

**VALIDATION OPINION FOR REVISION OF THE REGISTERED MONITORING PLAN**

CABLE CARS METRO MEDELLIN, COLOMBIA  
(UNFCCC REGISTRATION REF. No. 3224)

EMPRESA DE TRANSPORTE MASIVO DEL VALLE DE ABURRA LTDA. –ETMVA-  
(COLOMBIA)  
CENTRO NACIONAL DE PRODUCCION MÁS LIMPIA Y TECNOLOGIAS  
AMBIENTALES- CNPMLTA (COLOMBIA)  
GRÜTTER CONSULTING AG (SWITZERLAND)  
FOUNDATION MYCLIMATE – THE CLIMATE PROTECTION PARTNERSHIP  
(SWITZERLAND)

VALIDATION OPINION No. CDM-VALOP-12-006-1.0

FEBRUARY, 2013

# **VALIDATION OPINION FOR APPROVAL OF CHANGES IN A REGISTERED PDD**



<i>Project title:</i>	<i>CABLE CARS METRO MEDELLIN, COLOMBIA</i>	<i>Project No.:</i>	<i>UNFCCC REGISTRATION REF. No. 3224</i>	
<i>Audit team:</i>	<i>Luz Angela Carrillo G. ICONTEC Lead Auditor Jhonny León ICONTEC Technical Expert</i>	<i>Organizational unit:</i>	<i>Instituto Colombiano de Normas Técnicas y Certificación – ICONTEC Calle 53 No.58-33 Bogotá - Colombia</i>	
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<i>Version No.:</i>	<i>1.0</i>	<i>Last version date:</i>	<i>15/02/2013</i>	
<i>Sectoral scope</i>	<i>7 : Transport</i>	<i>Crediting period number/Duration</i>	<i>First</i>	<i>26/04/2010 to 25/04/2017 (Renewable).</i>
<i>Client:</i>	<i>GRÜTTER CONSULTING AG</i>	<i>Client ref.:</i>	<i>CDM-VALOP-12-006</i>	

## **1. OBJECTIVE**

The modalities and procedures for the CDM allow project participants to revise monitoring plans in order improve its accuracy and/or completeness of information, subject to the revision being validated by a Designated Operational Entity.

During verification ICONTEC found that the monitoring plan is not in accordance with the monitoring methodology applied to the registered project activity and does not reflect the actual monitoring activity based on the registered PDD.

For this reason, a permanent change to the monitoring plan as described in the registered PDD and the monitoring methodology, in accordance with paragraph 262 of the VVS /9/ is requested.

Therefore, ICONTEC has been contracted by GRÜTTER CONSULTING AG to perform a validation opinion of the revised monitoring plan of the registered project No. 3224 “CABLE CARS METRO MEDELLIN, COLOMBIA”, following the procedures established in section 6.2 of the CDM Project Cycle Procedure /7/ and section 12.8 of the CDM Project Standard /8/.

The purpose of the validation opinion is to have an independent third-party assessment of the revision of the monitoring plan in order to request for approval by the CDM EB.

## **2. SCOPE**

The validation opinion involves the independent and objective revision to determine that the project design meets the following criteria:

- UNFCCC criteria: The Kyoto Protocol, article 12, and the modalities and procedures for a clean development mechanism, and
- Relevant rulings by the CDM Executive Board:

CDM Project Cycle Procedure, paragraph 130 to 156, /7/

CDM Project Standard, paragraph. 206 to 225, /8/

CDM Validation and Verification Standard, paragraph. 247 to 282, /9/

ICONTEC, based on its ethics code and internal procedures for carrying out validation, verification and certification audits of CDM project activities (which, in turn, are based on the Validation and Verification Manual) focused on the identification of significant risks for CER generation, and verification of the mitigation.

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

## **3. GHG PROJECT DESCRIPTION**

The project activity examined under this verification process consists of the construction and operation of six cable cars in the city of Medellin, Metropolitan Area, Antioquia Department, Colombia. The cable car is operated by electricity using mono-cabins with a seating capacity of 8 persons and a maximum capacity of 10 persons. They are used as mass transit options in hilly areas of the city.

The CABLE CARS METRO MEDELLIN reduces GHG emissions by substituting conventional transport modes like small and medium buses, cars and taxis with efficient electricity powered transport means.

The Project applied the "Cable Cars for Mass Rapid Transit System (MRTS) Methodology" AMS-III.U Version 1.0.

## **4. DESCRIPTION OF THE CHANGES OF THE MONITORING PLAN OF THE PROJECT ACTIVITY AS COMPARED TO THE DESCRIPTION IN THE REGISTERED PDD**

Description of the changes is presented by comparing the registered PDD /1/, with the "Revised PDD" /2/, annexed to the Submission of Request for Approval of Changes.

The change is in compliance with the methodology. The only change is that instead of electronic smart cards or turnpikes the project is counting the passengers not with an electronic or mechanical device when riding uphill i.e. changing from the metro to the cable-car. When going downhill the passengers pass a turnpike in accordance with the

methodology. However when going uphill and coming from the metro to use thereafter the cable car passengers do not pass turnpikes.

**5. ASSESSMENT ON WHEN THE CHANGES OCCURRED, REASONS FOR THESE CHANGES TAKING PLACE, WHETHER THE CHANGES WOULD HAVE BEEN KNOWN PRIOR TO REGISTRATION OF THE PROJECT ACTIVITY, AND HOW THE CHANGES WOULD IMPACT THE OVERALL OPERATION/ABILITY OF THE PROJECT ACTIVITY TO DELIVER EMISSION REDUCTIONS AS STATED IN THE PDD**

The reasons for the changes are:

- ❖ The metro ticket includes also the cable car ride i.e. passengers have already paid for the ride and have already passed a turnpike when entering the metro. The metro thus has no financial incentive to install such turnpikes for passengers coming from the metro and using the cable car for the uphill ride.
- ❖ As passengers come in waves (always when a metro train arrives) the passenger fluency would be hindered due to limited available space if turnpikes were installed which would make the transfer of passengers more complex thereby reducing the convenience for passengers.

The approach used is to count all passengers using the cable car uphill during a standard week and relating the uphill to the downhill passengers for this standard week. The measured expansion factor is around 2 (which is idem to same amount of downhill and uphill passengers). This factor is reasonable, as passengers who use the cable car downhill to get to their destination must somehow return again to their origin i.e. an expansion factor of around 2 as monitored is per se logic.

The precise expansion factor was for both lines slightly more than 2 (2.02 and 2.12) which again is reasonable as more people will use the cable car uphill whilst for downhill walking is also an option (e.g. if a person lives between the metro station and the intermediate cable car station, this person might walk downhill to the metro but on the return trip take the cable car uphill to the intermediate station and then walk again down to his trip origin.

Thus the values recorded are plausible and logic. Also they are not based on a sample of passengers but based on a full counting during a week.

To make the approach more conservative the following rule has been established:

If the monitored expansion factor  $> 2.0$  then take 2.0 as expansion factor for calculations (based on the logic of equal amount of return trips).

If the monitored expansion factor is  $< 2.0$  then take the monitored expansion factor for calculations.

With this approach the passenger data is always conservative and the change in the monitoring approach will not affect the conservativeness of monitoring or reduce the level of accuracy.

The changes do not impact on the overall operation /ability of the project activity to deliver emission reductions as stated in the PDD.

The changes were not known at the moment of registration as passenger counting was not yet clear at that time.

**6. ASSESSMENT REGARDING WHETHER OR NOT THE CHANGES WOULD IMPACT THE FOLLOWING ASPECTS: Additionality, Scale and applicability and application of the baseline methodology**

ICONTEC, according to the CDM Validation and Verification Standard /9/ , consider that the change submitted do not impact additionality, scale and applicability and application of the baseline methodology of the project activity.

Additionally of the project was based on “first of its kind”. This is independent of passenger numbers.

The scale of the project remains small scale and is independent of the monitoring method of passengers as the monitoring method chosen is conservative and will not result in more passengers than the approach suggested originally in the PDD.

Applicability conditions of the methodology are not related to the monitoring method for passenger counting and is therefore not impacted.

The application of the baseline methodology is also not impacted by the change as the proposed change refers only to the method of passenger counting,

**7. DESK REVIEW AND INVESTIGATION OF SECONDARY SOURCES OF INFORMATION**

In order to carry out the Validation Opinion Process, the following documents were reviewed during the desk review and the on site visit:

- /1/ Registered Version of PDD, Version 1.3, dated 22/11/2009
- /2/ Revised PDD: PDD 1.4 corr mode, dated 27/11/2012.
- /3/ Validation Report of the CDM – TUV SÜD, Report No. 1241689, dated 02/12/2009
- /4/ “Cable Cars for Mass Rapid Transit System (MRTS)” AMS-III.U Version 1.0
- /5/ Monitoring Report: MR 1.4, dated 22/11/2012.
- /6/ CER sheet 1.3, dated 13/12/2012
- /7/ CDM Project Cycle Procedure (Ver. 3.1)
- /8/ CDM Project Standard (Ver. 2.1)
- /9/ CDM Validation and Verification Standard, (Ver. 03.0)

**8. CONCLUSION OF VALIDATION OPINION:**

ICONTEC performed the validation opinion on basis of Procedures for notifying and requesting approval of changes from the project activity as described in the registered project design document, Guidelines on assessment of different types of changes from the Project activity as described in the registered PDD, and UNFCCC criteria for the Clean Development Mechanism, as well as, criteria given to provide for consistent project operations and changes on the PDD.

The review of the Project Design Documentation and the subsequent follow up interviews has provided ICONTEC with sufficient evidence to determine the fulfillment of the stated criteria.

In summary, it is ICONTEC's opinion that the Project:

CDM project: CABLE CARS METRO MEDELLIN, COLOMBIA

Reg. number: 3224

Register Date: 26/04/2010

PDD registered, dated and Version: V1.3, 28/11/2009

PDD revised, dated and Version: PDD 1.4, 27/11/2012. File: PDD 1.4 corr mode.pdf.

ICONTEC can confirm that the changes on the monitoring plan with respect to the monitoring plan of the registered PDD /1/, provide a reliable accuracy level in the monitoring plan implemented and its accomplishment of the applicable consolidated methodology "Cable Cars for Mass Rapid Transit System (MRTS)" AMS-III.U Version 1.0 /4/.

This validation opinion follows guidance and complies with the requirements of the VVS /9/, paragraph 267 and 268.

The revised monitoring plan will apply for the first monitoring period.

Furthermore, ICONTEC ensures that:

- ❖ The changes to the monitoring plan proposed by the project participants are in compliance with the applied methodology and do not reduce the level of accuracy of the monitoring compared with the requirements contained in the registered monitoring plan, and
- ❖ The revised PDD reflects the application of the approved guidance from the Board regarding the permanent changes from the provisions of the registered monitoring plan.

Bogotá D.C., February, 2013



Diego Caballero  
Director of Conformity Assessment Services  
ICONTEC