
- ☑ Perpetual Energy Systems Private Limited - Calculation worksheet for grid emission factor
- ☑ DNA of India, Letter of Approval, dated 23 September 2005
- ☑ International Emission Trading Association (IETA) & the World Bank's Prototype Carbon Fund (PCF): *Validation and Verification Manual*. <http://www.vvmanual.info>
- ☑ 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.
- ☑ Revised 1996 IPCC guidelines for national green house gas inventories – Reference Manual (Volume 3)

- **DOE Validation team:**

Mr. Astakala Vidyacharan	DNV Certification, India	Team Leader
Mr. Santhosh Jayaram	DNV Certification, India	GHG auditor
Mr. Subhendu Biswas	DNV Certification, India	GHG Auditor
Mr. Einar Telnes	DNV Certification, Norway	Sector Expert/ Technical Reviewer

For further details, please refer to the "Introduction" and "References" Section of DNV's Validation Report (DNV Report 2005-9009, 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 of the project started in August 2005, with hosting of PDD at the UNFCCC website and inviting stakeholder's comments.

The validation consisted of the following:

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

In order to ensure transparency, a validation protocol was customised for the project, according to the Validation and Verification. The protocol shows in transparent manner criteria (requirements), means of verification and the results from validating the identified criteria. The validation protocol serves the following purposes:

- It organises, details and clarifies the requirements a CDM project is expected to meet;
- It ensures a transparent validation process where the validator will document how a particular requirement has been validated and the result of the validation.

Findings established during the validation can either be seen as a non-fulfilment of validation protocol criteria or where a risk to the fulfilment of project objectives is identified. Corrective Action Requests (CAR) is issued, where:

- mistakes have been made with a direct influence on project results;
- validation protocol requirements have not been met; or
- There is a risk that the project would not be accepted as a CDM project or that emission reductions will not be certified.

The term Clarification is used where additional information is needed to fully clarify an issue.

*For further details, please refer to the "Methodology" Section of DNV's Validation Report (DNV Report 2005-9009, rev. 02) and the IETA/PCF Validation and Verification Manual ([www.vvmanual.info](http://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, Version 01 of 7 August 2005, was made publicly available on DNV's climate change website ([www.dnv.com/certification/climatechange](http://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 09 August 2005 to 07 September 2005.

Two comments were received on 07 September 2005.

Please refer to the "Comments by Parties, Stakeholders and NGOs" Section of DNV's Validation Report (DNV Report 2005-9009, rev. 02) and the above mentioned CDM website.

**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 "Perpetual 7.5 MW Non-Conventional Renewable Sources Biomass Power Project" in Vizayanagaram district, Andhra Pradesh in India, on the basis of UNFCCC criteria for the Clean Development Mechanism and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 12 of the Kyoto protocol, the CDM modalities and procedures and the subsequent decisions by the CDM Executive Board.

The project participant is Perpetual Energy Systems Private Limited. The host Party India meets all participation requirements and the DNA of India approved the project

The validation has confirmed that the project is eligible as category I.D small-scale CDM project activity and correctly applies the simplified baseline and monitoring methodology AMS-I.D. The determination of the baseline is well elaborated, transparent and sufficiently supported with facts. The selected baseline scenario is reasonable for the selected 7 year crediting period. Moreover, an analysis of the barriers facing the project demonstrates that project is not a likely baseline scenario.

The project will contribute to sustainable development by providing benefits such as employment generation during construction and operation of the project, ensuring environmental wellbeing and aid in bridging the gap between demand and supply of power The DNA of India has confirmed that the project assists in achieving sustainable development and has accorded the approval for the project.

The validation did not reveal any information indicating that the project can be seen as a diversion of ODA funding towards India.

The project results in the reduction of GHG emissions those are real, measurable and give long-term benefits and that are additional to what would have occurred in the absence of the project.


*The monitoring plan makes sufficient provision for monitoring relevant project and baseline emission indicators. Responsibilities and authorities for project management, monitoring and reporting and QA/QC procedures have also been addressed.*

*A local stake holder consultation process has been carried out by the project participant. DNV published the PDD on the DNV climate Change web site and comments by Parties, stake holders and UNFCCC accredited NGOs were invited through the CDM web site. Two comments were received on this call. These have been considered during the validation and issues raised in these have been resolved satisfactorily.*

In summary, it is DNV's opinion that the project, as described in the project design document of date 6 February 2006, meets all relevant UNFCCC requirements for the CDM, and is eligible as category I D small-scale CDM project activity and correctly applies the approved simplified baseline and monitoring methodology AMS- D. Hence, DNV requests the registration of the "Perpetual 7.5 MW Non-conventional renewable sources biomass power project" project as CDM project activity.

For further details, please refer to DNV's Validation Report (DNV Report 2005-9009, 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.	Susanne Haefeli	
Name of authorized officer signing for the DOE	24/04/2006	
Date and signature for the DOE		
<b>1.1.1.1 Section below to be filled by UNFCCC secretariat</b>		
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