



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)

<i>Date of SSC WG meeting:</i>	20–23 March 2012, SSC WG 36
<i>Title/Subject (give a small title or specify the subject of your submission, maximum 200 characters):</i>	Clarification on the estimation of project emissions under AMS-III.AN
<i>Indicative methodology to which your submission relates (refer the items of Appendix B of the Simplified Modalities and Procedures), if applicable.</i>	AMS-III.AN “Fossil fuel switch in existing manufacturing industries”
<i>Name of the authors of the query:</i>	Vladislav Arnaoudov, Institution: Mitsubishi UFJ Morgan Stanley Securities CO., Ltd. arnaoudov-vladislav@sc.mufg.jp

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 PP:

AMS-III.AN. “Fossil fuel switch in existing manufacturing industries” covers project activities that involve switching from a fossil fuel to either: (a) A lower carbon content fossil fuel; or (b) A lower carbon intensive electric grid energy source in existing manufacturing industries. Paragraph 10 described that “the baseline emissions are the historic fossil fuel consumption related emissions associated with the element processes, affected by the project activity that would continue to occur in the absence of the project activity.” Paragraph 14 describes project emissions from a particular industrial fuel switch project activity as the sum of the emissions from fossil fuel combustion and electricity consumption.

The project participants would like to seek clarification for the case of projects involving fuel switch from fossil fuel to lower carbon content fossil fuel, where electricity is used for running auxiliary equipment prior to the fuel switch and after the project implementation.

The current version of the methodology in some cases may result in significant overestimation of the emission reductions, as baseline electricity consumption is not considered. We would like to seek guidance as of how project emissions from electricity consumption should be treated in this particular case.

Additional clarification requested 13-Mar-12:

1. As noted per equation 5 of the AMS-III.AN that grid electricity consumed by the project activity in **element process i** is to be used for calculating the project emissions. You are requested to provide the context in which the query arose with a brief description of the underlying project.

Response from PP submitted 14-Mar-12:

The project involves fuel switch in a steel ingot pusher furnace. In the baseline the furnace consumes heavy fuel oil, while after the project implementation it will consume natural gas for heating of steel ingots. Additionally, the furnace consumes electricity for the ingot pusher operation, fans, etc. both in the baseline and in the project.

Under the current version of the methodology, the above described situation is not reflected, i.e. only electricity consumption in the project scenario is accounted for, while electricity consumption in the baseline is disregarded. As electricity consumption can be a significant source of emissions, accounting only for project emissions of electricity consumption can significantly reduce the overall level of emission reductions achieved as a result of a fuel switch project implementation. Please see the response to Question 3 below for an example.

2. It is our understanding that the project activity also complies with the applicability condition specified in paragraph 6 of the methodology that states *"It can be demonstrated that the difference between the specific energy consumption of the fuel handling and other auxiliary systems of the project system is less than, or equal to, or not significantly higher than the baseline facility's specific energy consumption for fuel handling and other auxiliary systems (within the variation of 10% on annual basis, i.e. project auxiliary energy consumption per project output is no more than 110% of baseline auxiliary energy consumption per baseline output). Specific energy consumption is energy input of the auxiliary system per unit product output."* You are requested to provide information on:

- the share of auxiliary electricity consumption to the total project energy consumption;
- the auxiliary electricity consumption in the baseline and in the project.

The share of auxiliary consumption to total energy consumption in the project is within the range of 2 - 3%. In the baseline the total auxiliary electricity consumption is approximately 1,440MWh/year, while in the baseline it is approximately 1,500 MWh/hour.

3. Please substantiate your statement *"The current version of the methodology in some cases may result in significant overestimation of the emission reductions, as baseline electricity consumption is not considered"*. In other words, describe the cases where not considering baseline emissions would result in an overestimation of emission reductions.

There is a typo in the above statement. The correct statement should read:

The current version of the methodology in some cases may result in significant underestimation of the emission reductions, as baseline electricity consumption is not considered.

In the case described in the answer to question 2, as a result of the project implementation approximately 50 MWh/year are saved (mainly due to energy efficiency improvement measures). Our understanding is that the methodology does not allow to claim any emission reductions as a result of energy efficiency improvement, but only emission reductions from fuel switch.

At the same time, however, the way equation 5 is formulated requires project emissions from electricity consumption in the project case ONLY to be taken into consideration, thus "penalizing" the project participants.

Please consider the following example.

In a project, emission reductions as a result of fuel switch to a lower carbon content fuel (without considering electricity consumption in the project) are approximately 7,000 tCO₂/yr. The project consumes approximately 1,440MWh/yr of electricity. For simplifying the argument, we assume that the same amount of electricity is consumed in the baseline, i.e. there is no additional consumption of electricity and no additional CO₂ emissions compared to the baseline. If the electricity is procured from a carbon intensive national grid, e.g. CEF = 0.9 tCO₂/MWh, and we apply equation 5, then project emission due to electricity consumption become 1,296 tCO₂/yr, and overall emission reductions become 5,704tCO₂/yr.

This is almost a 19% reduction in the amount of emission reductions. We believe that in the cases like the one described above, it is preferable to consider project emissions only from the electricity consumed above the baseline electricity consumption levels, not the gross electricity consumption in the project.

Recommendation by the SSC WG:

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

Please refer to paragraph 27 of the meeting report of the SSC WG 36
<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 equation (5) of AMS-IIIAN accounts for project emissions due to fossil fuel and electricity consumption within the confines of the element process where fuel switch measures are implemented, whereas emissions on account of auxiliary consumption are addressed in paragraph 6 of the methodology. In other words, equation (5) corresponds to measures (a) and (b) specified in paragraph 1.

Paragraph 6 of the methodology implies that project auxiliary energy consumption per project output should be no more/less than 110%/90% of baseline auxiliary energy consumption per baseline output. The SSC WG agreed to clarify that project emissions due to auxiliary consumption shall be accounted for in cases where it is identified that the auxiliary consumption due to the implementation of the project activity has increased over the baseline level i.e. incremental consumption of fossil fuel and/or electricity in auxiliary equipment with reference to the baseline level shall be accounted for as project emissions.

The SSC WG agreed to include the above clarification in the next revision of the methodology.

Signed by the Chair, Mr. Peer Stiansen

Date: 23/03/2012

Signed by the Vice-Chair, Ms. Fatou Gaye

Date: 23/03/2012

Information to be completed by the secretariat

SSC-Submission number	SSC_615
Date when the form was received at UNFCCC secretariat	23 March 2012
Date of transmission to the EB	23 March 2012
Date of posting in the UNFCCC CDM web site	23 March 2012