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September 8, 2011

CDM Methodology Panel
UNFCCC Secretariat
Martin-Luther-King-Strasse 8
D 53153 Bonn
Germany

Honourable Members of the CDM Methodology Panel,
Dear Mr Gwage,

Bombardier Transportation welcomes this opportunity to provide input on the draft revised methodology ACM0016 "Baseline and Monitoring Methodology for Mass Rapid Transit Projects". As the CDM Methodology Panel is aware, Bombardier Transportation is a world-leading manufacturer of railway and metro vehicles and operator of unmanned transport systems.

While Bombardier Transportation is appreciative of the Methodology Panel's new approach for additionality demonstration, we believe that certain aspects require further consideration, otherwise the draft revision may be counterproductive to the wider application of ACM0016.

We find that the proposed changes to the monitoring procedures, in particular regarding the frequency of the surveys required, are improved to reduce costs to project proponents and facilitate greater uptake of the methodology.

Proposed procedure for the demonstration of additionality

For MRTS projects that are implemented in non-Least Developed Countries (LDCs), the draft revised methodology proposes a three-step approach to the determination of additionality. As the common practice assessment is a standard test under the CDM, Bombardier Transport's inputs focus primarily on the appropriateness of the financial assessment.

Bombardier Transportation believes that assessing the importance of CER revenue against total operations and maintenance costs is a fair parameter to use although other parameters could also be considered.

Bombardier Transportation believes that the proposed options for the determination of CER price are suitable as they are verifiable and conservative.

Bombardier Transportation believes that the indicative list of operational and maintenance cost categories that project proponents should include is appropriate as it excludes initial capital and financing costs.

Bombardier Transportation, however, strongly disagrees with the proposal that revenues from CERs must equal or exceed 30% and 60% of, respectively, rail-based and bus-based system operation and maintenance costs. In our experience the proportion of CER revenues will never reach close to this threshold, unless a significant and sustained increase in CER prices is seen. Our experience is backed up by figures from the rail and bus transport industry. We believe that a figure in the range of 1-3% is more appropriate and better reflects the reality of operating and maintaining MRTS. Our position is supported by the information that follows.

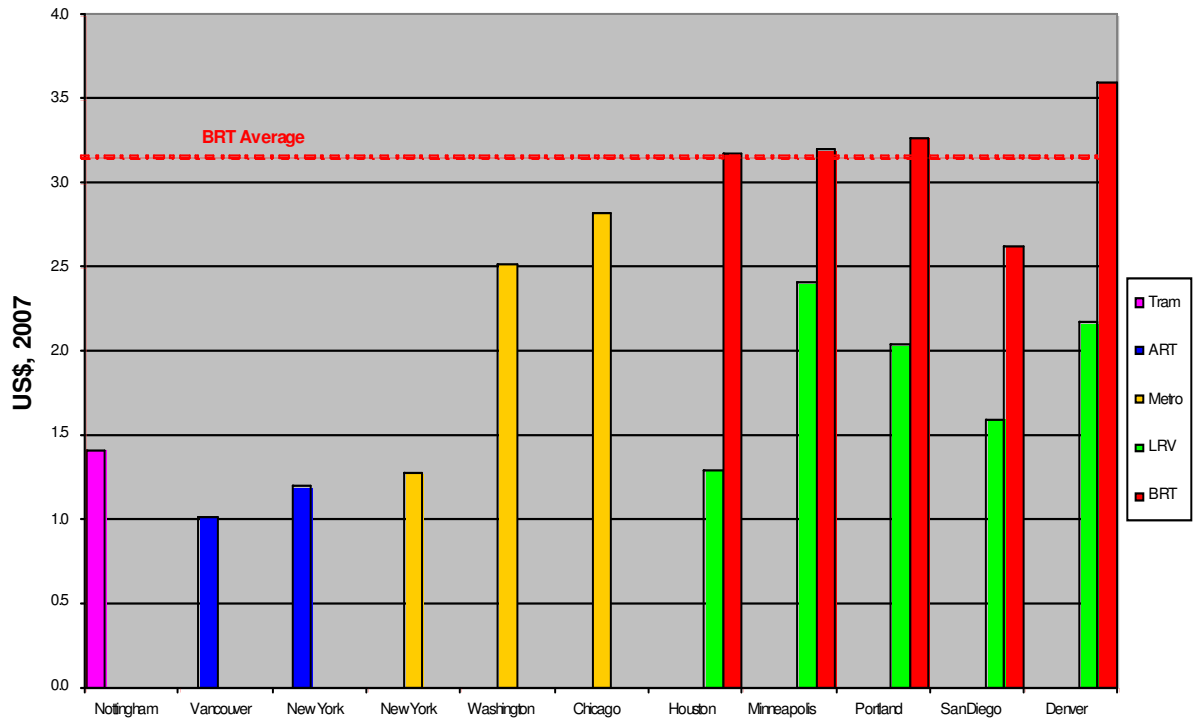
The operation and maintenance costs of different MRTS around the world vary depending on a number of factors. In order to provide relevant parameters for comparison we suggest that CER revenue per passenger per year or per passenger per year per kilometer be compared to the operation and maintenance cost per passenger per year or per passenger per year per kilometer.

Based on a review of CDM PDDs that seek to apply CDM methodology ACM0016¹, average emission reductions from rail-based MRTS are 0.0010934 tCO₂e per passenger per year and 0.0000825 tCO₂e per passenger per kilometer per year. This compares with average rail-based MRTS operation and maintenance costs of USD (2007) 1.00 to 2.90 per passenger per year for rail-based systems in selected cities in North America, or to a range of USD 0.27 to USD 1.23 per passenger mile traveled in North America from a separate survey.²

¹ Metro Dehli India, PDD version 1.3 (20 January 2011)
Mumbai Metro One, India, PDD version 1 (15 June 2010)
Metro Line 12, Mexico City, PDD version 1.0 (15 April 2011)
Efficient mode of public transportation by DAMEPL, PDD version 0.1 (30 June 2011)
Mode shift of passengers from private vehicles to MRTS for Gurgaon Metro, PDD version 1.0 (25 June 2011)

² Operating Costs Fact Sheet, Hamilton Public Works, February 2009 (www.hamilton.ca/rapid-transit)

Total operating and maintenance cost per passenger carried



City, State	Population	Per PMT		%Diff *	Per UPT		%Diff *
		BRT	LRT		BRT	LRT	
Denver, CO	588,349	\$0.67	\$0.34	-49%	\$3.60	\$2.17	-40%
Houston, TX	2,208,180	\$0.55	\$0.53	-4%	\$3.18	\$1.29	-59%
Minneapolis, MN	377,392	\$0.72	\$0.42	-42%	\$3.20	\$2.41	-25%
Pittsburgh, PA	311,218	\$0.90	\$1.23	-37%	\$4.29	\$6.00	40%
Portland, OR	550,396	\$0.93	\$0.39	-58%	\$3.27	\$2.04	-38%
San Diego, CA	1,266,731	\$0.71	\$0.27	-62%	\$2.62	\$1.59	-39%

If we take the 2009 average secondary CER price of USD 16.6 (EUR 11.9)³ and average passenger emission reductions of 0.0010934 tCO₂e, the per passenger contributions to CER revenues would be USD 0.0181504 per year.

If we take the same CER price and average passenger emission reductions of 0.0000825 tCO₂ per kilometer, the per passenger contributions to CER revenues would be USD 0.0013695 per unit of distance traveled.

This means that the average CER revenue contribution per passenger per year would be at best less than 2% of annual operation and maintenance costs per

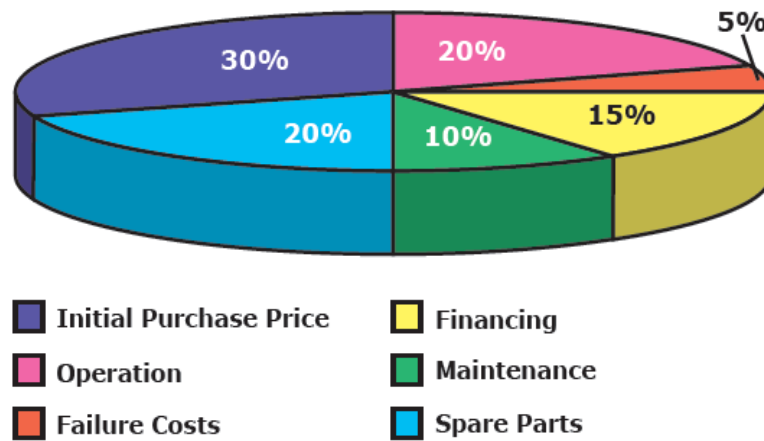
³ State and Trends of the Carbon Market, World Bank, 2010, p. 14

passenger for rail-based systems. The average CER revenue contribution per passenger per unit of distance traveled is even lower. For bus-based MRTS, the average figure may be less, and not more, than the figure for rail-based systems.

Hence Bombardier Transportation finds the 30% and 60% benchmark to be inappropriate and it is not clear to us how the proposed thresholds in the draft revised methodology were established.

Furthermore, according to the International Association of Public Transport (UITP), the total cost for a metro system over a 30-year time span has the following breakdown, which indicates the substantial O&M component, to which CER revenue could be expected to contribute but not as significantly as in the draft revision of ACM0016.

**Figure 2 – TCO Analysis
Transportation Area**

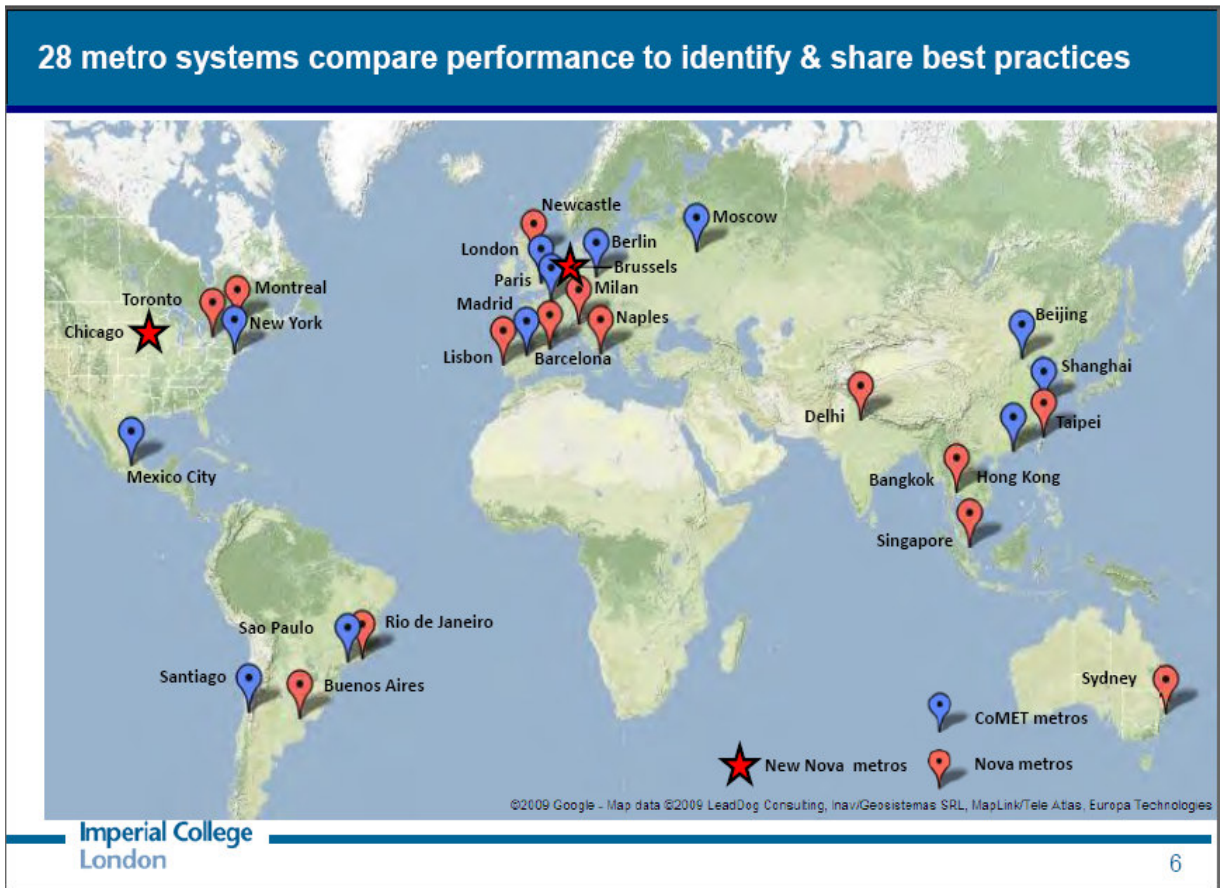


Bombardier Transportation understands that ACM0016 is intended to facilitate greenhouse gas emission reductions from transport, and we provide here some information that may be relevant in showing how a 1-3% CER revenue contribution to O&M costs can make the difference between a viable MRTS transport project and a project that will not proceed to implementation.

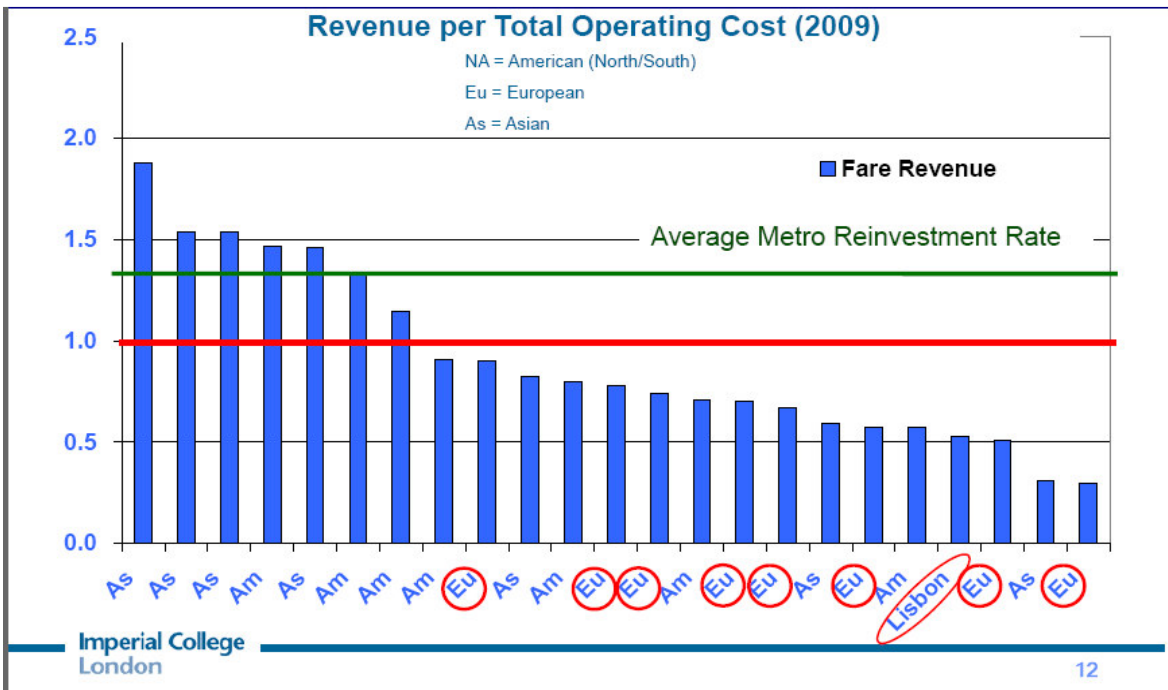
1) Many MRTS do not cover O&M costs

Very few mass transit system fare revenues cover O&M costs as defined in the draft revised methodology. In fact, only very dense urban areas with a strong policy to incentivize public transport and discourage private vehicles (such as Singapore, Hong Kong and London) generate sufficient fare revenues to break even or realize a small profit.

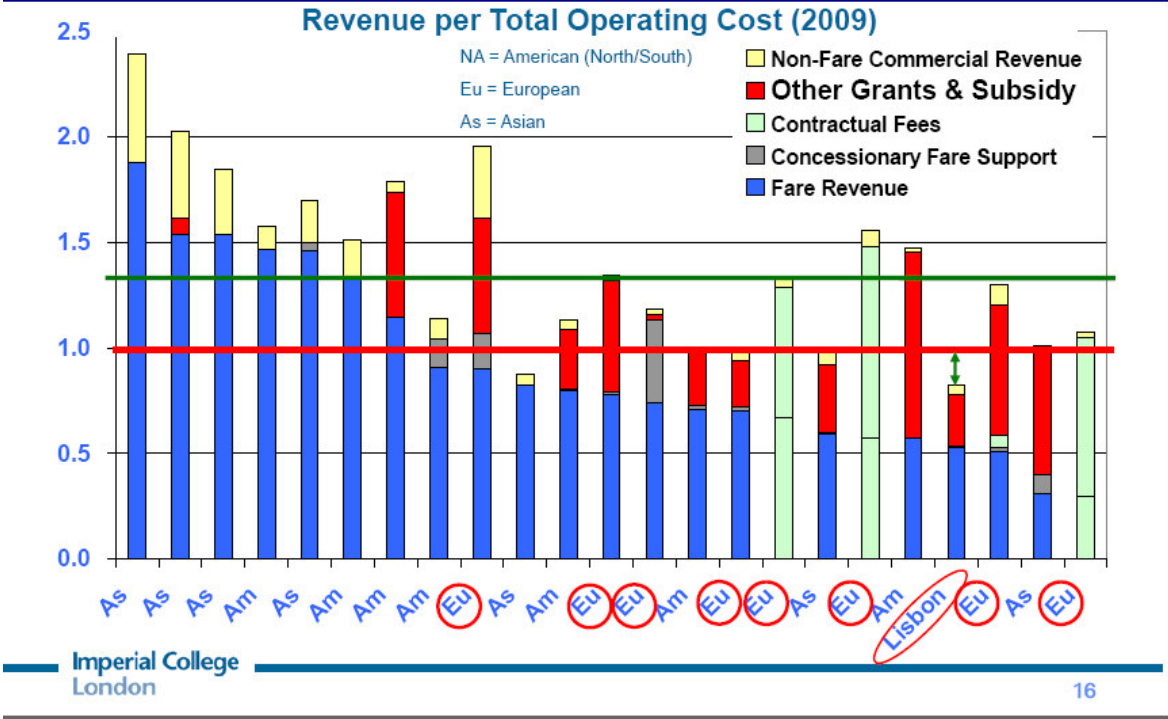
The following charts from a worldwide pool of 28 metro operators⁴ show that only one metro operator generates sufficient fare revenue to reinvest in its operations, while five others just reach the reinvestment threshold. Most of the 28 metro operators rely on non-fare revenues (such as advertising). The majority can only continue to operate with support in the form of subsidies. The fact that subsidies are often required means that many projects do not get off the ground. The situation is exacerbated in poorer countries.



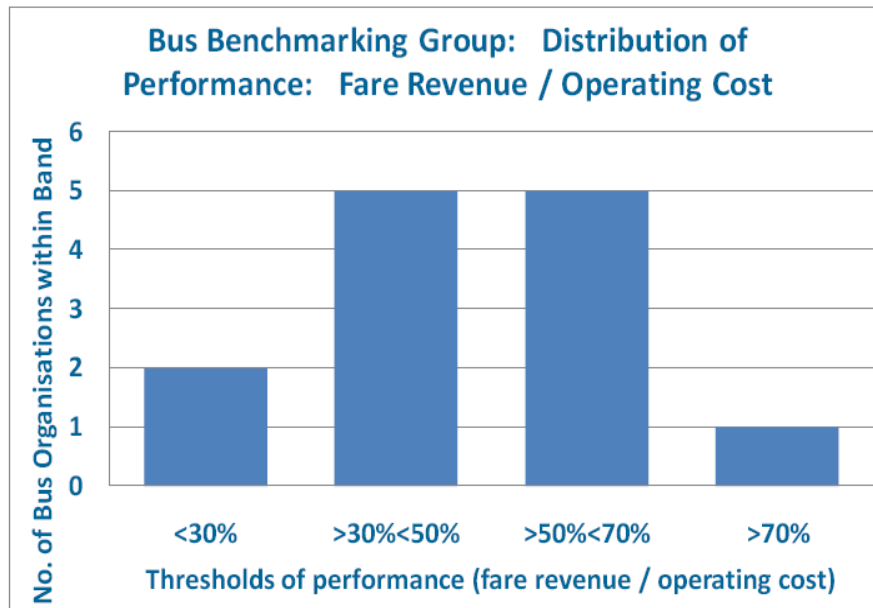
⁴ Richard Anderson, "Funding Sustainable Mass Transit" presentation, February 2011, Railway & Transport Strategy Centre at Imperial College London



Grants and subsidies (or debt) to meet the funding gap in many European and North American metros



Urban bus operators generally require higher levels of public support



Imperial College
London

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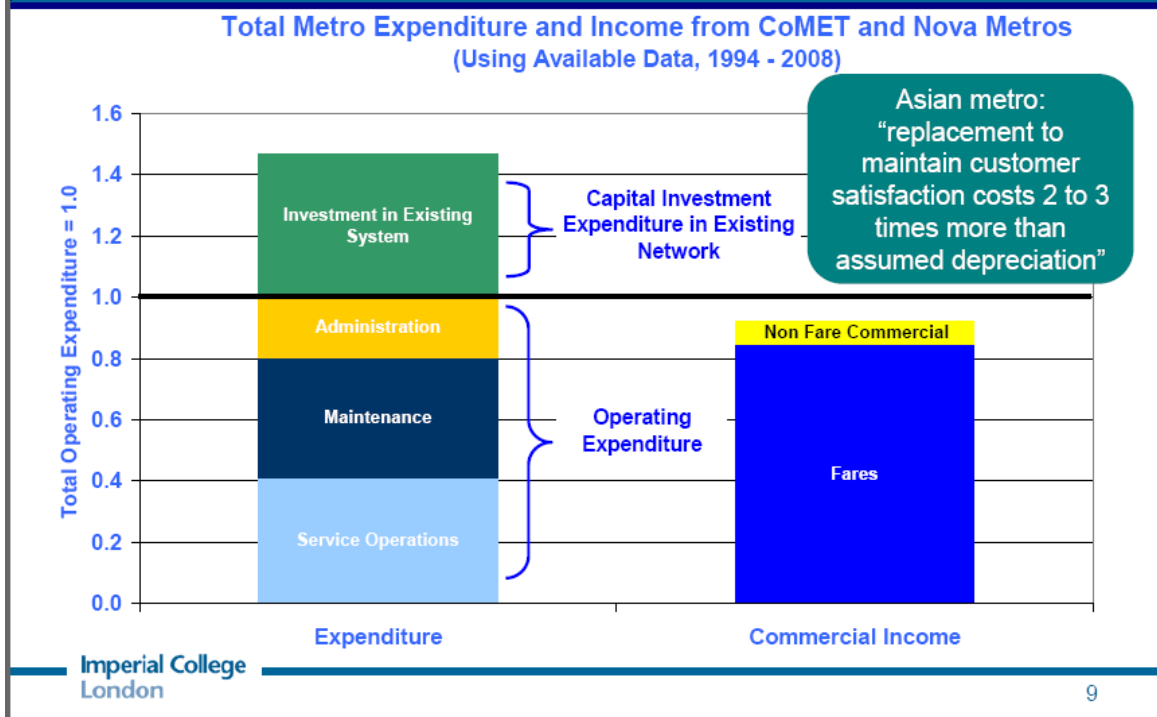
2) How 1-3% CER revenues can make a difference

In many CDM methodologies, the financial analysis targets business models where profit margins may be high or at least sufficient to attract investment. However, Bombardier Transportation takes the view that the implementation of new public transport projects require a different understanding as in many cases the investment may be unprofitable.

As the charts show, in many cases revenue does not cover O&M costs. This situation is made worse by the fact that fares are falling in real terms in 60% of the metros benchmarked, as unit labour and energy costs are rising faster than inflation. In many countries fare increases cannot be considered as this directly impacts on the poorest fringe of the population, while subsidies are politically sensitive as they affect the burden of taxpayers. The need to provide subsidies is one of the main criteria for governments to decide not to invest in public transport projects.

Given the above, it is clear to understand why many MRTS feasibility studies do not clearly indicate economic viability. However, as the following chart shows, if revenues increased by a few percent due to CERs, many more projects could be profitable and the level of subsidies could be reduced or removed, although this also depends on project specific circumstance and the type of MRTS deployed (heavy rail, light rail, monorail, BRT, etc). A CER revenue contribution of even 1-3% could be sufficient in many cases to make a difference in encouraging investment in public transport systems, especially when government subsidies could be reduced.

The evidence from 27 metros, over 15 years: in aggregate an extra 47% has been spent on reinvestment in the existing system.



In addition to its direct contribution to low-carbon development, the CDM Methodology Panel is aware of the indirect contribution that MRTS can provide in reducing greenhouse gas emission reductions such as reducing urban sprawl, facilitating denser growth and removing or reducing dependence on fossil fuel based systems.

Based on the above information, Bombardier Transportation requests that the CDM Methodology Panel reassess in particular the benchmark thresholds provided in draft revision of ACM0016.

Bombardier Transportation would be happy to make itself available to discuss the benchmark level further with members of the Methodology Panel if this would be useful.

We thank you for the opportunity to provide input to the development of ACM0016.

Yours truly,

Serge Van Themsche
Vice President Europe, Middle East, Africa & Brazil
Division SYSTEMS
Bombardier Transportation