Approved baseline and monitoring methodology/ methodological tool revision recommendation form (Version 02.0)

INFORMATION TO BE COMPLETED BY PANEL/ WG	
Date and number of Panel/ WG meeting:	5–8 May 2014, SSC WG 44
Title/Subject of the request for revision:	Revision to expand the applicability of AMS-III.AQ to cover the use of the Bio-CNG in modified diesel vehicles and the supply of Bio-CNG to natural gas network and end-users
Reference number of the request for revision:	SSC_706
Exact reference (number, title and version) of the methodology or methodological tool to which the request for revision applies:	AMS-III.AQ – version 01.0 "Introduction of Bio-CNG in transportation applications"

Summary of the request for revision:

Original text from Stakeholder:

This revision is being proposed following the recommendations provided by the Small Scale Working Group (SSC WG) which are connected to the request for clarification SSC_698.

Text from SSC_698:

Original text from Stakeholder:

EQAO is involved in a replicable project idea (in advanced stage of development) to produce biogenic natural gas from renewable biomass (contained in waste organic matters, either solid or effluent, of agro-industrial plants). The final objective is to compress the biogenic natural gas and supply it to final users (using either pipelines or cylinders) –or- to use it in the plant own freight transportation fleet (mainly not limited to trucks using diesel).

In the case of bio-CNG gas for the plant own fleet, heavy-duty (HD) diesel engine will run on methane either by changing the combustion system from the Diesel-cycle to the Otto-cycle or using the Diesel Dual Fuel (DDF) cycle which used a Diesel-like cycle.

While evaluating applicable small-scale methodologies, we found two partially applicable, namely AMS-III.AQ (Introduction of Bio-CNG in transportation applications) and AMS-III.S (Introduction of low-emission vehicles/technologies to commercial vehicle fleets).

A possible application of the methodologies to our situation would involve the subdivision of the project activity in two parts, as follows:

- AMS-III.AQ (case 1) for the production of bio-CNG displacing CNG from fossil origin, with the producer of the bio-CNG being the only one to claim emissions reductions. The final users of the bio-CNG, being a third party or the company's own fleet, will consider the supplied compressed natural gas as if it was from fossil origin.
- AMS-III.S for the introduction of CNG to run either dedicated or DDF truck for project activity own freight transport.

Although the above mentioned approach seems reasonable to us, there is to the best of our understanding only one problem in the application of the methodologies, namely, case 1 of AMS-III.AQ is to be used in "cases where the vehicles are not included in the project boundary," which will very likely not be possible.

For that reason we seek your guidance to check if the proposed approach – with a request for deviation (vehicles included in the project boundary) – is acceptable. If not, could you please indicate issues to take into account and the best possible alternatives to apply the methodologies to the project idea?

Final response by SSC WG:

The Small-Scale Working Group (SSC WG) of the Executive Board (hereinafter referred to as the Board) of the clean development mechanism (CDM) would like to thank the author for the submission.

In response to the clarification sought on whether a combination of AMS-III.AQ and AMS-III.S is applicable to the project activity for the components of production of bio-CNG displacing CNG from fossil origin and for displacement of diesel consumption by captive diesel vehicles fleet respectively, the SSC WG agreed to clarify as follows:

(a) A combination of AMS-III.AQ and AMS-III.S is not applicable; both these methodologies are limited to only transportation applications and not designed for supply of bio-CNG to (a) non-transport consumers directly; and (b) distribution through the natural gas pipelines;

(b) Further to that, AMS-III.S does not cover project emissions associated with the production of the bio-CNG which is required for the underlying project activity which produces, purifies and compresses bio-CNG from organic matter, where physical leakage may occur;

(c) AMS-III.AQ is not applicable to cases where existing diesel vehicles are converted into bio-CNG vehicles because case 2 of the methodology only accounts for displacement of gasoline in transportation applications.

The SSC WG agreed to encourage the project proponent to explore revising AMS-III.AQ considering the following:

(a) Under case 1 of the methodology displacement of CNG from fossil origin could be expanded to include other uses besides transportation vehicles. The submitter may explore the opportunity to integrate provisions from AMS-III.H for biogas purification and use, wherein the methodology allows supply of upgraded biogas: (i) directly to natural gas pipeline, (ii) direct supply to consumers etc.;

(b) Under case 2 an additional scenario for displacement of diesel use in transportation could be included, taking into account conservatively the drop in energy efficiency due to conversion of diesel vehicles to bio-CNG vehicles.

Recommended decision to the Board on the request for revision

☒ Approve the proposed revised methodology or methodological tool (“A case”)
☐ Reject the proposed revised methodology or methodological tool (“C case”)

Type of the revision if the recommendation is A case

☒ The revision is a major revision
☐ The revision is a minor revision

Reasons for rejection if the recommendation is C case

Not applicable.

Any other issues arising from the request for revision

The Small-Scale Working Group (SSC WG) of the Executive Board (hereinafter referred to as the Board) of the clean development mechanism (CDM) would like to thank the author for the submission.

With regard to the request to expand the applicability of the methodology to the use of Bio-CNG in the modified diesel vehicles, the SSC WG would like to point out that the inclusion of the diesel-based vehicles under the ‘Case 2’ approach of this methodology can be considered if the drop in energy efficiency due to conversion of diesel vehicles to bio-CNG vehicles is provided. For more details please refer to the response to SSC_625.

With regard to the request to expand the applicability of the methodology to the use of biogas in stationary equipment to produce energy, the SSC WG would like to point out that the appropriate type I methodology shall be used for these applications.

The SSC WG agreed to accept this request partially:

1. The project activities where biogas in a form of biogenic natural gas is injected into natural gas distribution grid can use the AMS-III.AQ by applying provisions contained in annex 1 of "AMS-III.H: "Methane recovery in wastewater treatment".
2. The project activities where biogas in a form of Bio-CNG is used in the modified diesel engines can apply approach 1 of the revised methodology. Approach 1 assumes that the diesel vehicles have been converted to run on natural gas, which is then considered to be the baseline fuel. If the individual converted vehicles can be identified and the transportation service provided by them may be monitored during the project activity, approach described in AMS-III.S may be used to determine the ER for the displacement of diesel fuel. PPs are encouraged to propose a revision of AMS-III.S for that purpose.

- - - - -

Document information

Version	*Date*	*Description*
02.0	18 July 2013	Revised to remove the row "Date and signature of the chair and vice chair of Panel/WG"
01.0	4 July 2013	Initial publication. This document supersedes and replaces the following documents: • Recommendation form for Small Scale Methodologies (F-CDM-SSCwg) (Version 01.1) • Recommendation Form for Small Scale A/R Methodologies and Procedures (F-CDM-SSC-AR) (Version 01.1)

Decision Class: Regulatory
Document Type: Form, Recommendation
Business Function: Methodology
Keywords: applying methodologies and tools