CDM: Recommendation Form for Small Scale Methodologies (version 01)

(To be used for presenting questions/proposals/amendments to the simplified methodologies for small-scale CDM project activity categories)

Date of SSC WG meeting:	30 January−02 February 2012, SSC WG 35
Title/Subject (give a small title or specify the subject of your submission, maximum 200 characters):	Clarification regarding applications of AMS-I.I v02, AMS-III.R v02 and AMS-III.D v18
Indicative methodology to which your submission relates (refer the items of Appendix B of the Simplified Modalities and Procedures), if applicable.	AMS-I.I "Thermal energy production with or without electricityBiogas/biomass thermal applications for households/small users" AMS-III.D "Methane recovery in animal manure management systems" AMS-III.R "Methane recovery in agricultural activities at household/small farm level"
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Summary of the query:

Please use the space below to summarize the query related to SSC methodologies/categories SSC Modalities and Procedures provide recommendation/analysis of the SSC WG.

Original text from DOE:

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Background

TUV NORD is now validating a biogas PoA using combined methodologies of AMS-I.I. version 02 and AMS-III.R. version 02 and the combination has already been approved by EB. Because AMS-III.R. version 02 quotes AMS-III.D. version 18, the PoA applies the above three methodologies. During the validation, TUV NORD has found two aspects of issues for these three methodologies and is kindly requesting the following clarification.

1. Aspect 1 of issues: possible errors

1.1 For AMS-III.D. version 18, the relationship of $VS_{LT,y}$ and $MS\%_{BL,J}$

For the formula 1, $BE_y - GWP_{CH4} * D_{CH4} * UF_b * \sum_{j,LT} MCF_j * B_{0,LT} * N_{LT,y} * VS_{LT,y} * MS\%B_{l,j}$, the parameter of $VS_{LT,y}$ is defined by AMS-III.D. version 18 as follows:

- *Volatile solids for livestock LT entering the animal manure management system in year y (on a dry matter weight basis, kg dm/animal/year)*

But, the parameter of $MS\%_{BL,J}$ defined by AMS-III.D. version 18 as follows:

- *Fraction of manure handled in baseline animal manure management system j*

The non-entering part of manure has already been considered in MS%BL,J (fraction of manure handled). Hence, if the calculation is carried out as per formula 1, there will be a double-counting discount of the fraction of manure entering the baseline manure management system. **Therefore, the $VS_{LT,y}$ might be defined again as follows:**

- *Volatile solids excreted for livestock LT in year y (on a dry matter weight basis, kg dm/animal/year)*

Our opinion is supported by page 10.41 of tier 2 approach to estimate CH4 emissions from manure management, Chapter 10 "Emissions from Livestock and Manure Management", under the volume 4 "Agriculture, Forestry and Other Land Use" of the "2006 IPCC Guidelines for National Greenhouse Gas Inventories"

1.2 For AMS-III.R. version 02, the meanings of two monitoring parameters

Paragraph 12 of AMS-III.R. version 02 stipulates the following:

Monitoring shall consist of:

(a) Recording annually the number of systems operating using survey methods;

(b) Estimating the average annual hours of operation of a system using survey methods;

AMS-III.R. version 02 allows using the formulas in paragraph 10 and paragraph 13 of AMS-III.D. version 18 to calculate the baseline emissions and project emissions, respectively. These formulas are the only formulas referred to by AMS-III.R. version 02. However, the above monitoring parameters stipulated by AMS-III.R. version 02 are not related to the formulas. **Thus, these two monitoring parameters can be considered irrelevant and might be deleted.** In other aspect, we assume that these two parameters were designed by SSC WG for the parameter of nd_y, which is used to calculate $VS_{LT,y}$.

- *nd_y, Number of days in year y where the animal manure management system is operational*

But, the nd_y can not be calculated by using these two monitoring parameters. **Maybe, nd_y could replace these two parameters.**

2. Aspect 2 of issues: unclear definition

2.1 For AMS-I.I. version 02, $\eta_{PJ/BL}$

In paragraph 13 of AMS-I.I. version 02, it is stated that

$$ER_y = \sum_k N_{k,0} * n_{k,y} * BS_{k,y} * EF * \eta_{PJ/BL} * NCV_{biomass} - LE_y$$

ηPJ/BL, Ratio of efficiencies of project equipment and baseline equipment (e.g. cook stove using coal) ***measured once prior to validation*** *applying the same test procedure (e.g. lab test), as per a national or an international standard. Official data or scientific literature can be used for cross-check purposes*

In Table 1 of AMS-I.I. version 02, it is indicated that $\eta_{PJ/BL}$ is an ex-post monitoring parameter to be monitored during the crediting period.

Our question is that considering the $\eta_{PJ/BL}$ is measured once prior to validation as per paragraph 13, the

$\eta_{PJ/BL}$ should be determined ex-ante but not ex-post (to be monitored during the crediting period) as stipulated in AMS-I.I. version 02.

Therefore, clarification on whether the $\eta_{PJ/BL}$ is ex-ante or not ex-post determined is kindly requested.

TUV NORD would like to express the following suggestion for your reference.

Theoretically, η_{BL} should be determined ex-ante (measured once prior to validation because the η_{BL} of baseline equipment has the highest value compared with one measured after validation and thus $\eta_{pJ/BL}$ is conservative); η_{PJ} should be periodically determined ex-post (to be monitored during the crediting period because the project equipment efficiency η_{PJ} is decreasing over the crediting period). Therefore, on a theoretical basis, AMS-I.I. version 02 should stipulate that the $\eta_{PJ/BL}$ is the ex-post monitoring parameter.

However, in practice, the ex-post determination of $\eta_{PJ/B}$L is time-and-cost-consuming. Considering that both η_{BL} and η_{PJ} are decreasing over the crediting period, the ex-ante determination of $\eta_{PJ/BL}$ is advisable. **Thus, TUV NORD would welcome if ηPJ/BL were to be measured once prior to validation and not monitored during crediting period.** Also, there is a registered PDD ref 4695 using AMS-I.C which is same to AMS-I.I in terms of using the $\eta_{PJ/BL}$. The page 14 of this PDD shows that the η_{PJ} and $\eta_{PJ/BL}$ are both the ex-ante parameters.

Recommendation by the SSC WG:

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

Please refer to paragraph 47of the meeting report of the SSC WG 35 <http://cdm.unfccc.int/Panels/ssc_wg>.

Answer to authors of query by the SSC WG:

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

The small-scale working group of the CDM Executive Board would like to thank the author for the submission.

Regarding the first query on AMS-III.D, the SSC WG agreed to clarify that the *VSLT,y* means the rate of volatile solids production/excretion per animal of livestock LT (kg dm/animal/year). The SSC WG will amend the current definition of the *VSLT,y* in a future revision of the methodology.

Regarding the second query on AMS-III.R, the SSC WG agreed to clarify the purpose of the monitoring parameters as follows:

(a) Recording annually the number of systems operating using survey methods" is to determine the number of applications installed by the project activity that are still being used in year *y*. The survey shall be used to determine this number, and only the operating equipment shall be considered in the emission reduction calculation for that year;

(b) Estimating the average annual hours of operation of a system using survey methods" is not necessary, considering that AMS-III.R will be applied to the project activity in conjunction with Type I methodologies (AMS-I.C, I.E and I.I) which should take care of this monitoring requirement if needed.

Regarding the third query on AMS-I.I, the SSC WG agreed to clarify that the ratio of project/baseline efficiency may be determined once ex ante and be used during the whole crediting period.

The SSC WG will incorporate all the above changes in a future revision of the respective methodology.

Signed by the Chair, Ms. Fatou Gaye
Date: 02/02/2012

Signed by the Vice-Chair, Mr. Peer Stiansen
Date: 02/02/2012

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