



**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>	BRT Bogotá, Colombia: TransMilenio Phase II to IV
<b>Project participants (Name(s))</b>	TransMilenio S.A. Corporación Andina de Fomento (CAF)
<b>Sector in which project activity falls</b>	Sectoral Scope Nr. 7: Transport
<b>Is the proposed project activity a small-scale activity?</b>	<u>No</u> / <del>Yes</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 proposed project activity involves the implementation of a sustainable mass urban transport system based on a Bus Rapid Transit (BRT) system in Bogotá, Colombia. The project is proposed to be implemented in phases (II to IV).

Phase II which is already implemented consist of 3 trunk routes: Americas, NQS and Suba; Phase III will be in construction phase will consist of 3 additional trunk routes: Calle 26, Carreras 10 & 7 and Av. Boyacá and Phase IV which had not started yet will consist of 4 trunk routes: Avenida 68, Calle 13, Av. Ciudad de Cali and Av. 1 de Mayo; Phase I of the project has already been implemented and does not form a part of this project.

The project activity involves implementation of the following measures:

- Infrastructure consisting of dedicated lanes, large capacity buses, and elevated bus stations that allow pre-board ticketing and fast boarding and integration of smaller transport units offering feeding services to main stations.
- Improved bus management system moving from many small independent enterprises competing at bus-to-bus level to a consolidated structure with formal enterprises competing for transport concessions
- Centralized coordinated fleet control providing monitoring and communications to schedule services and real-time response to contingencies and
- Reduction program of the existing fleet of buses through scrapping of old buses.

The objective of the TransMilenio project is to establish an efficient, safe, rapid, convenient, comfortable and effective modern mass transit system and aims to reduce the GHG emissions through reduced fuel consumption per passenger per kilometre distance transported by using fuel efficient, large capacity buses operating on a modern road system.

The annual average estimated reductions for the 1<sup>st</sup> renewable crediting period are 246 563 tonnes of CO<sub>2</sub>e over a 7 years renewable crediting period starting from January 1<sup>st</sup>, 2006. The project activity qualifies as a prompt start project as the project proponent had submitted a new baseline methodology for approval prior to December 31<sup>st</sup> 2005. The project Phase II initiated construction in March 2002 and finally started operations in December 2003.

It has been verified through the contract signed between the District of Bogotá and CAF in November 14<sup>th</sup>, 2001 that CDM revenues were considered prior to the project implementation.

- **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, including the approved simplified baseline and monitoring methodologies AM0031. 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 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:**

- Grutter Consulting: CDM PDD for *BRT Bogotá, Colombia: TransMilenio Phase II to IV*, versions 3.0 dated July 25<sup>th</sup>, 2006, version 4.0 dated August 27<sup>th</sup>, 2006 and version 4.1 dated September 6<sup>th</sup>, 2006..
- Host country approval letter September 12<sup>th</sup>, 2006
- Annex 1 country approval letter August 25<sup>th</sup>, 2006
- Grutter Consulting: *BRT TransMilenio Master File Calculations*, July 2006
- Corporación Andina de Fomento: *Loan Contract between Corporación Andina de Fomento and Bogotá D.C. "Plan Vial y programa educativo de la Alcaldía Mayor de Bogotá"*, November 14<sup>th</sup>, 2001.
- Logitrans: *Contrato PNUD COL/01/23, Análisis de Corredores*, 2003/4
- Steer Davis Gleave: *Diseno Operacional Proyecto TransMilenio*, 1999
- Steer Davis Gleave: *Estudio sobre Estimacion de Usuarios de Transporte Privado a ser Desplazados por el Sistema TransMilenio*, 2002
- Steer Davis Gleave: *Estudio para la Reformulacion del Plan Vial de Transporte y de Espacio Publico Peatonal del Plan de Ordenamiento Territorial de Bogota*, Producto 2, 2005
- TransMilenio, S.A.: *CDM Project Monitoring Manual*, Version 2.1; August 10<sup>th</sup>, 2006
- World Bank: *Report 24941-CO, PAD on a Proposed Loan in the Amount of USD 100 Million to the Capital District of Bogotá*, 2003
- GTZ: *Bus Rapid Transit*, version 2.0, 2005
- Alcaldía Mayor de Bogotá D.C.: *Plan de Ordenamiento Territorial / Decreto 469*, Diciembre, 2003
- TransMilenio, S.A. y el Instituto de Desarrollo Urbano: *Plan Marco Sistema TransMilenio*, Noviembre 2003
- IDU-DAMA: *Manual Verde*, 2002
- Instituto de Desarrollo Urbano : *Final Reports for the project Social Management*, 2002-2005
- Instituto de Desarrollo Urbano: *Final Reports for the project Environmental Management* 2002-2005
- TransMilenio, S.A.: Public Bid 007 "Concesión de la explotación del servicio publico de Transporte terrestre automotor urbano masivo de Pasajeros de la fase dos mediante la operación troncal del Sistema TransMilenio", 2002
- International Emission Trading Association (IETA) & the World Bank's Prototype Carbon Fund (PCF): *Validation and Verification Manual*. <http://www.vvmanual.info>
- CDM Executive Board AM0031 *Baseline/monitoring Methodology for Bus Rapid Transit Projects*, Version 01 of 28 July, 2006
- CDM Executive Board: *Tool for the demonstration and assessment of additionality*,

- Version 02 of 28 November 2005.
- IDU: *Manual de Seguimiento Ambiental para proyectos de infraestructura urbana*, Diciembre 2005.
- Consejo Nacional de Política Económica y Social de la República de Colombia: *Conpes 3093, Sistema de Servicio Público Urbano de Transporte Masivo de Pasajeros de Bogota*, Noviembre 15, 2000
- DAMA/Universidad Nacional de Colombia: *Revisión y Ajuste de la Norma de Emisiones por Fuentes Móviles en la Ciudad de Bogotá*, 2004
- IPCC Guidelines for National Greenhouse Gas Inventories *Reference Manual* Revised 1996.
- Universidad Nacional de Colombia, Pérez M.P.: *Evaluación y Caracterización del parque automotor de transporte público individual y colectivo en Bogotá D.C. y confrontación con la flota necesaria para satisfacer la demanda actual de viajes en este modo*, 2004
- Arpel: *Measurement of In-Service Vehicles Emissions in Sao Paulo, Santiago and Buenos Aires*, July 2005
- Alcaldía Mayor de Bogotá D.C.: *Decreto 115, 2003 "Por el cual se establecen criterios para la reorganización del transporte público colectivo en el Distrito Capital"* Abril 2003.
- Ministerio de Minas y Energía: *Resolución No.18 0687* Junio 17, 2003
- Consejo Nacional de Política Económica y Social de la República de Colombia: *Conpes 3260, Política Nacional de Transporte Urbano masivo*, Diciembre 15, 2003
- Alcaldía Mayor de Bogotá D.C.: *Decreto 323 de 1992 "Por el cual se reglamentan las zonas viales de uso público en lo referente a las áreas para el sistema vial general y para el transporte masivo, la red vial local de las urbanizaciones y el equipamiento vial"* Mayo, 1992
- Ministerio de Ambiente, Vivienda y Desarrollo Territorial: *Resolución No.0453 "Por el cual se adoptan los principios y criterios y se establece el procedimiento para la Aprobación Nacional de proyectos de reducción de emisiones de gases de efecto invernadero que optan al Mecanismo de Desarrollo Limpio-MDL"* 27 Abril, 2004

**Persons Interviewed:**

- Jürgen M. Grütter- Grütter Consulting
- Camilo Rojas García- CAF
- Raúl Roa- Director de Operaciones TransMilenio, S.A.
- Fernando Páez- Subgerente General de TransMilenio, S.A.
- Deysi Rodríguez- Profesional especializado en gestión ambiental de TransMilenio, S.A.
- Susana Ricaute- Asesora de Convenios de TransMilenio, S.A.
- Martha Ligia Carpintero- Profesional especializado en calidad de TransMilenio, S.A.
- Francisco Charri- Asesor del Grupo de Mitigación de Cambio Climático
- Carolina Villafañe Asesor en la Coordinación del Grupo de Mitigación de Cambio Climático
- Felipe Castro - Subsecretario Técnico de la Secretaría de Transito y Transporte
- Carolina Camacho Bolivar- Coordinador del Grupo de Transporte Masivo. Del Ministerio de Transporte

- Guillermo Acevedo- Asesor ambiental del despacho del Ministerio de transporte.

• **DOE Validation team:**

Ms Susanne Haefeli	DNV Certification Oslo	Team Leader
Mr Alfonso Capuchino	DNV Certification Mexico	GHG auditor
Mr Venkata Raman K	DNV Certification India	Technical reviewer
Mr. Sourmik Biswas	DNV Certification India	Technical reviewer
Mr. Simon Dawes	DNV Certification Sydney	Sector expert

For further details, please refer to the "Introduction" and "References" Section of DNV's Validation Report (DNV Report 2006-1321, 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 interviews with project stakeholders
- III 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 Manual. 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) are issued, where:

- i) mistakes have been made with a direct influence on project results;
- ii) validation protocol requirements have not been met; or
- iii) 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" may be 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 2006-1321, rev. 01) 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 of July 25<sup>th</sup>, 2006 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 July 29<sup>th</sup>, 2006 to August 27<sup>th</sup>, 2006. No comments were received.

Please refer to the "Comments by Parties, Stakeholders and NGOs" Section of DNV's Validation Report (DNV Report 2006-1321, rev. 01) 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 meet. 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 "BRT Bogotá, Colombia: TransMilenio Phase II to IV" project in Colombia. The validation was performed on the basis of UNFCCC criteria for the Clean Development Mechanism 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 fulfillment of stated criteria.*

*The project participants are TransMilenio S.A. of Colombia, Corporación Andina de Fomento (CAF) and the Ministry of Housing, Spatial Planning and the Environment (VROM) of the Netherlands. The host Party Colombia and the Annex I Party the Netherlands meet the relevant requirements to participate in the CDM. Both the DNAs of Colombia and the Netherlands provided approval of voluntary participation in the project.*

*The project is expected to contribute to sustainable development through improved environment through less GHG and air pollutant emissions, improved social wellbeing as a result of less time lost in congestion, creation of temporary construction jobs for unskilled workers of the surrounding communities. The DNA of Colombia provided confirmation that the projects assists in achieving sustainable development.*

*The project applies the approved baseline methodology AM0031 "Baseline Methodology for Bus Rapid Transit Projects".*

*The additionality of the project activity has been established using the "Tool for the demonstration and assessment of additionality". It is sufficiently demonstrated that after a cost increase for Phase II, the project was not financially attractive. Furthermore, it is concluded that similar activities without ODA or CDM finance are not common practice.*


The monitoring parameters proposed in the PDD are fully consistent with the approved monitoring methodology AM0031. Given that the project is implemented as described, the estimate for the anticipated annual average emission reductions of 246 563 tonnes of CO<sub>2</sub> e, as stated in the project design document is reasonable and likely to be achieved.

Environmental impacts have been sufficiently addressed and necessary controls are in place. The Department of Environmental Affairs (DAMA) has granted all environmental permits and requires periodic environmental reports. Permits for phase IV will be taken on the completion of the phase III of the project and the start of phase IV.

In summary, it is DNV's opinion that the project as described in the project design document of August 27<sup>th</sup>, 2006 meets all relevant UNFCCC requirements for the CDM and correctly applies the baseline and monitoring methodology AM0031 version 01. Hence, DNV requests the registration of the "BRT Bogotá, Colombia: TransMilenio Phase II to IV" as a CDM project activity.

For further details, please refer to DNV's Validation Report (DNV Report 2006-1321, 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.	Susanne Haefeli-Hestvik	
Name of authorized officer signing for the DOE		
Date and signature for the DOE	25/09/2006	

**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