



**CDM: Response form for Request for revision of approved methodologies
(version 01.1)**

<i>Date of Meth Panel meeting:</i>	03 - 7 November 2008
<i>Title and number of Request for revision</i>	Expansion of applicability conditions to AM0031 and subsequent change/addition of corresponding formulas AM_REV_0114

Summary of the query:

Please use the space below to summarize the request for revision on the related approved methodologies.

AM0031 “Baseline Methodology for Bus Rapid Transit Projects” is applicable to project activities that reduce emissions through the construction and operation of a Bus Rapid Transit (BRT) system for urban road based transport. The methodology is also applicable for extensions or expansions of existing BRT systems (adding new routes and lines).

The request for revision seeks the following amendments to the methodology:

- (1) Expansion of the applicability of the methodology to allow the use of electricity as fuel, e.g. for trolleybuses either in the baseline or in the project case;
- (2) Expansion of the applicability of the methodology to allow the existence of a complementary rail-based transport system which was operating before the implementation of the project activity and continues to operate after the implementation of the project activity, e.g. trams which existed in the baseline and continue to operate in coordination with the BRT. The request is not intended to expand the applicability of the methodology to the construction of new rail-based transit systems;
- (3) Expansion of the applicability of the methodology to cases where use of biofuels in the public transport systems is not limited. Currently, the methodology imposes a limit of less than 3% blend for the use of biofuels. The request is not intended to expand the applicability of the methodology to project activities that involve additional use of biofuels and claim emissions reductions for that. The objective is to remove the current restriction to broaden the applicability of the methodology. A conservative approach is suggested to calculate emissions;
- (4) Adaptation of the default technology improvement factor for buses according to age for the calculation of baseline emissions;
- (5) Correction of equation 22 used for calculation of leakage. The request claims that, during the formatting of the methodology by UNFCCC, the parameter TR_C was forgotten erroneously in the equation.

The underlying project activity is the extension of an existing bus rapid transport system in Quito, Ecuador. The existing system exists since 1996 and is not part of the project activity. The project activity will extend the existing BRT system by creating new infrastructure consisting of 2 trunk routes totalling 29 kilometres of dedicated bus lanes, an extension of the trolleybus-lane by 2 km and 3 semi-trunk routes with a total distance of 32 km. The routes have standardized bus stations that allow pre-board ticketing using rechargeable electronic cards to streamline the boarding process. Part of the new buses are electrically driven.

Recommendation by the Meth Panel:

(a) Please use the space below to provide amendments /changes (in your expert view, if necessary).

Not applicable.

(b) Please use the space below for providing guidance, as per Para 93 of EB25 Report, on what type of projects need to revise the PDD as a consequence of the suggested revision, if the recommendation is to revise the methodology.

Not applicable.

Answer to authors of the request for revision by the Meth Panel :

Please use the space below to provide an answer to the authors of the above query

The recommendation is not to approve the request for revision, for the following reasons:

(1) *Expansion of the applicability of the methodology to allow the use of electricity as fuel*

In Table 1 of the revision request, the project proponents highlight that the upstream emissions from electricity generation can be significantly larger (up to 28%) than upstream emissions from fossil fuels used for transportation. Assuming an upstream emission factor of 14% is only conservative if electricity consumption in the baseline is the larger than electricity consumption under the project activity. However, the proposed revision makes the methodology also applicable to cases where no electricity is used in the baseline (e.g. no trams or trolley buses were operating before the implementation of the project) and where the buses operating under the project are electric buses. In this case the project activity would reduce the use of gasoline, diesel or CNG by the use of electricity. The proposed upstream emission factor of 14% for all upstream emissions is not conservative in this case, but results in an overestimation of emission reductions.

(2) *Expansion of the applicability of the methodology to allow the existence of a complementary rail-based transport system*

The approach is not appropriate for the following reasons:

- (a) The project proponents propose that the emissions from an interconnected existing urban rail MRTS are included in both project and baseline emissions. Firstly, the methodology does not transparently specify how baseline emissions are calculated (based on historical data or on the year y as indicated in the description of the formula). More importantly, the electricity consumption of an existing urban rail MRTS may change for reasons that are outside the project activity. For example, if the existing system introduces more efficient vehicles in the future, the project activity would claim emission reductions for reasons that are outside the scope of the project activity;
- (b) The revised applicability conditions only require that an existing urban rail MRTS does not discontinue operation. However, its load capacity may decrease as a result of the project activity. In the new formula 3b an emission factor as grCO₂ per passenger is calculated to determine baseline emissions. It could be the case that the load of existing rail based systems decreases but the same number of trains continue operating. In such case, as per the proposed revision, baseline emissions are calculated from reducing electricity consumption, which is not the case, as the amount of electricity consumed would remain the same. While the methodology accounts for effects of changes in the load factor for taxis and the remaining conventional bus fleet, the revision does not address at all changes in the load factor of an existing rail-based system. This is clearly inappropriate;
- (c) The inclusion of electricity based systems in the methodology would need adaptations to other parts of the methodology. Several sections do not mention what should be done in such cases, which makes the methodology more difficult to understand and implement.

Besides, the Meth Panel notes that this revision is not related to the underlying project activity submitted with the request and, therefore, it is not clear why it is necessary. The underlying project activity does not involve rail based systems. For this reason, it is also not possible to evaluate the application of this revision in a project activity in a CDM-PDD.

(3) Expansion of the applicability of the methodology to cases in which the use biofuels in the public transport systems is not limited

The proposed revision is not appropriate for two reasons:

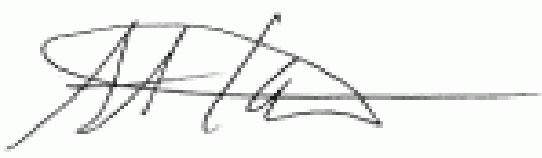
- (a) The EB guidance on differentiation between regulations adopted before and after 2001 should not apply to the calculation of emission factors but to the identification of baseline scenarios. The purpose of the guidance is clearly to avoid perverse incentives for policy makers. It is difficult to argue that this can be the case in the context of the methodology. It seems very unlikely that a country would not introduce a regulation on biofuels because this could result in lower emission factors for projects implementing bus rapid transit systems. For similar reasons (and methodological reasons), also the emission factor for electricity generation does not factor out any policies adopted after 2001 that may have influenced the emissions intensity of electricity generation (e.g. on renewable energy policy);
- (b) The GHG intensity of biofuels can be lower or higher than that of fossil fuels, depending mainly whether the cultivation of additional biofuels involves land-use changes (e.g. deforestation) or not. The methodology simply assumes that biofuels have the same GHG intensity as fossil fuels. This simplification may in some cases be very conservative, but in other cases overestimate emission reductions.

The Meth Panel further notes that, similar to issue (2) above, this revision is not related to the underlying project activity submitted with the request and, therefore, it is not clear why it is necessary. Biofuels are not used in the public transport systems involved in the underlying project activity.

(4) Adaptation of the default technology improvement factor for buses according to age for the calculation of baseline emissions

The new differentiated technology improvement factors are derived from European data (Switzerland, UK) where regulations on air pollutants have slowed down efficiency improvements of vehicles. From this, a two different improvement factors are derived: for buses produced before 1996 and buses produced after 1996. The data to support the approach is derived from the experience in Europe. In many developing countries, there are not yet similar air pollution control measures in place. Therefore, the experience in Europe cannot be used to derive technology improvement factors for developing countries.

Equation 22 will be corrected by issuing an editorial revision to AM0031.



Signature of Meth Panel Chair

Date: 07/11/2008

(Akihiro Kuroki)



Signature of Meth Panel Vice-Chair

Date: 07/11/2008

(Philip Gwage)

Information to be completed by the secretariat

F-CDM-AM	AM_REV_0114
Name of the authors of the query:	SGS
Date when the form was received at UNFCCC secretariat	7 November 2008
Date of transmission to the EB	7 November 2008
Date of posting in the UNFCCC CDM web site	7 November 2008