

 <p align="center">CDM Project Activity Registration and Validation Report Form <i>(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)</i></p>	
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.1 of the attached CDM-PDD) submitted for registration	La Vuelta and La Herradura Hydroelectric Project
Project participants (Name(s))	Empresas Públicas de Medellín E.S.P., Electric Power Development Co. Ltd.
Sector in which project activity falls	Sectoral Scope Nr. : 01 - Energy industries (renewable - / non-renewable sources)
Is the proposed project activity a small-scale activity?	<u>Yes</u> / <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; <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"> o (Attach a list of all Parties involved and attach the approval (in alphabetical order)) <input checked="" type="checkbox"/> Other documents, including any validation protocol used in the validation <ul style="list-style-type: none"> o Validation Report 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 <ul style="list-style-type: none"> • 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 La Vuelta and La Herradura Hydroelectric project envisages the construction of two run-of the-river hydroelectric power plants on La Herradura river for generation of total 31.5 MW electricity. The project construction started in February 2002 and the two sub-projects were commissioned during October and December 2004. The project will reduce GHG emissions by replacing electricity generation from existing fossil fuel power plants. The emission reductions will be accounted from January 2005. The total emission reductions from the project are estimated to be 481 566 tCO₂ during the first seven years crediting period, resulting in annual average emission reductions of 68 795 tCO₂.

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 and the relevant decisions by the CDM Executive Board, including the approved baseline and monitoring methodology ACM0002. 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:

- ☒ MGM, *La Vuelta and La Herradura Hydroelectric Project*, PDD, Version of July 2003, April 2004, Version 5 of 30 September 2005 and version 06 dated 06 September 2006
- ☒ DNA of Colombia, *Letter of Approval* dated 20 August 2004.
- ☒ DNA of Japan, *Letter of Approval* dated 11 August 2006.
- ☒ International Emission Trading Association (IETA) & the World Bank's Prototype Carbon Fund (PCF): *Validation and Verification Manual*. <http://www.vvmanual.info>
- ☒ CDM EB, *ACM0002 - Consolidated baseline methodology for grid-connected electricity generation from renewable sources*, version 06 of 19 May 2006.
- ☒ CDM-EB, *Tool for the demonstration and assessment of additionality*, version 02 of 28 November 2005.

The following persons were interviewed:

- ☒ Martha P. Castillo, OCMCC
- ☒ Norberto Duque, ISA (CND)
- ☒ William Urrego, ISA (CND)
- ☒ Francisco Bedoya, E.E.P.P.M, Management of energy "bag"
- ☒ Cristina Holguin, E.E.P.P.M, QMS
- ☒ Walter del Rio, E.E.P.P.M, Operating engineer (LVLH)
- ☒ Rene Altamar, E.E.P.P.M, Operating engineer (LVLH)

- ☒ Gabriel Jaime Lopez, E.E.P.P.M, Inspector of projects (LVLH)
- ☒ Luis Velez, E.E.P.P.M, Project Director (LVLH)
- ☒ Luis Rodriguez, E.E.P.P.M, Planning specialist (LVLH)
- ☒ Jorge Mesa, E.E.P.P.M
- ☒ Oscar Fernandez, E.E.P.P.M
- ☒ Olga Lucia Velez, E.E.P.P.M
- ☒ Jaime Aramburu, E.E.P.P.M
- ☒ Ismael Concha, UPME
- ☒ Jorge Mesa, UPME
- ☒ Carlos Rubiano, E.E.P.P.M

The validation team consists of the following personnel:

Mr Einar Telnes	DNV Certification Norway	Team Leader, Energy sector expert
Mr Gustavo Godinez	DNV Certification Norway	GHG auditor
Mr Raman K.V	DNV Certification India	GHG auditor,
Mr Michael Lehmann	DNV Certification Norway	Technical reviewer.

For further details, please refer to the "Introduction" and "References" Section of DNV's Validation Report (DNV Report 2005-1429, 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 interview with project stakeholders.
- iii) The resolution of outstanding issues and the issuance of the validation report and opinion.

The PDD, the first version of July 2003 and the latest version 06 of 6 September 2006 and several version of the PDD between these two versions, submitted by MGM International and additional background documents related to the project design and baseline were assessed during the validation.

On 6-9 January 2004, DNV performed interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of EE.PP.M, UPME and CND 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 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 the DNV's Validation Report.

For further details, please refer to the "Methodology" Section of DNV's Validation Report (DNV Report 2005-1429, 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)***

The PDD of 30 September 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 03 November 2005 to 02 December 2005. No comments were received.

Please refer to the "Comments by Parties, Stakeholders and NGOs" Section of DNV's Validation Report (DNV Report 2005-1429, 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 "La Vuelta and La Herradura Hydroelectric Project" in Colombia. The validation was performed 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.

The review of the project design documentation and the subsequent follow-up interviews have provided DNV with sufficient evidence to determine the fulfilment of stated criteria.

The host Party is Colombia and the Annex I Party is Japan. Both Colombia and Japan fulfil the participation criteria and approved the project and authorized the project participants. The DNA of Colombia confirms that the project assists in achieving sustainable development.

The project correctly applies ACM0002 (version 06) "Consolidated baseline methodology for grid-connected electricity generation from renewable sources".

By implementing the run-of -river hydroelectric power plant project, the project reduces electricity generation from fossil fuel based power plants in the Colombian electricity grid. Hence, the project results in reductions of CO₂ emissions that are real, measurable and give long-term benefits to the mitigation of climate change. It is demonstrated that the project is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity.

The total emission reductions from the project are estimated to be on the average 68795 tCO₂e per year over the selected 7 year crediting period. The emission reduction forecast has been checked and it is deemed likely that the stated amount is achieved given that the underlying assumptions do not change.

The project proponent has vast experience in the operation and maintenance of hydroelectric power plants and has quality management systems in place, which covers the training and monitoring procedures.

In summary, it is DNV's opinion that the "La Vuelta and La Herradura Hydroelectric Project" in Colombia, as described in the PDD of 06 September 2006, meets all relevant UNFCCC requirements for the CDM and all relevant host country criteria and correctly applies the baseline and monitoring methodology ACM0002 (version 06). DNV thus requests the registration of the project as a CDM project activity.

For further details, please refer to DNV's Validation Report (DNV Report 2005-1429, 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-Hestvik	
Name of authorized officer signing for the DOE		
Date and signature for the DOE	25 Oct. 2006	<i>S. Haefeli-Hestvik</i>
1.1.1.1 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