



CDM: Recommendation form for Small Scale Methodologies (Version 01.1)

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

Date of SSC WG meeting:	20–23 August 2012, SSC WG 38
Title/Subject (give a small title or specify the subject of your submission, maximum 200 characters):	Revision of AMS-II.D to clarify determining baseline procedure and production capacity for projects involving batch processes
Indicative methodology to which your submission relates <i>(refer the items of Appendix B of the Simplified Modalities and Procedures), if applicable:</i>	AMS-II.D “Energy efficiency and fuel switching measures for industrial facilities”
Name of the authors of the query:	Naoki Matsuo Institution: Climate Experts, Ltd. n_matsuo@climate-experts.info

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:

AMS-II.D is a methodology to monitor “process-wise” or “equipment-wise” energy saving.

For the factory which has not yet monitored such “process/equipment-wise” energy consumption to date (this is common in developing countries), the project participant shall undertake monitoring during some period before installation of the project technology.

We know that nitric acid N₂O methodology (AM0034, ver. 5.1.1) has the similar case and provide a procedure to monitor the “baseline” N₂O emission factor during the “baseline campaign” which is under normal operation (normal operation is determined by at least 5 complete campaign). I think the concept of “campaign” is appropriate for AMS-II.D case also. On the other hand, we had better to avoid cumbersome procedures because AMS-II.D is a “small-scale” CDM methodology and it is characteristic not to specify the technological details of the project activities.

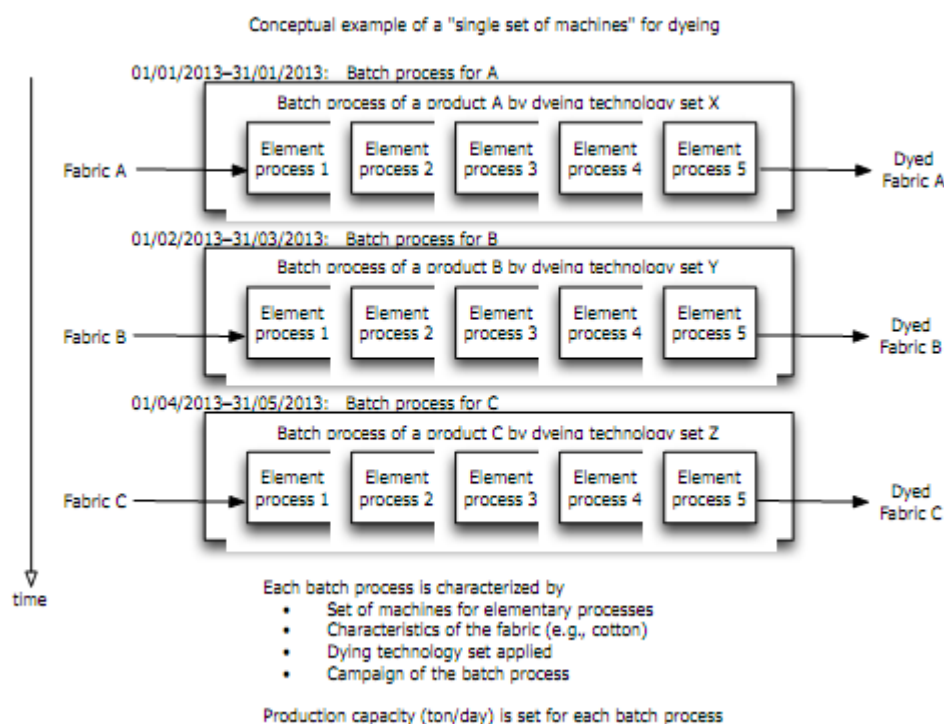
We would like the SSC WG to clarify that the concept of “baseline campaign” can be applied to determine the baseline energy consumption for each process/equipment as long as the campaign is demonstrated to be under “normal” operation, and/or suggest how many campaigns (or how long period for continuous operation) are needed to determine the baseline energy consumption.

Based on the communication with the SSC Secretariat, here we add more specific explanation as well as to integrate with other clarification and attach a proposal to revise the AMS-II.D.

The clarifications can be generalized to the specific sector/factory which utilize

- Batch process
- A set of machines for a process is NOT dedicated to a single product but to several products which has different characteristics in the sense of energy use

The case which we will apply AMS-II.D is the less-energy consuming technologies for “dyeing process” (which consume most of the energy) of a textile factory as shown in the following figure.



Characteristics of the this energy saving dyeing technologies are as follows:

- The dyeing process consists of several sequential element processes. The project activity a set of technologies which need less energy.
- There are several sorts of fabrics (e.g., cotton, polyester, CVC (blended cotton and polyester). For each sort, the energy (as well as water, temperature, chemicals, etc.) needed is different if the same machines are used. The energy (and others) demand is also dependent on the technologies applied.
- Batch process is applied by using the same series of machines for different sorts of fabric-type
- Therefore, a concept of "production capacity" cannot be applied directly for each machine o of machines.
- On the other hand, this "production capacity" concept can be applied for each series of mac per sort of product and per the dyeing technologies applied.
- In the case of the project dyeing technology we will apply, the production capacity increases is dependent on the sort of fabric-type).

CDM Methodological challenge:

- AMS-II.C cannot be applied because the production capacity can be changed by the project activity
- AMS-II.D can be applied if it clarifies several points, i.e.,
 - Generalization of "production capacity" to the above mentioned case where it is define sort of fabric-type and per dyeing technology applied.
 - How to apply to the batch processes for several sorts of fabric types.
- Batch process-wise treatment is necessary for determination of
 - Production capacity, and
 - Baseline energy consumption (& project energy consumption)
- Defining "campaign" (as a unit cycle of the batch process) in order to obtain historical energy consumption is necessary

Based on the above discussion, we would like to propose a revision of AMS-II.D as attached.

Recommendation by the SSC WG:

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

Please refer to paragraph 9 of the meeting report of the SSC WG 38
<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 baseline emissions can be determined using a “baseline measurement campaign” carried out prior to the implementation of the project activity. As per paragraph 3 of AMS-II.D, the campaign must include direct measurements and recording of the energy use within the project boundary. In addition, per paragraph 4 of AMS-II.D, the baseline measurement campaign must provide sufficient information such that the impact of the measures implemented by the project activity can be clearly distinguished from changes in energy use due to other variables not influenced by the project activity (signal to noise ratio).

Thus:

The project boundary must be defined to include downstream and upstream systems, if there is any reasonable possibility that their energy use and/or emissions will be impacted by the project activity (thus requiring measurement of energy use of impacted downstream and upstream systems), and

Independent variables that determine energy use, such as feedstock/material characteristics, final product characteristics, and operating conditions such as temperatures, must also be monitored during both the baseline measurement campaign and during the crediting period.

The baseline measurement campaign is conducted for a period of time sufficient to capture the range of independent variables expected to be encountered during the crediting period.

The baseline measurement campaign energy use (and/or emissions) data and the independent variable data are used to define a relationship between baseline energy use/emissions and the independent variables. During the crediting period, the same independent variables are monitored and used for calculating the baseline energy use/emissions for the values of the independent variables experienced during the crediting period. If, during the crediting period, conditions are such that the value(s) of the independent variables fall outside of the range of value(s) encountered during the baseline campaign, then either: (a) additional analysis is required to conservatively demonstrate that the relationship between baseline energy use/emissions and the independent variables (as defined using data collected during the baseline campaign) is still valid; or (b) a new baseline measurement campaign must be conducted; or (c) emissions reductions cannot be claimed during periods of time when the value(s) of the independent variables fall outside of the range of value(s) encountered during the baseline campaign.

The project proponents may wish to refer to Options B and C in the “Tool to determine the baseline efficiency of thermal or electric energy generation systems” (EB 48, annex 12) that may be applicable to the baseline measurement campaign.

For specific case of batch processes, the processes may be separated into ones whose characteristics, in terms of energy use, are different (by feedstock, product-type, applied technology, etc.). In other words, the product and feedstock are defined in manner that the baseline metric is only applied to products/feedstock that can be reasonably assumed to have the same/similar energy use profiles to the combination used for baseline campaign. The baseline metric in the case of batch processes may, if demonstrated to be conservative and reliable, take the form of energy use per batch for a given set of feedstock and product characteristics.

The SSC WG agreed to take into account the above clarification in a future revision of AMS-II.D.

Signature of SSC WG Chair: Mr. Peer Stiansen

Date: 23/08/2012

Signature of SSC WG Vice-Chair: Ms. Fatou Gaye

Date: 23/08/2012

SECTION TO BE FILLED IN BY THE UNFCCC SECRETARIAT

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History of the document

Version	Date	Nature of revision(s)
01.1	12 April 2012	Editorial changes to include new logo and other improvements.
01.0	2005	Initial publication.
Decision Class: Regulatory Document Type: Form Business Function: Methodology		