CDM: Proposed new methodology expert form (version 04)

(To be used by methodology experts providing desk review for a proposed new methodology)

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Related F-CDM-NM document ID number	NM0109

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. Evaluation of the proposed new methodologies by desk reviewers:

I. Evaluation of the porposed new baseline methodology:

Title of new baseline methodology:>> Generalized baseline methodology for transportation Bio-Fuel production with LCA (Life Cycle Assessment)

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

>> Applicable to projects producing biomass-based transportation fuel under a large set of applicability criteria that limit the baseline options and exclude project with certain leakage effects.

ii. Strengths and weaknesses of the methodology:

>> The methodology appears to be very complete and aims to take all relevant factors into account (e.g. using LCA and including grid losses in calculations for electricity consumption).

iii. Any changes needed to improve the methodology:

a. Minor changes:>> The methodology uses life cycle assessment for the bio-fuel (and explains that N2O emissions are significant there). It also refers to LCA for emissions from the displaced fossil fuels. However, it does not provide much further instructions on how to assess these emissions (refers to literature). Section E.2 states: *several scientific literatures are assessed to be used in the PDD. If such assessment is not provided, only the direct emissions are applied.* This is not fully clear from section D.6. It should be clearly stated that if the project developer cannot provide a reliable LCA, the project developer may not take these emissions into account (it now states LCA is not needed). While the approach is acceptable, it would benefit from a better clarification of the way it should be applied.

Where applicability condition (g) refers to a letter showing the project would not affect the power development plan, the methodology may also introduce a limit on electricity consumption to avoid using the build margin, as it may not always be possible to obtain such a letter. Perhaps this limit can be as a percentage of the estimated entire grid consumption.

b. Major changes:>>

II. Evaluation of the proposed new monitoring methodology:

Title of new monitoring methodology: >> Generalized monitoring methodology for transportation bio-fuel production with LCA

i. Conditions under which this methodology is applicable to other potential projects

(e.g. project type, region, data availability):

>> Applicable under the same set of conditions as the baseline methodology

ii. Strengths and weaknesses of the methodology:

>> The methodology is complete and monitors all three stages identified. Most of the relevant variables would be monitored for normal commercial reasons anyway.

iii. Any changes needed to improve the methodology:

a. Minor changes:>> Monitoring variable B6. (δ, the Adjustment factor related to the difference of fuel efficiency for km drive per GJ) should be updated more often than at PDD drafting, as fuel efficiency may change, or more accurate data may become available. At least update at beginning of each crediting period.

b. Major changes:>>

B. Details of the evaluation of the proposed new methodology by the desk reviewer:

I. Proposed new baseline methodology *(specify title here):* >>

(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 applies to projects producing biomass-based transportation fuel under a large set of applicability criteria that limit the baseline options and exclude project with certain leakage effects. The 3 main components identified in the methodology are: 1) Applicability conditions (related to supply of biomass, production of the bio-fuel, and the use of the fuel (market characteristics)), (2) Identification of the baseline scenario, (3) Mathematical formula of baseline (and project) emissions. The main assumption for the baseline emission level is that bio fuel sold equals fossil fuel replaced (corrected for fuel efficiency). The formulae for baseline and project emissions take into account LCA emissions.

b) State the approach selected:

>> b (economically attractive course of action taking into account barriers)

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:

>> Approach a (existing actual or historical emissions) appears to be the most appropriate. The methodology uses economic analysis in the additionality assessment, but the baseline is based on current emissions. This is perhaps the fruit of the confusing role of the options of paragraph 48, as it is unclear as to whether these should be used for quantification of baseline emissions or for the determination of additionality.

(2) Basis for determining the baseline scenario:

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

>> Yes. An elaborate and strict set of applicability criteria is used whereby the continuation of the current situation remains the only realistic baseline scenario.

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

>> The baseline calculation is based on the fossil fuel displaced by the project. This is established via the amount of bio-fuel actually sold by the project.

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 main tool is the set of applicability conditions, where the continuation of the current situation remains the only realistic baseline scenario. Elements of the "Tool for the demonstration and assessment of additionality" are used to further demonstrate that the project itself is not the baseline.

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

>> Yes, although the situation as set out in applicability condition f(iii) may require some attention in the additionality assessment.

In case we see a biomass fuel (for the same usage) penetrates in the market (less than 100%), there is a concern that the Bio-Fuel produced by the project would displace this penetrated biomass fuel. However, this will not happen, because in this case, such biomass has economically more competitive than the fossil fuel, i.e., the Bio-Fuel of the project would displace less competitive fossil fuel in the market. This logic can be applied for any penetration rate (less than 100%), while the threshold rate is set as [70%] for conservativeness.

If bio-fuel is indeed competitive, the methodology should require an assessment of why the penetration rate would not grow to 100% without the CDM.

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

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

>> Yes

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):

>> Yes

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.

>> Yes

Please explain:

>> Under the applicability criteria the methodology can only be applied in the specific situation where the project does not displace other fossil fuel or meet hidden demand. An assessment of emissions from the fossil fuel displaced would represent the baseline GHG emissions.

(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):

>> yes

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

>> mostly project specific data, national (grid), plus international (for N2O emissions fertilizer), or left to project developer (LCA emission factor of displaced fossil fuel, to be based on literature). Appropriate.

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:

>> Most data is monitored. Appropriate.

(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

>> CO_2 and N_2O

Sources:

- the plantation site,
- transportation to the project site (Bio-Fuel production facility),
- the project site,
- the steam supply site (to the project site), if present (outside of the project site),
- transportation to fuel-supply facility,
- fuel-supply facility, and
- all vehicles which utilizes the Bio-Fuel produced by the project
- and relevant sources related to electricity consumptions from the grid (referred to ACM0002)

ii) Physical delineation

>> see sources above

b) Indicate whether this project boundary is appropriate:

>> yes

(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:

>> The main assumption is that bio fuel sold equals fossil fuel replaced (corrected for fuel efficiency)

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

>> yes

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

>> yes

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

>> most data is monitored, using IPCC data for N2O emissions, referring to ACM for grid emissions.

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

reliable:

>> yes

f) State possible data gaps:

>> If LCA of emissions for fossil fuels are not available to the developer in the project country, this may require using an LCA from another region or there will be a gap in data that perhaps could be solved through the use of a conservative default factor. .

(7) Assessment of uncertainties:

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

i) The basis for determining the baseline scenario:

>> yes, the amount of biomass sold, and the related emission factor for fossil fuel displaced

ii) Algorithms/formulae:

>> not specifically

iii) Key assumptions:

>> not specifically

iv) Data:

>> for some data

b) State whether the uncertainties presented are reasonable:

>> Yes. However, section D.5 refers to "the uncertainty range of emission reductions", in order to assess whether certain items in the project boundaries can be considered "negligible". The methodology does not provide further information on how to assess this range. This could be included to make it more complete.

(8) Leakage:

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

>> Leakage effects caused in the biomass production part (replacing other uses) and by potentially displacing other bio-fuel, or meeting hidden demand, are all prevented via the applicability criteria. Electricity consumption in the production process is considered under leakage, and N2O emissions from fertilizer are also considered there.

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

>> yes

(9) Transparency and "conservativeness":

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

>> yes

b) State whether the baseline methodology is conservative:

>> yes

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

>> The major strength is that the methodology is extremely detailed and complete. Its main weakness is that, because of its completeness, it is difficult and expensive to apply. An option to allow for future projects to rely more heavily on literarure sources from previous LCAs may make this methodology more widely applicable.

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

>> no

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

>> The methodology is not specific to any region, can be applied anywhere as long as it meets conditions.

(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:

>> No

b) Indicate any further comments:

>> None

II. Proposed new monitoring methodology *(specify title here): >>*

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 "generalised monitoring methodology for biofuel production with LCA" monitors the relevant variables at the 3 stages identified in the baseline methodology. For the consumption stage, this is done at the fuel supply point. LCA emissions are analysed at the beginning of each crediting period.

(2) Key assumptions/parameters:

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

>> Biofuel is monitored at the supply point, assuming consumption equals purchase of fuel.

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

>> Yes

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

>> Yes

(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):

>> Most data are monitored specifically for the project, for some data the methodology refers to scientific literature (if available).

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

>> Yes

c) *State possible data gaps:*

>> Data needed for LCA may not always be available.

(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:

>> Yes

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):

>> Yes

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

>> Yes

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

>> Leakage as identified in the baseline methodology is monitored.

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

>> Biofuel sold (the main driver for emission reductions) can be verified via invoices.

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

>> See A II ii

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

>> The methodology is not specific to any region, can be applied anywhere if required data is available.

(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:

>> No

b) Indicate any further comments:

>>

Signature of desk reviewer

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