**CDM: Proposed New Methodology**
**Meth Panel recommendation to the Executive Board**
**(version 04)**
***(To be used by the Meth Panel to make a recommendation to the Board regarding a proposed new methodology)***

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| *Date of Meth Panel meeting:* | 4 - 8 April 2005 |
| *Related F-CDM-NM document ID number (electronically available to EB members)* | F-CDM-NM0086: "Petrotemex Energy Integration Project" |
| *Related F-CDM-NMex document ID number(s) (electronically available to EB members)* | F-CDM-NMex0086: Schiller / Yang |
| *Related F-CDM-NMpu document ID number(s) (electronically available to EB members)* | F-CDM-NMpu0086: Harthan / Takao |

*Note to those completing this form, as applicable: Please provide recommendations on the proposed new baseline and monitoring methodologies based on an assessment of CDM-NMB and CDM-NMM 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.*

## 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 project activities involving energy efficiency, self-generation, cogeneration, and/or fuel switching measures at an industrial facility.

a. To approve this proposed methodology with minor changes

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

>>

ii. Minor changes:

>>

b. To reconsider this proposed methodology, subject 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 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.)*

c. Not to approve the proposed methodology

☒

i. Reasons for non-approval:

>> The methodology is well organized, well written, and prepared in a manner that should in principle allow generalization to other projects. Furthermore, it builds upon approved methodologies and relies on what should be readily available and verifiable data. However, the methodology is incomplete or ambiguous in a number of key respects, and resolving these issues (in particular with respect the development of the "Option 2" method) would require an amount of new methodological input sufficient to require a full review. Such resolution will require that the PP:

1) Provide firm and mutually exclusive criteria for selection of Option 1 or 2 for determining baseline emissions associated with fuel consumption.
2) Since both ex post and ex ante options for baseline emissions calculations are provided for each option, provide priority or criteria to select between the two. Furthermore, it is indicated that where ex post methods are "too difficult" a conservative ex ante approach should be used, however no such approach is mentioned.
3) For Option 2, provide methods to determine a valid relationship between control variables (e.g. industrial production) and baseline fuel use. This includes providing criteria for approving a single, ex-ante, relationship, between baseline emissions and process variables, that is unaltered during the crediting period. If statistical methods are used, appropriate indicators or tests should be provided. At present no process or methodology is provided for developing this relationship, and indeed this Option 2 is the main element of this new methodology that is new relative to existing methodologies. (Note furthermore that the diagram provide suggests that a non-linear relationship might exist between fuel use and a control variable, suggesting the need to consider various mathematical relationships in the methodology.)
4) Demonstrate how changes in efficiencies of fuel combustion in equipment, from baseline to project cases can be used to calculate baseline emissions values from project emission values if multiple fuels are used in different equipment processes; there will probably need to be some limits defined on the applicability of this baseline calculation option and equations provided showing how emissions reduction is calculated (in addition to equation showing ratios of baseline and project fuel use).
5) Provide a means to estimate the combustion efficiency for fuels not previously used at the facility (e.g. biogas). In addition, since the methodology assumes historical efficiencies are appropriate for the future (in the case of fuel switching), it should be demonstrated that the historical record is sufficient and appropriate (e.g. a fuel may have not been used enough to generate a robust estimate of fuel efficiency).
6) More clearly define the mechanisms for determining baseline electricity consumption (similar to the format used for baseline fuel consumption and emission values)
7) Given the generic nature of this methodology, address how the methodology might identify process changes that might affect greenhouse gas emissions not directly related to fuel consumption, for example non-$CO_2$ gases.
8) Related to the previous point, the draft CDM-PDD example notes a part of the project activity includes the emission benefits from substituting the use of biogas from wastewater processes for fossil fuel use, however no methodology is provided to address emissions from wastewater activities within the project boundary or as leakage.

*(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: >> Monitoring methodology for project activities involving energy efficiency, self-generation, cogeneration, and/or fuel switching measures at an industrial facility.

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:

>> This monitoring methodology is not approved because of the concerns noted above for the baseline methodology. Should the project participants (PPs) wish to submit a new baseline methodology addressing the concerns described above, the accompanying monitoring methodology should:

1) Define the variables that might need to be added or changed based on revision of the baseline methodology.
2) Provide mechanisms for collecting process data and/or equipment efficiency data for baseline energy use (and emissions) calculations and models.
3) Provide QA/QC procedures that can be enforced, particularly given the possibility of significant reliance on hand-written records; address using billing meters and their accuracy and calibration
4) Be clear on use of lower heating value (LHV) or higher heating value (HHV) values for fuel use in all equations.
5) Move all project emissions (for electricity and steam) to the project emissions equation and out of equation for baseline – make sure all "signs" (+ or -) are correct in equations.

*(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):* >>** Monitoring methodology for project activities involving energy efficiency, self-generation, cogeneration, and/or fuel switching measures at an industrial facility.

**(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 involves a series of straightforward steps, as follows:

1) Additionality assessment is based on the tools for the demonstration and assessment of additionality (Annex 1 to EB 16 Report).
2) The baseline scenario is determined next based on use of the tools (step 1) to identify and assess candidate baselines.
3) Baseline emissions associated with electricity, steam and fuel are calculated using local or IPCC emissions factors multiplied times annual baseline energy use, whether fuel, steam and/or electricity consumption.
4) For baseline emissions associated with fuel consumption (at the industrial site), there are two options with several sub-options (however, a procedure for determining which option to choose is not provided):
    - Option 1: Where there are no changes in efficiency between baseline and project (due to energy efficiency activities, process changes, etc.), baseline energy use is either determined a) *ex post* based on project energy use, assuming equivalent fuel use and fuel-specific energy efficiency in baseline; or b) *ex ante* as a "conservative alternative" if the "dynamic baseline proves very difficult" (how this is proven and done conservatively is not indicated).
    - Option 2: Where heat output may vary from baseline levels due to project activity (e.g. process change,. energy efficiency), baseline fuel consumption is calculated using an ex ante defined relationship between fuel use and a control variable (e.g. industrial process production levels)
5) For baseline emissions associated with the purchase or sale of grid-based electricity, the consolidated baseline methodology ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" or the small-scale methodology can be used "as appropriate"(not defined). For the purchase of electricity or steam from individual facilities, those facilities' emission characteristics shall be used.

*b) State the approach selected:*

>> The proposed approach is 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:*

>> It is appropriate given the reliance on actual data for baseline emissions assessment.

**(2) Basis for determining the baseline scenario:**

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

>> Yes, it does so quite clearly.

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

>> The basic underlying rationales include:

- That baseline electricity, steam and fuel usage can be accurately correlated to product (or other?) production rates
- The use of a combined margin (as outlined in ACM0002) is an appropriate basis to calculate emission reductions from avoided electricity generation.
- That the project will displace historic fuel consumption at the facility.
- For fuel switching, that baseline fuel use can be determined based on historical combustion efficiencies for each fuel (i.e. if a fuel has not been used at the plant before, then there is no way to estimate its fuel combustion efficiency).
- That the modification of industrial process does not effect emission of greenhouse gases in other ways.

*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 provided is based the "Tool for the demonstration and assessment of additionality". The additionality test should be carried out for each individual component of a proposed project (this is not clear in the currently proposed methodology).

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

>> The basis for determining the baseline scenario and additionality is appropriate and adequate.

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

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

>> The descriptions are well organized, but insufficient for reasons noted in the summary above. Descriptions are lacking, in particular, for how relationships between control variables and energy use will be established, when ex post vs. ex ante methods should be used, when option 1 should be used instead of option 2 (except in the case of energy efficiency which is clear), emissions and efficiencies for biogas and other fuels not currently produced or used, and so on.

*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 CDM-NMB):*

>> In principle it is appropriate.

*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.*

>> It could, but the application can take many different forms with widely varying levels of robustness.

*Please explain:*

>> The methodology is not sufficiently defined for the reasons described above.

**(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):*

>> Generic formulas are provided for baseline and project emissions that could be used in a general methodology for other projects. The problem is rather that only very general algorithms are provided. Also, the equation for baseline emissions includes the project-scenario energy use, which is confusing. Needed are algorithms and procedures to address the gaps noted above, in particular, regression or other methods of establishing relationships, methods for dealing with new fuels, methods for estimating baseline electricity use, etc. For example,

- For the option of calculating fuel consumption based on only fuel switching, there is no formula for calculating emission reductions and this shortfall seems to be shown in that the draft CDM-PDD calculation of emission reductions associated with biogas does not appear to include the project emissions.
- There are no provided algorithms, or methodologies for developing algorithms, or correlating energy use to production volumes. This is a key and difficult issue for all industrial facilities where baseline energy use can vary based on changes during the project period in terms of production volumes, product types and characteristics, and/or other factors that can change baseline energy use depending on the industrial process in question. Other such factors could include changes in feedstock, weather, and process technology.

  Appropriate algorithms need to be provided for this particular project (missing from the sample draft CDM-PDD) and in order for the baseline methodology to be useful for other future projects a generic approach or set of guidelines should be provided for creating a statistical model that correlates energy use to industrial process activities, during the emissions crediting period. There are a number of models/algorithms that can be used to develop such correlations with the common complexity being the collection of data over a range of operating and product scenarios.

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

>> "Fuel consumption, energy purchase/sale, control variables, and equipment efficiency data correspond to the industrial facility. Parameters needed to determine the emission factor for grid-connected electricity generation depend on the wholesale electricity manager and power plants connected to the grid in question."

This data scope may not be sufficient in some cases. As noted emission associated with biogas processes should be covered. It may also be necessary to consider the emissions characteristics of similar facilities elsewhere if the project might affect production levels (not necessarily in the draft CDM-PDD case, but since the methodology is generic it must be capable of considering all industrial facility types in general).

*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:*

>> The methodology calls for fuel and energy consumption baseline data (when Baseline Option 2 is used) to be for a period of at least three years prior to project implementation. This, may or may not be adequate if (a) the data are available, (b) if the data leads to a statically valid regression analysis (see above), and (c) the data can be shown to be accurate and valid and cover a range of operating scenarios that are reasonably expected to occur during the project crediting period.

For Baseline Option 1, use of efficiency factors, the vintage of data are not addressed, but should be to ensure that the appropriate efficiency values are used for baseline operating equipment that will still be in place during the crediting period and is not reaching the end of its useful life.

**(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*

>> Fuels used both in the baseline scenario and in the project case are used. $CO_2$, $NO_2$ and $CH_4$ are included in algorithms

*ii) Physical delineation*

>> The project boundary encompasses the site of the industrial facilities.

*b) Indicate whether this project boundary is appropriate:*

>> In general it should be with the caveat that electricity grid plants are also included within the boundary for the purpose of calculating emission reductions.

**(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:*

>> On page 16, the CDM-NMB document lists the following explicit parameters:

- CEFi -- Carbon dioxide emission factor per unit energy of fuel i (e.g. tCO2/GJ)
- MEFi -- Methane emission factor per unit energy of fuel i (e.g. tCH4/GJ)
- NEFi -- Nitrous oxide emission factor per unit of energy of fuel i (e.g. tN2O/GJ)
- EFeli -- Baseline emission factor from energy generation, including electricity generation by the grid and/or a private plant (e.g. tCO2/MWh). Each energy source is denoted by i.
- EFsti -- Baseline emission factor from steam generation (e.g. kgCO2e/tonne steam).
- No energy-intensive equipment would be replaced during the crediting period under business as usual (BAU).

The most important implicit assumption is the validity of the changing baseline energy and emissions, up or down, based on product production rates and fuel switching from fuel oil to biogas (in the case of the draft CDM-PDD).

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

>> The key assumptions concerning the baseline data and electric grid markets are transparent with the exception of :

- Lack of information, as noted above, on production versus energy use for the baseline. It should be noted that the draft CDM-PDD indicates that the baseline energy use and production rates data are "scattered" which does not inspire confidence in the method or results, particularly since the data and analyses are not provided.
- Information on source and type of fuels (e.g. biogas) and how its emissions are included in analyses

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

>> They are inadequate because of gaps in the methodology.

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

>> According to the information on page 16 of the CDM-NMB, the following parameters and data are collected from various sources and used in the CDM-NMB:

- National inventory of GHG emissions, prepared as part of the National Communications to the UNFCCC or other official documents.
- On-site measurements of carbon content and calorific value of fuels. This would be recommended for fuels where there is significant variation in properties and/or when the fuel is not widely commercialised.
- IPCC default emission factors.
- IPCC default values. Methane emissions from fuel combustion are likely to be insignificant so that standard values should suffice to provide an adequate estimate.
- IPCC default values. Nitrous oxide emissions from fuel combustion are likely to be insignificant so that standard values should suffice to provide an adequate estimate.
- ACM0002 "Consolidated methodology for grid-connected renewable electricity generation from

renewable sources."

- Simplified methodology for small-scale CDM project activities (for electricity generation less than 15 MW equivalent).

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

>> In principle, the data sources are ok.

*f) State possible data gaps:*

>> The data gaps relate to the methodology gaps noted above.

**(7) Assessment of uncertainties:**

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

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

>> There is limited discussion of uncertainties, but none related to ii – iv below

*ii) Algorithms/formulae:*

>> No.

*iii) Key assumptions:*

>>No.

*iv) Data:*

>> No.

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

>> Uncertainties require discussion and possible analyses – such as validity of baseline adjustments through possible modelling of project to baseline energy differences, variations due to changes in the process (volume, distillation technique, product type, etc.) over the time period of crediting emission reductions, and uncertainties associated with the displaced electricity emission factors.

**(8) Leakage:**

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

>> The methodology addresses leakage from upstream fuel production and delivery.

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

>> The upstream fuel coverage is appropriate, however, the primary leakage potential is the movement of production of the industrial product to or from this facility from where it is produced at another facility with higher or lower emission rates. This has been neglected.

**(9) Transparency and "conservativeness":**

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

>> Yes it has.

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

>> Since it is insufficient, this cannot be determined.

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

>>

Strengths:

- Well organized and prepared in a manner that should allow generalization to other projects.
- Builds on approved methodologies.
- Relies on what should be readily available and verifiable data.

Weaknesses:

- Does not address criteria for developing an acceptable relationship between facility baseline production variables and energy consumption (electricity, steam and fuel use).
- Lack of calculations for displaced electricity emission factors.

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

>> Legal and regulatory issues are examined.

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

>> In principle, this methodology could be widely applicable.

**(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:*

>> M&V Guidelines: Measurement and Verification for Federal Energy Projects Version 2.2. U.S. Department of Energy, DOE/GO-102000-0960 September 2000, prepared by Schiller Associates.

*b) Indicate any further comments:*

>> A set of criteria for determining that a model/algorithm is appropriate could include:

- The model makes intuitive sense—e.g., the explanatory variables are reasonable, the coefficients have the expected sign (positive or negative), and they are within an expected range (magnitude).
- The modelled data are representative of the population—i.e., data covers a reasonable period of time (greater than one year?) and the model limits (range of independent variables for which the model is valid) are reasonable.
- The form of the model conforms to standard statistical practice.
- The number of coefficients is appropriate for the number of observations (approximately no more than one explanatory variable for every five data observations).
- The T-statistic for all key parameters in the model is at least 2 (95% confidence that the coefficient is not zero). Other statistical parameters may also be appropriate (e.g. RMSE).
- The model is tested for possible statistical problems (e.g., auto-collinearity), and if they are found, appropriate statistical techniques are used to correct for them.
- All data input to the model are thoroughly documented, and model limits are specified - this last point is critical with approaches indicated for what would occur if the model limits are exceeded during the crediting period). GWPs should not be included in the methodology itself. Rather, a reference should be made to the relevant COP decision.

**II. Proposed new monitoring methodology *(specify title here):* >>** Monitoring methodology for project activities involving energy efficiency, self-generation, cogeneration, and/or fuel switching measures at an industrial facility.

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

**(1) Brief description of new methodology:**

*Describe new methodology:*

>> The proposed methodology primarily involves collection of data: on baseline and project (a) fuel consumed, steam purchased and electricity purchased and sold, (b) production rates of the facility product (or other control variables that are not defined), (c) fuel emission factors (IPCC), (d) equipment efficiency factors, and (e) displaced electricity emission factors (ACM0002). The collected data are then used to estimate emissions reductions.

The methodology for this type of project is relatively simple and with post-project installation monitoring of all fuel usage, steam purchases from outside parties and electricity usage the emission savings can be calculated without concern for accuracy of initial estimates of emission reductions with one large assumption. This assumption is that the baseline energy (fuel, steam and electricity) consumption, and thus emissions, can be calculated from either (a) information about project energy consumption with the use of a baseline model (b) baseline and project equipment fuel consumption efficiencies. The assumption may be perfectly valid but there must be parameters set for determining when the model is valid or not

**(2) Key assumptions/parameters:**

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

>> Major assumptions are:

- There are accurate data available on fuel and electricity usage for the prior three years at each facility – unknown in terms of validity as data were not provided
- If baseline Option 1 is used - accurate data available on equipment efficiencies for calculating changes in fuel usage and this could be complex if there is a wide range of end-use equipment that consumes fuel without detailed knowledge of fuel consumption for each piece of equipment or system and the fuel burning efficiency of the equipment/systems; also the combustion efficiencies of older equipment will likely not be available or have varied with age from manufacturer data - – unknown in terms of validity as the analysis and data were not provided
- If baseline calculation Option 2 is used - a correlation can be made between some industrial process control variable(s) and baseline electricity and fuel usage – unknown in terms of validity as the analysis and data were not provided.
- Information is available to calculate grid and private party electricity emissions factors - unknown in terms of validity since data and analyses were not provided.
- Use of IPCC factors for various fuel type used on site and leakage calculations

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

>> They are insufficiently described due to problems in the baseline methodology.

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

>> No, due to problems in the baseline methodology.

**(3) Data sources and data quality:**

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

>> The data come from:

- Industrial facility;
- Power grid and/or private plant; and
- Steam supplier.

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

>> As QA/QC procedures are not defined, it is not possible to determine the adequacy, accuracy, etc. of the data sources and quality. The use of metered data from billing records or government reporting information would be preferable to what is assumed to be manual data collection by facility staff with paper records.

c) *State possible data gaps:*

>> The same data gaps described under the baseline methodology become monitoring data gaps here – inadequate specification of control variables, coverage of new fuels, etc. Furthermore it is not clear for all facilities that all fuel use and all electricity use in the baseline and project cases will be collected. Need to ensure that there is sufficient and valid data available for modelling of baseline energy use and calculation of project emissions.

**(4) Assessment of the description of the proposed methodology and its applicability:**

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

>> The proposed methodology has not been described adequately as does not clarify that all required data will be collected and the QA/QC description is not adequate.

*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 CDM-NMM):*

>> The methodology is not appropriate without modification.

*c) State whether this proposed monitoring methodology is compatible with the proposed baseline methodology described in CDM-NMB of the draft CDM-PDD:*

>> The methodology is compatible with the baseline methodology.

**(5) Leakage** *(please elaborate, if appropriate)***:**

>> Leakage is calculated similar to AM0008 covering fuel production and delivery. However, no leakage due to shifts in production are included.

**(6) Quality assurance and control procedures** *(please explain)***:**

>> QA/QC is mentioned but no description is provided of what the QA/QC procedures will actually be and how they ensure data integrity, accuracy, etc.

**(7) Potential strengths and weaknesses of the proposed monitoring methodology** *(please explain)***:**

>>

Strengths:

- Relatively simple metering and
- Data collection/recording requirements.

Weaknesses:

- Possible dependence on data collection methods that may not be accurate (without meters) and
- Requires data on un-specified production variables for which a correlation between energy and

production have not been provided .

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

>> In principle it is widely applicable.

**(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: 15/04/2005 *(Jean-Jacques Becker)*

Signature of Meth Panel Vice-Chair ……..

Date: 15/04/2005 *(José Miguez)*

| **Information to be completed by the secretariat** | |
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