

**REPORT OF THE TWENTY-EIGHTH MEETING OF
THE SMALL-SCALE WORKING GROUP**

UNFCCC Headquarters, Bonn, Germany
19–22 October 2010

RECOMMENDATIONS BY THE SSC WG TO THE CDM EXECUTIVE BOARD

A. Opening of the meeting and adoption of the agenda

1. The Vice- chair of the Small-Scale Working Group (SSC WG), Mr. Hugh Sealy, opened the meeting.
2. The agenda was adopted as proposed.

**B. Revision of the simplified modalities and procedures
for small-scale CDM project activities**

3. The SSC WG considered submissions requesting revisions to, or clarifications of approved SSC methodologies as well as requests for the creation of new methodologies. The detailed responses provided by the SSC WG are made publicly available at: <http://cdm.unfccc.int/goto/SSCclar> and <http://cdm.unfccc.int/methodologies/SSCmethodologies/NewSSCMethodologies/index.html>.

They can also be accessed by clicking the hyperlinked submission number in the table below.

Requests for revisions		
SSC_445	Revision of AMS-III.F for co-digestion of biomass waste and wastewater	(See paragraph 7)
SSC_461	Revision of AMS-III.F to include use of biogas through delivery to sale points and alternative method for baseline calculation	(See paragraph 7, 8, 9)
SSC_467	Revision of AMS-II.J to abolish the requirement for unique project marking of CFLs	(See paragraph 4)
SSC_468	Revision of AMS-III.E for the selection of default k value for different climate zones in case of stockpile	(See paragraph 5)
SSC_472	Revision of AMS-III.AJ to allow for inclusion of other plastics and also inclusion of project activities where the plastics are transported over 200km	(See paragraph 6)

Requests for clarifications		
SSC_456	Questions regarding level of precision, mean value estimation, and non-normal distributions	(See paragraph 10)
SSC_457	Clarification on the applicability of AMS-III.I to vermicomposting project activities	(See paragraph 11)
SSC_458	Clarification on the applicability of AMS-I.C to a new co-generation plant	(See paragraph 12)
SSC_459	Consideration of fugitive emissions due to operation of pre-project chillers	(See paragraph 13)
SSC_460	<i>Clarification on estimating baseline emissions for fuel switch project</i>	<i>(See paragraph 16)</i>
SSC_462	Clarification on the application of AMS-III.D and AMS-III.F combination to digestion of multiple waste feedstock	(See paragraph 7, 17)

SSC_463	Request for further clarification on applicability of AMS-III.C v.11	(See paragraph 20)
SSC_464	Request for further clarification on applicability of AMS-III.C v.12	(See paragraph 20)
SSC_465	Consideration of Leakage from Production emissions and Vehicle Capacity in Programme of Activities	(See paragraph 21)
SSC_466	Applicability of AMS-I.D/AMS-I.F for wind power projects feeding power to manufacturing unit of the wind project developer	(See paragraph 22)
SSC_469	Clarification on data variation in baseline determination of a Greenfield project under AMS-III.H	(See paragraph 8, 18)
SSC_470	Monitoring of electricity generation in AMS-I.D	(See paragraph 23)
SSC_471	Clarification on the applicability of AMS-I.F to small hydropower rehabilitations	(See paragraph 24)
SSC_473	Clarification on the applicability of AMS-II.C to project activities which involve installation of water saving devices	(See paragraph 25)
SSC_474	Clarification on the calculation of the thermal output of a cook stove for applicability of small-scale limit of 45 MWth	(See paragraph 26)
SSC_475	Clarification on the determination of baseline fuel mix ratio for a new cogeneration plant	(See paragraph 14)
SSC_476	Clarification on the applicability of AMS-III.P to Petrochemical Industry	(See paragraph 27)
SSC_477	Clarification on the applicability of AMS-III.Q to an enhanced waste heat recovery project	(See paragraph 28)
SSC_478	Clarification on AMS-I.C for baseline selection	(See paragraph 15)
SSC_479	Clarification regarding precision values of a ratio parameter	(See paragraph 29)
SSC_480	Clarification on the overlapping of two project boundaries under AMS-III.H	(See paragraph 19)

Request for new methodologies		
Submission number	Title	Recommendation
SSC-NM052-rev	Transport Energy Efficiency Activities using Idling Stop Device	(See paragraph 30)
SSC-NM053-rev	Determination of greenhouse gas emissions reductions based on whole-building simulation of building mitigation efforts using eQUEST/DOE-2.2	WIP (See paragraph 37)
SSC-NM055-rev	Introduction of Bio-CNG in road transportation	(See paragraph 31)
SSC-NM058	Lime kiln fired with gasified renewable biomass	(See paragraph 32)
SSC-NM059	Natural Gas thermal energy production with or without electricity	(See paragraph 33)
SSC-NM060	Emission avoidance by replacing the use of CO ₂ as Filler Bowl Counter Pressure in the Filling Operations with N ₂ in a Beverage Industry	(See paragraph 34)

SSC-NM061	Transportation Energy Efficiency Activities installing digital tachograph systems to commercial freight transport fleets	(See paragraph 35)
SSC-NM062	Heat generation from biomass residues without power generation	(See paragraph 36)

C. Response to requests for revision of methodologies

4. **Revision of AMS-II.J:** in response to the submission SSC_467 requesting revision of AMS-II.J “Demand-side activities for efficient lighting technologies” to abolish the requirement for unique project marking of CFLs, the SSC WG was of the opinion that a revision would not be necessary. The SSC WG clarified that the unique numbering/markings/labelling of CFLs is to ensure the “traceability” of CFLs to a project during ex post surveys for retention rates of CFLs particularly when multiple CFL projects are underway and their boundaries overlap.

5. **Revision of AMS-III.E:** in response to the submission SSC_468, requesting a revision of AMS-III.E “Avoidance of methane production from decay of biomass through controlled combustion, gasification or mechanical/thermal treatment”, the SSC WG agreed not to recommend a revision of AMS-III.E due to the inherent uncertainty related to the estimation of methane emissions from stockpiles. Project proponents may submit methods to more accurately assess the values for degradation rates (k) and methane correction factor (MCF) applicable to stockpiles of biomass.

6. **Revision of AMS-III.AJ:** in response to the submission SSC_472 requesting a revision of AMS-III.AJ “Recovery and recycling of materials from solid wastes” to broaden the applicability to other plastics (e.g. PET), the SSC WG agreed not to recommend a revision and seek further clarifications for example application of recycled PET plastics to produce sheets, flakes, chips and the respective virgin materials that would get displaced in the baseline. The group is of the opinion that the recycled PET materials do not necessarily displace the virgin PET materials for the production of intermediate/final products unlike the case of HDPE/LDPE.

7. **Revision of AMS-III.F:** in response to a number of pertinent submissions (e.g. SSC_461, SSC_462 and SSC_445), the SSC WG agreed to recommend:

- (a) Revision of AMS-III.F “Avoidance of methane emissions through composting”, as contained in annex 1 for aerobic controlled biological treatment of biomass, i.e. composting/co-composting;
- (b) SSC-III.AO “Methane recovery through controlled anaerobic digestion”, as contained in annex 2 for anaerobic controlled biological treatment of biomass, i.e. digestion and co-digestion (including of co-digestion of manure). Projects involving anaerobic digestion of manure as single substrate is covered under AMS-III.D.

8. **Revision of AMS-III.H:** considering a number of pertinent submissions (e.g. SSC_461, SSC_469), the SSC WG agreed to recommend a revision of AMS-III.H “Methane recovery in wastewater treatment”, as contained in annex 3. The revision includes additional guidelines pertaining to transport of biogas (e.g. by trucks) and application of upgraded biogas in transportation applications. Additional procedures for determining baseline emissions through measurement campaign are also included.

9. **Revision of AMS-III.D:** in response to SSC_461, the SSC WG agreed to recommend a revision of AMS-III.D, as contained in annex 4. The revision broadens the applicability to cover central anaerobic treatment of animal manure collected from farms and includes provisions for estimating baseline emissions based on the direct measurement of manure

quantity and volatile solids. Projects involving co-digestion of animal manure with other organic matters are now covered under SSC-III.AO.

D. Response to requests for clarification

10. In response to the submission SSC_456 requesting clarification on the general guidelines for sampling and surveys for SSC project activities, the SSC WG provided clarifications for example those related to applicable formulas, confidence interval. The working group also agreed to indicate that further work is underway (e.g. worked out examples) due for finalisation in early 2011.

11. In response to the submission SSC_457 requesting clarification on the applicability of AMS-III.I “Avoidance of methane production in wastewater treatment through replacement of anaerobic systems by aerobic systems” to vermicomposting project activities, the SSC WG agreed to indicate that further inputs by the project proponent would be required (e.g. consideration of possible anaerobic zones and N₂O emissions during vermicomposting).

12. In response to the submissions SSC_458 requesting clarification on the applicability of AMS-I.C “Thermal energy production with or without electricity” to a new cogeneration plant, the SSC WG agreed to clarify that the currently written AMS-I.C is not applicable to the underlying project since it does not comply with the definition of co-firing. The group invited the query author to submit a request for a revision or a new methodology.

13. In response to the submission SSC_459 requesting clarification on the consideration of fugitive emissions due to operation of pre-project chillers in the context of a registered project, the SSC WG clarified that the issue is not under the purview of the SSC WG.

14. In response to the submission SSC_475 requesting clarification on the determination of baseline fuel mix ratio (e.g. biogas and coal) for a Greenfield cogeneration plant, the SSC WG clarified that the baseline fuel mix for the project plant can be determined based on the maximum biogas production capacity of the digesters and the baseline fuel(s) shall be determined using the procedure provided in the “General Guidelines to SSC CDM methodologies” for Greenfield project activity.

15. In response to the submission SSC_478 requesting clarification on AMS-I.C version 17 for baseline selection, the SSC WG clarified that the SSC CDM methodologies have precedence over the general guidelines to SSC CDM methodologies and hence footnote 6 of AMS-I.C applies to the procedures for Type II and Type III Greenfield projects provided in the guidelines. It further clarified that the baseline emissions shall be calculated in a conservative manner using the lowest emission factor among the identified baseline alternatives.

16. In response to the submission SSC_460 requesting clarification on estimating baseline emissions for fuel switch projects using AMS-I.C, the SSC WG clarified that the response provided to the submission SSC_410 titled “Clarification on the options for calculating the baseline and project emissions under AMS-I.C” is related to determination of baseline emission factor in a conservative manner and it does not cover issues related to baseline alternatives selected by the underlying project activity.

17. In response to the submission SSC_462 requesting clarification on the use of a combination of AMS-III.D and AMS-III.F for co-digestion of multiple wastes (e.g. animal manure with green waste) the SSC WG recommended a new methodology (See annex 2), deconsolidated from AMS-III.F to cover such co-digestion project activities. Please also refer to paragraph 7 (b).

18. In response to the submission SSC_469 requesting clarification on data variation in the baseline determination of a Greenfield project under AMS-III.H, the SSC WG recommended a

revision of AMS-III.H, as contained in annex 3. It clarifies the conditions under which the measurement campaign can be utilized for baseline emission determination. Please also refer to paragraph 8.

19. In response to the submission SSC_480 requesting clarification on the overlapping of two project boundaries under AMS-III.H, the SSC WG agreed that under the circumstances and conditions described in the query and in the associated PDD, it is acceptable for the proposed project activity to share a sludge treatment plant facility with the registered project activity 0492.

20. In response to the submission SSC_463 and SSC_464 requesting clarification on the applicability of AMS-III.C “Emission reductions by electric and hybrid vehicles” version 11 and version 12, the SSC WG clarified that AMS-III.C version 11 is not restricted to project electric and hybrid vehicles, although version 12 is restricted. As per the procedures by the Board, the project proponents applying version 11 of AMS-III.C may continue using version 11 for submitting their project for validation/registration until the expiration of the methodology version as provided for by the procedure.

21. In response to the submission SSC_465 on the consideration of leakage from production related emissions and the requirements related to level of service of vehicles in the context of a programme of activities applying AMS-III.C, the SSC WG clarified that leakage emissions related to production of new vehicles can be ignored.

22. In response to the submission SSC_466 requesting clarification on the applicability of AMS-I.D “Grid connected renewable electricity generation” and AMS-I.F “Renewable electricity generation for captive use and mini-grid” for wind power projects feeding power to a manufacturing unit of the wind project developer via a regional grid, the SSC WG clarified that the underlying project is applicable under AMS-I.D.

23. In response to the submission SSC_470 requesting clarification on monitoring of electricity generation in AMS-I.D “Grid connected renewable electricity generation”, the SSC WG agreed to clarify that hourly measurement of electricity is applicable to all plants connected to the grid irrespective of operating mode. The SSC WG further referred to the definitions of monitoring parameters indicated in SSC_443 entitled “Clarification on the definition of Monitoring, Measuring, Reading and Recording Frequencies”.

24. In response to the submission SSC_471 requesting clarification on the applicability of AMS-I.F “Renewable electricity generation for captive use and mini-grid” to small hydropower rehabilitations, the SSC WG clarified that the circumstances and conditions described in the query does not comply with AMS-I.F for instance the underlying mini-grid in the baseline is supplied by a mix of hydro and diesel generators and hence does not comply with paragraph 13 of AMS-I.F and the emission factor for a diesel generator as stipulated in Table I.F.1 cannot be applied.

25. In response to the submission SSC_473 requesting clarification on the applicability of AMS-II.C “Demand-side energy efficiency activities for specific technologies” to project activities which involve installation of water saving devices, the SSC WG clarified that AMS-II.C is not applicable to the underlying project activity since it is designed for projects that do not reduce level of service, but provide the same level of service more efficiently. The SSC WG recommended the project proponent to submit a new methodology.

26. In response to the submission SSC_474, requesting clarification on determination of the thermal output of a cook stove to establish the compliance with the threshold for Type I SSC project activities of 45 MWth/15 MWe, the SSC WG clarified that the manufacturer’s specifications on the installed/ rated thermal output shall be used and in their absence the

installed/rated capacity should be determined by an accredited laboratory in accordance with relevant international/national standards.

27. In response to the submission SSC_476 requesting clarification on the applicability of AMS-III.P “Recovery and utilization of waste gas in refinery facilities” to Petrochemical Industry, the SSC WG clarified that AMS-III.P can in principle be applicable to waste heat recovery project implemented in petrochemical industries where in the baseline the waste gas produced is flared. The group invited the query author to submit a request for revision of AMS-III.P taking into account issues and suggestions as detailed in the response for example formulating baseline equations capturing the characteristics of petrochemical plants.

28. In response to the submission SSC_477 requesting clarification on the applicability of AMS-III.Q “Waste Energy Recovery (gas/heat/pressure) Projects” to an enhanced waste heat recovery project, the SSC WG, among the other issues, clarified that a revision of the methodology shall be proposed to cover the underlying project or the project proponent may consider following the progress on the revision of ACM0012 “Consolidated baseline methodology for GHG emission reductions from waste energy recovery projects”.

29. In response to the submission SSC_479 requesting clarification regarding precision requirements when the sampling efforts are aimed at estimating a ratio parameter (proportions), the SSC WG considered the request, and evaluated that further information from the query author would be required (e.g. the technology/measures in question, the number of units distributed and the parameters that is to be monitored by sampling).

E. Response to requests for new methodologies

30. In response to SSC-NM052-rev “Transport energy efficiency activities using post - fit Idling Stop device”, the SSC WG agreed to recommend a new methodology as contained in annex 5. This methodology comprises installation of post-fit type Idling Stop devices¹ in passenger vehicles used for public transport (e.g. buses), in order to reduce fossil fuel consumption and GHG emissions.

31. In response to SSC-NM055-rev “Introduction of Bio-CNG in road transportation”, the SSC WG agreed to recommend the methodology entitled “Introduction of Bio-CNG in transportation applications”, as contained in annex 6. The methodology involves project activities that produce Biogenic Compressed Natural Gas (Bio-CNG) from renewable biomass sources including waste organic matters and utilize as a fuel for transportation applications (e.g. compressed natural gas fuelled vehicles and modified gasoline vehicles).

32. In response to SSC-NM058 “Lime kiln fired with gasified renewable biomass” involving switching from a high carbon intensive energy source (a mix of energy sources) to gasified renewable biomass (syngas) or a mix of fossil fuel and a syngas in the lime production kiln, the SSC WG agreed to seek further clarifications for example on the description of the feedstock sources producing syngas; types of renewable biomass utilized; potential leakage sources and estimating baseline emission for Greenfield projects.

33. In response to SSC-NM059 “Natural Gas thermal energy production with or without electricity” the SSC WG, among other issues, agreed to seek further clarifications on determining baseline and treatment of project equipment as back-up units.

34. In response to SSC-NM060 “Emission avoidance by replacing the use of CO₂ as Filler Bowl Counter Pressure in the Filling Operations with N₂ in a Beverage industry”, the SSC WG agreed to seek further clarification on issues such as detailed procedures for monitoring of the

¹ Post-fit Idling Stop devices enable drivers to stop engine idling, without turning off the ignition, simply by shifting into the neutral gear position and releasing the clutch pedal when the vehicle stops.

portion of CO₂ released during the filling operation and establishing the historical index for energy consumption due to loading/off-loading CO₂ in the baseline.

35. In response to SSC-NM061 “Transportation Energy Efficiency Activities installing digital tachograph systems to commercial freight transport fleets”, the SSC WG noted that there is a need for significant improvement in the proposed draft before the methodology can be considered further. It agreed that rigorous approaches (e.g. including a control group) would be required to ensure real measurable emission reductions attributable to the project activity occur under the proposed project activity.

36. In response to SSC-NM062 “Heat generation from biomass residues without power generation” agreed not to recommend the methodology as the group was of the opinion that the proposed methodology needs significant improvements to cover a project activity involving increased share of biomass as compared to the baseline. The group noted that the underlying project activity however does not use the biomass in the baseline and it suggested the submission author to explore AMS-I.C. It further referred to the responses provided by the SSC WG to clarification requests SSC_460 “Clarification on estimating baseline emissions for fuel switch project” and SSC_478 “Clarification on AMS-I.C for baseline selection, ver.17” about assessment of baseline alternatives and determining the baseline emission factor.

37. In response to NM053-rev for the determination of greenhouse gas emissions reductions based on whole-building simulation of building using eQUEST/DOE-2.2, the SSC WG agreed to continue considering the proposed draft methodology, taking into account expert input and further input from the project proponents.

F. Top down Methodologies Recommended/In-progress

38. As envisaged in the workprogramme of the SSC WG <http://cdm.unfccc.int/reference/Notes/info_note06.pdf> the group developed in consultation with project proponents, experts and public and recommended a Type III methodology entitled SSC-III.AR “Substituting fossil fuel based lighting with LED lighting systems”, as contained in annex 7. The methodology includes several conservative default values for determining the emissions from the baseline fossil fuel lighting equipment to enable simplified determination of baseline emissions. It also includes quality requirements for project equipment i.e. LED lighting systems distributed under the CDM project to ensure continued provision of lighting service at the same time as simplified survey requirement for the retention rates of project equipment. The group agreed to indicate that the methodology may have high relevance for expanded application of CDM to LDCs (Least Developed Countries) and SIDs (Small Island Developing States).

39. The SSC WG considered a draft new methodology for application of biogas in small scale end use applications (e.g. cooking, drying etc.). The working group agreed to continue to consider the methodology taking into account inputs from the project proponents and make a recommendation at its twenty-ninth meeting. The SSC WG also agreed to work on a new methodology for solar cooker applications, clarifying issues related to baseline determination and monitoring (e.g. thermal energy output, efficiency testing) for recommendation to the Board at a future meeting.

40. The Board, at its fifty-third meeting, agreed to open calls for public inputs on small scale solar water heating methodology. The SSC WG agreed to continue to consider the methodology taking into account public and expert inputs and make a recommendation at its twenty-ninth meeting. The SSC WG appreciates all the input received and encourages continued interaction and input from project proponents during the development of methodologies.

41. The Board, at its fifty-third meeting, agreed to open calls for public inputs on small scale methodology for efficient outdoor/street lighting technologies. The SSC WG agreed to continue to consider the methodology taking into account public comments received, expert inputs and inputs from potential project proponents. It agreed to finalize the draft of the methodology by early 2011 for recommendation to the Board.

42. While approving AMS-III.AJ “Recovery and recycling of materials from solid wastes” the Board requested to expand the applicability of the methodology to other types of recyclable materials such as glass, paper, aluminum and other types of plastics etc. The SSC WG agreed to continue considering a top-down revision of AMS-III.AJ to include other recyclable materials from municipal solid wastes and finalize its recommendation by its thirtieth meeting taking into account public and expert inputs.

43. The SSC WG recognizes that there is significant potential for both emission reductions and sustainable development through water conservation activities. Such activities can reduce the energy consumption associated with water supply and treatment systems, for example through the reduction in energy use in water pumping requirements. However, a barrier to cost-effectively implementing such conservation projects is that the savings may be associated with multiple water systems within a region and thus the calculation of energy savings and emission reductions per unit of water saved can be complex; this is similar to the situation associated with electricity saving associated with a power grid. Therefore, the SSC WG suggests that a call for public comment be issued for creation of a calculation tool to determine an emission factor for a water supply system/grid. Such a tool may be similar in concept to the “Tool to calculate the emission factor for an electricity system”. The tool should be applicable to small-scale water conservation projects and PoAs in industrial, agricultural, commercial and residential facilities where the source of water is a regional (or national) water supply system with or without a regional water treatment system.

G. General guidance

44. The SSC WG agreed to recommend a revision of the general guidelines to SSC CDM methodologies to update the document to reflect the latest decisions of the Board with regard to approved combinations of methodologies for the application in PoAs (EB 56, para 57), as contained in annex 8. The SSC WG further noted that the Board has requested a recommendation on further combination of methodologies suitable for application in PoAs without the need for a prior approval. The group agreed to recommend that any combination of SSC methodologies that has been applied in a registered project may also be applied in the context of PoAs as long as the project proponent is able to demonstrate that there are no interactive or cross effects between the measures applied in respective component methodologies or that if there are such cross effects they are conservatively accounted for in the calculation of CERs. For example, if under a CPA, a lighting energy efficiency project is achieved under one component/methodology and a lighting control efficiency project is achieved in the same buildings under another methodology/component then the reduced energy consumption of the lights should be taken into account when determining savings from the lighting controls project.

45. As requested by the Board (EB 50, para 51) and the workprogramme (second semester of 2010) on developing non-binding best practices examples to illustrate the application of sampling guidelines, the SSC WG considered inputs from experts. The SSC WG agreed to continue to consider the issue and finalize the work at its twenty-ninth meeting.

H. Schedule of meetings

46. The SSC WG agreed to schedule its twenty-ninth meeting from 11–14 January 2011 taking into account the schedule of the Board. The deadline for new methodology submissions to this meeting is 16 November 2010 and the deadline for submitting requests for clarifications/revisions for this meeting is 14 December 2010.

I. Desk Reviews

47. The SSC WG noted the satisfactory completion of the desk reviews SSC-NM058, SSC-NM059, SSC-NM060, SSC-NM061 and SSC-NM062 undertaken for the proposed new SSC methodologies considered at the meeting.

External annexes to the twenty-eighth meeting of the SSC WG

- Annex 1: Revision of AMS-III.F
- Annex 2: SSC-III.AO “Methane recovery through controlled anaerobic digestion”
- Annex 3: Revision of AMS-III.H
- Annex 4: Revision of AMS-III.D
- Annex 5: SSC-III.AP “Transport energy efficiency activities using post - fit Idling Stop device”
- Annex 6: SSC-III.AQ “Introduction of Bio-CNG in transportation applications”
- Annex 7: SSC-III.AR “Substituting fossil fuel based lighting with LED lighting systems”
- Annex 8: Revision of “General Guidelines to SSC CDM methodologies”