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):	Application of AMS-II.D in projects with a renewable energy generation component
Indicative methodology to which your submission relates (refer the items of Appendix B of the Simplified Modalities and Procedures), if applicable.	AMS-II.D "Energy efficiency and fuel switching measures for industrial facilities"
Name of the authors of the query:	Daniel Blank Institution: GFA ENVEST GmbH daniel.blank@gfa-envest.com

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 Stakeholder:

We are underway of preparing a CDM-activity in sugar factories. Sugar extraction from the raw product "sugar cane" is heat intensive. Energy generation in sugar cane mills thus mainly serves the purpose of satisfying the heat demand of the process. The heat demand is in the form of superheated steam. Electricity generation is of second priority only whereby steam, which is extracted from the steam cycle after the production process (so-called "exhaust steam"), is used in steam turbines.

The CDM-activity comprises of the following measures:

1) Improvement of demand-side (i.e. process) energy efficiency. The most prominent technical measure is the introduction of heat exchangers into the steam cycle; and
2) Additional renewable power generation at the project site (capacity is added).

Due to the project activity, the process heat demand is reduced below the baseline level and the boiler's steam generation capacity and the turbines' power generation capacity are increased above the baseline level.

Measure 2) can be described with ACM0006. The applicability criteria are met: e.g. use of biomass residues, no impact on processing capacity, no change in product, etcetera).

Measure 1) might be described with AMS-II.D, in our understanding which is for "any energy efficiency and fuel switching measures implemented at a single or several industrial (…) facilities".

[Remark: The implementation of measure 1) entails additional power export (above baseline levels). This is because of the combustion of further biomass residues. However, also the reduced steam consumption entailed by measure 2) will be partially converted in additional power generation in the new larger turbines. In the activity fossil fuel consumption is not reduced, but the plant is operated on 100% biomass already.]

An applicability criterion of AMS-II.D is to "directly measure and record the energy use within the project boundary" (paragraph 3). It is not possible to directly measure and record energy use by the process

equipment as only steam is consumed by the process equipment (based on steam tables an estimate of the energy consumption could be produced). It is only possible to directly measure and record the energy use within the project boundary. This however includes the effects of both measures. The request for clarification thus touches the necessity for an attribution of emission reductions to either component within this multi-component activity.

We seek your clarification whether in the special case of combining AMS-II.D with ACM0006 (or another methodology on renewable energy generation) the literal reading of the applicability criterion formulated in paragraph 3 of AMS-II.D to directly measure and record energy use within the project boundary (in contrast to each component of an activity) satisfies the conditions of the methodology?

Further we seek your clarification whether in cases where no capacity addition for renewable energy is involved (i.e. pure demand-side energy efficiency project) it is possible to apply AMS-II.D in situations where the project plant is operated at 100% biomass. The improved energy efficiency reduces on process steam consumption and consequently entails an increase of power generation (if additional turbine generation capacities are exploited). In other words, is it possible to apply AMS-II.D to cases in which fossil fuel consumption is not decreased due to the project activity, but energy export is increased?

Recommendation by the SSC WG:

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

Please refer to paragraph 40 of 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.

The SSC WG agreed to clarify that currently there is no SSC methodology applicable to cases where: (i) additional electricity is produced and supplied to a grid with no increase in the amount of biomass consumed, due to the implementation of energy efficiency measures at the demand side; and (ii) an additional amount of electricity is produced due to energy efficiency measures at the demand side plus additional biomass is combusted with added capacity.

Type I approved methodologies apply when there is an increased use of biomass, while Type II approved methodologies are applicable to project activities that implement energy efficiency measures resulting in the reduction of fossil fuel consumption.

Based on the description provided, it the group is also of the opinion that incremental electricity attributed to energy efficiency improvement and/or capacity addition can not be considered as two distinct components[1] of a project activity and a combination of multiple methodologies would not be applicable.

Consequently a new SSC methodology will be needed for this case. The project proponent may wish to explore large scale methodologies, for example ACM0006. For any clarification regarding the applicability of a large scale methodology, the author shall submit a request to the Methodologies Panel.

The above response is based on the limited information provided by the PPs. It was indicated during the subsequent communication with the query author that the project activity is at an early planning phase and that key information such as the capacity/size of the equipment, and baseline information etc are not available. For example, it would also be important to understand whether the ”incremental electricity” can be attributed to the “process efficiency improvement” and not because of other factors such as adjusting temperature/pressure may attribute savings in steam while still maintaining the process heat demand (signal to noise ratio) but finally producing some percentage of additional electricity without combusting additional biomass.

[1] Component of a project activity is defined by EB 28, para 55(b) as “A project activity with more than one component’ (e.g. methane recovery and production of electricity from the recovered methane) defined as: “a single project activity composed of two or more distinct project activities being implemented by the same project participant, each applying an approved

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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category/methodology separate from the other. Each component of a project activity should receive or provide an input from/to other components of the project activity". It seems that the project activity is currently under validation."