

 <p style="text-align: center;">CDM: Proposed New Methodology Meth Panel recommendation to the Executive Board (version 03) <i>(To be used by the Meth Panel to make a recommendation to the Board regarding a proposed new methodology)</i></p>	
Date of Meth Panel meeting:	26 - 28 January 2005
Related F-CDM-NM document ID number (electronically available to EB members)	F-CDM-NM0083: “AutoLPG in India - A Road Transport Sector Fuel-Switching Project “
Related F-CDM-NMex document ID number(s) (electronically available to EB members)	F-CDM-NMex0083: Mawandia / Gruetter
Related F-CDM-NMpu document ID number(s) (electronically available to EB members)	F-CDM-NMpu0083: Graichen / Mohan
<p><i>Note to those completing this form, as applicable: Please provide recommendations on the proposed new baseline and monitoring methodologies based on an assessment of annexes 3 and 4 and of their application in sections A to E of the draft CDM PDD, desk reviews and public input. Please ensure that the form is entirely filled and that arguments and expert judgements are substantiated.</i></p>	
A. Final recommendations by the Meth Panel	
I. Recommendation on the proposed new baseline methodology: (checkmark the choice made)	
Title of proposed new baseline methodology:>> Baseline methodology for road transport sector in India	
<p>a. To approve this proposed methodology with minor changes</p> <p><input type="checkbox"/></p> <p>i. Conditions under which this proposed methodology is applicable to other potential CDM project activities (e.g. project type, region, data availability):</p> <p>>></p> <p>ii. Minor changes:</p> <p>>></p>	
<p>b. To reconsider this proposed methodology, subject to required changes</p> <p><input type="checkbox"/></p> <p>i. Conditions under which the proposed methodology is applicable to other potential projects (e.g. project type, region, data availability):</p> <p>>></p> <p>ii. Required changes:</p> <p>>></p> <p><i>(Project participants shall make required changes to the proposed new methodology and send it back to the Meth Panel. The proposed new methodology will be reconsidered by the Meth Panel if changes required are made by the project participants. The Executive Board will only consider this proposed new methodology after the revised proposed methodology has been reconsidered by the Meth Panel.)</i></p>	

c. Not to approve the proposed methodology



i. Reasons for non-approval:

>>>The project developers have made a good attempt at using the additionality tool.

However, The baseline methodology in its current form is very unclear, not logical and not a stand-alone document (e.g. the project activity cannot be inferred without consulting the draft CDM-PDD).

The document does not define a baseline methodology (a number of tables are presented instead). Step by step instructions are required to determine the baseline and these are lacking in the document.

The criteria for defining baseline are not clear.

Several assumptions have been made without any justification, making the methodology very non-transparent. Severe methodological failures include the usage of fixed emission factors based on averages, the usage of fixed and non-transparent growth and scrap rates and arbitrary market diffusion rates.

The criteria or procedure for defining the baseline scenario are not clear.

The main computation is based on a USAID funded study on emissions from vehicular transport in India for 7 cities and for the year 1997. 1997 data is not applicable to the proposed project, for which a methodology was submitted in 2004. Additionally, the study details are not available (which makes the methodology not transparent) and the methodology appears questionable, for example, emissions are measured at 20 km/hr. All emission values are derived from this study. The study itself is based on theoretical values based on the Indian Drive Cycle and not on actual measurements. The average distance travelled used in the report is based on not further explained "personnel communication". The quality of the study and the data used is thus considered as questionable.

Further, emissions reductions are assumed for Euro III OEM (15%), whereas, Euro II or lower vehicles will be retrofitted (the efficiency of retro-fitted vehicles is much lower).

As pointed out by one of the desk reviewers: That LPG is a viable and cost effective solution, is borne out by the fact that vehicle owners have been known to voluntarily shifting to LPG even in the absence of regulatory guidelines. The fact that state owned oil companies are setting up LPG refuelling stations, without CDM registration would seem to suggest that the business model is a viable and it would not be out of place to suggest that LPG could become the baseline scenario in a significant portion of the market being targeted by the project developer.

The first cost barrier referred to by the project developer should be compared with the fuel cost savings in switching to LPG.

The potential leakage has not been adequately addressed. For example, cheaper fuel could increase the usage not just for purposeless driving but as a result of a switch from public transport or 2-wheeler transport to a private car (as a result of change in mode of transportation).

Discussions of leakages are not complete and part of it is in the wrong section (D1 instead of D8). The explanations are not fully satisfactory.

Average data cannot be used: emissions of vehicles of the same category may differ by the factor 5 or more basically due to type of vehicle (e.g. small, low powered car vs. SUV: both would fall in the same category of petrol cars). If a project would thereafter target basically small cars popular also in India and compare project emissions against the average significant (theoretical) reductions would be calculated even if the cars would not change fuel. The correct baseline would need to establish average emissions of the cars replaced and not of the total population of cars.

Range of percentage reduction due to a fuel switch is mentioned as 11-15% and 12% in one case. Study takes the highest of 15%.

Data in the 2 tables on page 11 of the draft CDM-PDD differ for the same year by a factor of 10 for USA. In the first table Indian emissions exceed US emissions historically, which is absolutely incorrect. The source of this data is the study, which is the basis of the entire methodology - adding to the unacceptability of a single study.

Table on page 14-15 data presented till 2008 though text discusses this beyond 2008 - this is a minor comment because the use of these tables is not evident.

Are two-wheelers included or not? (page 16 these are not there, but on page 21 these are included in the discussion). Why doesn't the methodology decide upfront which vehicles to include and focus on these (the tables discuss more vehicles than those that are finally considered)?

Additionality needs to be strengthened and made consistent throughout the document: section B does not make clear which parts of the additionality test are mandatory and which not.

Page 25 second bullet - please explain how GHG emissions of auto LPG vehicles be electronically monitored?

(A new proposal should be submitted in accordance with the procedures for submission and consideration of proposed new methodologies of the Executive Board.)

II. Recommendation on the proposed new monitoring methodology: (checkmark the choice made)

Title of proposed new monitoring methodology: >> RFID based electronic monitoring methodology for the road transport sector

a. To approve this proposed methodology with minor changes

☐

i. Conditions under which methodology is applicable to other potential projects (e.g. project type, region, data availability):

>>

ii. Minor changes:

>>

b. To reconsider this proposed methodology, subjected to required changes

☐

i. Conditions under which the proposed methodology is applicable to other potential projects (e.g. project type, region, data availability.):

>>

ii. Required changes:

>>

(Project participants shall make required changes in the proposed new methodology and send it back to the Meth Panel. The proposed new methodology will be reconsidered by the Meth Panel if changes required are correctly made by the project participants. The Executive Board will only consider this proposed new methodology after required changes proposed have been made and the revised proposed methodology has been reconsidered by the Meth Panel.)

c. Not to approve the proposed methodology

☒

i. Reasons for non-approval:

>> The proposed methodology is simple, and can be applied to a transport project subject to some changes. However, as the baseline methodology is not defined it is difficult to determine its applicability to the baseline.

Other issues that the monitoring methodology needs to address are:

- Needs to discuss issue of fuel usage from other refill stations, as fuel sale from the RFID

station is recorded and not the total fuel consumption by the vehicle. Fuel bought from other stations is not recorded thus severely underestimating the project emissions - methodology should assess fuel usage.

- Odometer reading problems are not discussed (problem of exactitude and problem of malfunctioning odometers)
- QA is not addressed appropriately thus not assuring high quality data and reliability - need to ensure that there is no tampering of data centrally.

(A new proposal should be submitted in accordance with the procedures for submission and consideration of proposed new methodologies of the Executive Board.)

B. Details of the evaluation of the proposed new methodology by the Meth Panel:

I. Proposed new baseline methodology (*specify title here*): >> [Baseline methodology for road transport sector in India](#)

(1) Short description of the methodology, including an assessment of which approach from paragraph 48 of the CDM modalities and procedures was used:

a) Describe the methodology:

>> The methodology describes the conversion of a projected number of vehicles to Auto LPG from petrol or diesel. The baseline methodology uses the CO₂ emission data for petrol and diesel vehicles of different types, based on data sourced from a research report financed by USAID and prepared by Dr. Moti Mittal and Dr. Sharma. The computation of the GHG emissions data are based on the specific assumptions, for example, that the engines are new, there is no engine deterioration on account of usage, and a constant speed of 20 km/hr is maintained.

The baseline emissions are determined by the projected number of vehicles (using assumptions of growth rates, attrition rates, and conversion rates) converting to alternative fuel options (in this case Auto LPG) from petrol / diesel. The target market share for the project activity has been assumed at 30% of the projected conversion.

The baseline methodology proposes that the difference between the baseline emissions and the project emissions (which are calculated as the pre-determined emission factors from the study mentioned above, multiplied by the pre-determined average annual distance travelled and calculated emissions from the fuel consumption during idling time) are the GHG emissions reduction from the proposed project activity.

b) State the approach selected:

>> Approach as per paragraph 48 (a) of the CDM modalities and procedures: “Existing actual or historical emissions, as applicable”.

c) Indicate (in summary form) why the approach selected is the most appropriate. Please provide your expert judgement on the appropriateness of the selected approach to the project category:

>> No clear justification is provided. This approach could be justified but the determination of the baseline is absolutely flawed.

(2) Basis for determining the baseline scenario:

a) State whether the documentation explains how the baseline scenario is to be chosen and identified:

>> An explanation of how the baseline scenario is to be chosen is provided but it is without justification and presented in a very confusing manner.

b) State the basic underlying rationale for algorithms/formulae used (e.g. marginal vs. average basis) (see also section 4 below):

>> The rationale for formulae used are:

- Shift to alternative fuel options will be marginal and therefore petrol and diesel, the predominant fuels can constitute the baseline;
- Regulatory guidelines / actions of the judiciary are not expected to impact the baseline;
- The price elasticity of the use of the vehicle is marginal - regardless of the price levels of the fuel, the usage will remain fairly constant.
- Average emissions on a historical base are used for selected categories of vehicles. The rationale for using averages is not explained and the only rationale seems to be the availability of a study.
- The rationale for using fixed km, arbitrary market shares, fixed growth rates and scrap rates are not explained.

c) State whether the documentation explains how, through the use of the methodology, it can be demonstrated that a project activity is additional and therefore not the baseline scenario. If so, what are the tools provided by the project participants?

>> The documentation explains using the consolidated additionality tools it can be demonstrated that the project activity is additional and thus not the baseline scenario. (It should be clarified that barrier analysis should be used if investment analysis is not).

d) State whether the basis for determining the baseline scenario and for assessing additionality is appropriate and adequate:

>> Additionality is determined by applying the consolidated additionality tool quite adequately (although this is not clear in section B of the proposed methodology). However, this can be improved by providing more details on how to "establish" the various barriers. For example, how is it "established" that there is technological barrier or what is a barrier due to prevailing practice or that CDM helps to overcome the barriers. What is the measurement tool? One possible way would be to include financial data.

Probable marketing strategies - like sharing CER revenue with customers, are mixed up in the methodology.

Baseline scenario: The basic rationale for the underlying formulae is not appropriate. The baseline discussion including section E is very confusing, not conservative and not appropriate. For example, Average data cannot be used: emissions of vehicles of the same category may differ by the factor 5 or more basically due to type of vehicle (e.g. small, low powered car vs. SUV: both would fall in the same category of petrol cars). If a project would thereafter target basically small cars popular also in India and compare project emissions against the average significant (theoretical) reductions would be calculated even if the cars would not change fuel. The correct baseline would need to establish average emissions of the cars replaced and not of the total population of cars. This is essential as the "population of cars" of the baseline (leading to its average) is not necessarily identical to the "population of cars" of the project. If this baseline would be accepted potentially 50% of all currently operating cars could apply for CERs (as 50% have - by definition of an average - lower emissions than those fixed by the baseline).

The baseline stated is not conservative but inflates potential project benefits as it takes 1997 values assumes a speed of 20 km/hr, assumes highest possible reductions, makes assumptions about the average distance travelled, and fails to account for refuelling from non-RFID stations during project activity. The applicability of the study to determine the baseline and the data used are considered questionable.

(3) Assessment of the description of the proposed methodology and its applicability

a) State whether the methodology has been described in an adequate manner:

>> No. The methodology is confusing and unclear. It is a mix of some data-tables rather than a methodology. The logic is unclear and the document is difficult to comprehend. The methodology implies that the baseline is calculated based on growth factors and fixed kilometres for vehicle types. Why is this required as the actual number of converted vehicles could be used? Also the methodology says that the quantity of emissions must be multiplied by the distance driven. Which distance driven? The average fixed distance or the monitored distance driven in the project. It should be the latter but this is not explicitly stated in the methodology.

b) State whether the proposed methodology is appropriate for the referred proposed project activity and the referred project context (described in Sections A-E of the draft CDM-PDD and submitted along with Annex 3):

>> No. In addition to reasons already discussed in (2), there are other problems, like:

Average cars of the baseline are not necessarily equal to the average cars switched to LPG. Differences of the car population may lead to emission reductions, which are not due to the project but of pure statistical order.

LPG reduction benefits estimated are based on Euro III cars according to the draft CDM-PDD document while the same document states that India has currently Euro II and most cars are Euro 0 or before. Also the reductions estimated refer to dedicated OEM vehicles. The project however plans to refurbish existing and old petrol vehicles to LPG. Reductions achieved may be significantly lower due to car technology, or retrofit kits used.

c) State whether the application of the methodology could result in a baseline scenario that reasonably represents the anthropogenic emissions by sources of greenhouse gases that would occur in the absence of the proposed project activity.

>> No.

Please explain:

>> The baseline is not clearly defined.

The basis of the baseline is not acceptable as it is dated information, not based on actual measurements, and uses fixed numbers/coefficients without justification.

The underlying rationale for the baseline methodology is unacceptable.

(4) Assessment of algorithms/formulae and type of data needed:

a) State whether the description of the methodology includes algorithms and generic formulae that can be applied to other potential project activities (if not, the proposed new methodology will be considered as a project-specific methodology):

>> No. The implicit rationale for the methodology is faulty.

b) Explain the spatial scope of data used to determine the baseline and whether the scope is appropriate:

>> The spatial scope is all-India for some parameters and based on a study covering 7 cities for some. The data should be category specific (e.g. type of car as opposed to all cars) rather than the national average.

c) Explain the vintage of data used (in relation to the duration of the project crediting period) and whether the vintage of data is appropriate, indicating the period covered by the data:

>> 1997 data has been used in many places, which is outdated and overstates the emissions reductions from the project activity.

(5) Definition of the project boundary related to the baseline methodology:

a) State how the project boundary is defined in terms of:

i) Gases and sources

>> CO₂ - Combustion of petrol / diesel in vehicles during motion and during idling.

During motion: CO₂ gms / Km & during idling its in CO₂ gms / hr.

Though the methodology states that the "only gas which is monitored in the project activity is Auto LPG".

ii) Physical delineation

>> The project boundary includes the planned retail outlets and the vehicles that use the Auto LPG, purchased from the retail outlets

b) Indicate whether this project boundary is appropriate:

>> The project boundary is appropriate - except for projects using biodiesel as an alternative fuel, as these projects will need to include any emissions from land clearing, harvesting and production of biodiesel in the boundary. The suggested boundary is not clearly described in the proposed methodology (gases and sources)

(6) Key assumptions/parameters (including emission factors and activity levels) and data sources:

a) List the implicit and explicit key assumptions. Identify those, if any, which are problematic and explain:

>> Data source: Most of the data is sourced from a particular study. This is problematic as the precise agenda of the study, its objectives, the methodology / models used and their under lying assumptions are not known. For example, GHG emissions at 20 km/hr are deemed to be representative. In addition, the data used too seems to be of 1997 vintage, the study is limited to 7 major Indian cities and not based on actual measurements.

Other assumptions are that:

- Baseline scenario will remain petrol / diesel (i.e. no switch to any alternative fuel will occur under BAU).
- Regulatory guidelines will not play a major role
- Emission factors are constant over time
- Same population group for project and baseline (implicit assumption when using averages)
- Constant vehicle speed over time
- No change in fuel composition over time (this is not problematic)
- Theoretical consumption values are comparable to real consumption values.
- Distance driven is not influenced by fuel cost (i.e. distance driven is price inelastic)
- Fixed growth values per vehicle category
- Fixed discard rate for vehicle categories
- Market share fixed

b) State whether the key assumptions are arrived at in a transparent manner:

>> Most of the above assumptions are not arrived in a transparent manner, for example, the growth rates of vehicles, the market shares, etc.

c) Give your expert judgement on whether the assumptions/parameters are adequate:

>> Not adequate as most of the assumptions are not explained or justified.

d) *Indicate which data sources are used and how the data are obtained (e.g. official statistics, expert judgement):*

>> A study sponsored by USAID and personal communications

e) *Give your expert judgement on whether the data used are adequate, consistent, accurate and reliable:*

>> Data is not adequate as there are many unexplained issues and the many are being taken from a study, which may not be a reliable source for developing the baseline methodology.

f) *State possible data gaps:*

>> There are several.

- Emissions are based on 1997 data for a 2005 baseline
- Baseline is computed considering an average speed of 20 km / hr without proper justification.
- Rationale for considering a 3% discard rate.
- The mix of vehicles between the cities and the costal regions need not be similar. In view of the same, the vehicle mix in the targeted costal states needs to be revised. The actual cars converting should be considered.
- A 30% market share is not explained. Again it is not clear why this has to be assumed upfront.

(7) Assessment of uncertainties:

a) *State whether the methodology includes an assessment of uncertainties regarding:*

i) *The basis for determining the baseline scenario:*

>> No. A reference is made to the USAID study.

ii) *Algorithms/formulae:*

>> No.

iii) *Key assumptions:*

>> No.

iv) *Data:*

>> None.

b) *State whether the uncertainties presented are reasonable:*

>> The discussion on uncertainties is unacceptable as it all points to one study, which is not included in the methodology. (Readers are referred to a web site).

(8) Leakage:

a) *State how the baseline methodology addresses any potential leakage due to the project activity:*

>> Principle sources of leakage are:

- LPG transportation related emissions - assumed to be negligible / compensated as similar emissions would have occurred in the case of transporting crude.
- Use of alternative fuel reserved for the priority sector: assumed that the construction of the container / cylinder will prevent any possibility of diversion to the automobile segment.
- Increased usage due to availability of a cheaper fuel has been assumed to be low - in other words the driving patterns are price inelastic and can be ignored.

b) *Indicate whether the treatment for leakage is appropriate and adequate:*

>> The treatment for leakage is generally appropriate and adequate, although it does not include the possibility that emissions might occur from manufacturing the alternative fuel used in an associated project activity. (This may be important if the alternative fuel is biodiesel, although not relevant for the project activity in the accompanying draft CDM-PDD)

(9) Transparency and “conservativeness”:

a) *Indicate whether the baseline methodology was developed in a transparent way:*

>> No. As discussed above the methodology lacks clarity and contains unjustified assumptions.

Carbon emission factors for the project activity are assumed to be for

- OEMs (whereas quite a few will be retro-fits),
- Euro III vehicles (actual ones are not Euro III); and
- The higher of the range for emissions reduction is considered.

Page 3 of NMB, states that average speeds could increase to 30-50 kmph, in which case there is no justification for an inflated baseline with carbon emission factors at 20 kmph.

b) *State whether the baseline methodology is conservative:*

>> The methodology is not conservative and is likely to overestimate the emissions reduction.

(10) Potential strengths and weaknesses of the proposed baseline methodology (please explain):

>> No apparent strengths could be identified, as the methodology by itself is unclear.

Weaknesses:

- Unclear and non-transparent
- Severe methodological failures including the usage of fixed emission factors based on averages of population groups, the usage of fixed and non-transparent growth, scrap and market diffusion rates and market shares.
- Usage of static and dated data overstating potential benefits.
- Impact of the project registration under CDM on its viability has not been adequately explained.
- Methodology is not conservative

(11) Other considerations, such as a description of how national and/or sectoral policies and circumstances have been taken into account (please explain):

>> The methodology states that it is not based on any direct or indirect legislative obligation to fulfil and national and/or sectoral policies or circumstances. Suitable provisions should be included to review the baseline should there be any development that could affect the rate of fuel switch.

(12) Applicability of the proposed methodology across project types and regions (please indicate):

>> The methodology, in its current form can only be applicable to countries where:

- The baseline scenario is the continuation of the use of fuel types that have a higher GHG emission factor per unit of service delivered.
- The absence of regulatory guidelines requiring the use of a particular fuel / fuel type.
- Availability of data on the number and types of vehicles in the target market.

The methodology in its current form is very unclear and needs to be thoroughly revised.

(13) Any other comments:

a) *State whether any other source of information (i.e. other than documentation on this proposed methodology available on the UNFCCC CDM web site) has been used by you in evaluating this methodology. If so, please provide specific references:*

>> Useful information provided by one of the desk reviewers:

- **Kolkata: Operation persuasion for LPG:** The oil companies have decided to organise awareness drives in Calcutta to prod car-owners into switching to liquefied petroleum gas (LPG) for the sake of both environment and economy. The transport department plans to join hands with the oil firms.

Source: The Telegraph, Calcutta, 30/4/2004

- **Kolkata: Bharat II deadline for government vehicles:** The West Bengal government has ordered its departments to ensure that all vehicles run by them start following Bharat Stage II norms from this month, failing which vehicles will be grounded. Mr H Mohan, joint secretary to the state government, wrote to the heads of the departments in March asking them to take immediate steps to convert the existing engines, either by introducing LPG kits or by installing Bharat stage II engines. Source: The Statesman, Kolkata, 5/5/2004
- **Crackdown on cars with illegal gas kits:** Delhi transport department will soon launch a drive against vehicles running on illegal LPG conversion kits. The enforcement wing of the department will soon start checking vehicles across the city, sources said. The first advice to vehicle owners is to switch over to approved LPG kit or the CNG mode. If they don't convert within a stipulated time-frame (to be 2-3 months), the vehicle will be impounded for being hazardous. "We have asked petrol pumps to inform us about vehicles running on illegal LPG kits as they are unsafe," transport commissioner Rajiv Talwar. Nine types of LPG kits for four wheelers have been approved by the department and can be installed at a price ranging between Rs 20,000-25,000. Source: The Hindustan Times, New Delhi, 9/3/2004
- <http://www.hindustanpetroleum.com/news/oilnews.php?id=6336>
- <http://www.shrishakti.com/governmentguide.html>

b) Indicate any further comments:

>> No further comments.

II. Proposed new monitoring methodology (specify title here): >> RFID based electronic monitoring methodology for the road transport sector

In respect of the proposed new monitoring methodology, evaluate each section of annex 4 to the draft CDM PDD. Please provide your comments section by section:

(1) Brief description of new methodology:

Describe new methodology:

>> The methodology relies on RFID measurements. RFID equipment basically identifies the vehicle at a refuelling station. It also records the data of fuel purchased, the fuel consumption during idling time and records the odometer mileage of the vehicle. It is important to notice that RFID does not record the total fuel consumption of the vehicle but just the quantity of fuel sold at this outlet. Only fuel stations equipped with RFID would register sales and this not likely to be the consumption by the vehicle. The equipment automatically shuts off if gasoline is used instead of LPG during driving (dual-fuel vehicles).

(2) Key assumptions/parameters:

a) List the implicit and explicit key assumptions. Identify those, if any, which are problematic and explain:

>>

- All LPG used by car-owners is sold through RFID equipped stations (implicit assumption)
- Odometer work properly and accurately (implicit)

b) State whether the key assumptions are arrived at in a transparent manner:

>> Not discussed in the document.

c) Give your expert judgement on whether the assumptions/parameters are adequate:

>> The assumption that all fuelling of LPG is done through RFID equipped stations is unrealistic and the main flaw in the methodology, which needs to be addressed.

As pointed by the desk reviewer: Mechanical odometers tend to be very inexact (+/- 15%). However if variations are in the + - range they will statistically neutralize themselves. This needs however to be checked or ascertained e.g. with vehicle manufacturers. More severe is the problem of non-functioning or mal-functioning odometers (on purpose or by chance). Older cars in developing countries equipped with mechanical odometers often have problems in this respect. Experiences of an Inspection/Maintenance

<p>Project in Central America showed that a high number of odometers (+20%) were out of order. The reliability of odometer readings is thus problematic and must be addressed.</p>
<p>(3) Data sources and data quality:</p> <p><i>a) Indicate which data sources are used and how the data are obtained (e.g. official statistics, expert judgement):</i></p> <p>>> RFID; electronic readings based on fuel dispatch and odometer readings</p> <p><i>b) Give your expert judgement on whether the data used are adequate, consistent, accurate and reliable:</i></p> <p>>> Yes, the data used are adequate, consistent, accurate and reliable (assuming that the RFID technology will perform as expected)</p> <p>One of the reviewers raises the issue that:</p> <p>Unclear why measurement is made of idle fuel consumption and how this is technically performed. Odometer readings are problematic (see above). Accuracy is given with 99%. However it is unclear how the author derived this accuracy. The odometer accuracy is at best 90%, thus it is unclear how thereafter processed data can be more reliable than the original database</p> <p><i>c) State possible data gaps:</i></p> <p>>> Fuel consumption in total of vehicle must be measured as re-filling may occur in other stations than those equipped with RFID</p>
<p>(4) Assessment of the description of the proposed methodology and its applicability:</p> <p><i>a) State whether the proposed methodology has been described in an adequate manner:</i></p> <p>>> Subject to addressing the issue of fuelling from non-RFID gas stations and quality assurance for odometers, the methodology is adequate.</p> <p><i>b) State whether the proposed methodology is appropriate for the referred proposed project activity and the referred project context (described in Sections A-E of the draft CDM-PDD and submitted along with annex 4):</i></p> <p>>> Yes - subject to (a) above.</p> <p><i>c) State whether this proposed monitoring methodology is compatible with the proposed baseline methodology described in annex 3 of the draft CDM-PDD:</i></p> <p>>> It is difficult to comment on the compatibility, as the baseline methodology is unclear.</p>
<p>(5) Leakage (please elaborate, if appropriate):</p> <p>>> Leakage is not likely in the monitoring methodology - other than getting fuel from non RFID sources</p>
<p>(6) Quality assurance and control procedures (please explain):</p> <p>>> The methodology is expected to generate very reliable data. However, QA should address the following issues:</p> <ul style="list-style-type: none"> • Wrong odometer readings • Errors in reading electronically data from odometer and fuel measurement • Transmission errors • Reliability of equipment • Data assurance and safety
<p>(7) Potential strengths and weaknesses of the proposed monitoring methodology (please explain):</p> <p>>></p> <p><u>Strengths:</u></p> <ul style="list-style-type: none"> • Simple, fairly accurate, measures fuel dispatch per vehicle and mileage per vehicle, tamper-proof.

Weaknesses:

- Needs to discuss issue of fuel usage from other refill stations, leakage, and odometer problems

(8) Applicability of the proposed methodology across project types and regions *(please indicate):*

>> Applicable for a range of transport projects.

(9) Any other comments:

a) State whether any other source of information (i.e. other than documentation on this proposed methodology available on the UNFCCC CDM web site) has been used by you in evaluating this methodology. If so, please provide specific references:

>> None.

b) Indicate any further comments:

>> No further comments.

Signature of Meth Panel Chair

Date: 9/02/2005

 (Jean-Jacques Becker)

Signature of Meth Panel Vice-Chair

Date: 9/02/2005

(José Miguez)

Information to be completed by the secretariat

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