

**REPORT OF THE NINETEENTH MEETING
OF THE SMALL-SCALE WORKING GROUP**

UNFCCC Headquarters, Bonn, Germany
24–27 February 2009

RECOMMENDATIONS BY THE SSC WG TO THE 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 Peer Stiansen welcomed the members of the working group. Mr. Hugh Sealy, Chair, was absent providing proper justification.
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 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.

Proposed new methodologies		
Submission number	Title	Recommendation
SSC-NM013	Promotion of natural refrigerants in air-conditioning and refrigeration	(See paragraph 15)
SSC-NM014-rev	Switch from High Carbon Intensive Energy Source (HCES) to Low Carbon Intensive Energy Source (LCES)	(See paragraph 6)
SSC-NM015-rev	Energy management measures at brick works	(See paragraph 4)
SSC-NM016-rev	Avoidance of HFC emissions in Standalone Commercial Ice Cream Cabinets	WIP (See paragraph 16)
SSC-NM017	Introducing recovery of spent sulphuric acid including pre-concentration, heat recovery and electricity generation to avoid CO ₂ emissions from its neutralisation with hydrated lime or lime stone	(See paragraph 17)
SSC-NM018	Switching from fossil fuels to biomass residues or other renewable fuels in clinker production	(See paragraph 18)
SSC-NM019	Transportation Energy Efficiency Activities using Retrofit Technologies	(See paragraph 19)
SSC-NM020	Electricity and/or heat generation using fuel cell	(See paragraph 20)
SSC-NM021	Reduction of energy consumption during hydraulic lime production for construction purposes by adding non-calcined mineral components and additives	(See paragraph 21)
SSC-NM022	Emissions reductions from electricity generation resulting from energy efficiency measures	(See paragraph 22)
SSC-NM023	Energy efficiency and renewable energy measures in new housing	(See paragraph 23)
SSC-NM024	Methodology for using recycling material instead of raw material	(See paragraph 24)

Requests for revisions		
SSC_250	Fuel ratio switch in a self-generation power plant using Heavy Fuel Oil and Natural Gas	(See paragraph 6)
SSC_253	Revision of AMS-III.N to include Integral skin type PUF in existing manufacturing facilities using HFC based blowing agents	(See paragraph 8)
SSC_268	Revision of AMS-III.X for restricted eligibility based on fraction of HFC-134a in total emissions reductions	(See paragraph 13)
SSC_269	Revision of AMS-II.J for LFR adjustment procedures and PoA-specific provisions	(See paragraph 11)
SSC_275	Revision of AMS-III.Q to allow new captive plants	(See paragraph 14)
SSC_276	Definition of terms, marking requirements, clarification on monitoring, Baseline Penetration requirements in AMS-II.J	(See paragraph 11)
SSC_277	Clarification of treatment of below 40W IBs and request for inclusion of commercial premises in AMS-II.J	(See paragraph 11)
SSC_278	Annual assessment of disposal methods of solid waste and waste water in AMS-III.F	(See paragraph 10)
SSC_279	Broadening the applicability of AMS-III.A to legume – grass rotation and additional options for fertilizer use	(See paragraph 9)
SSC_282	Revision of AMS-II.B to include energy efficiency measures in the natural gas supply system of the combined cycle gas turbines	(See paragraph 12)

Requests for clarifications		
SSC_245	Clarification on Consideration of methane emissions factor for composting of organic waste under AMS-III.F version 06	(See paragraph 31)
SSC_246	Clarification on applicability of AMS-I.D for project activity using biomass sourced from another country and using bunker fuel for the biomass transportation	(See paragraph 32)
SSC_247	Clarification on thermal energy production capacity of cogeneration project activity using AMS-I.C	(See paragraph 5)
SSC_248	Clarification regarding definition/scope of an industrial facility in AMS-II.H	(See paragraph 25)
SSC_249	Switching from fossil fuel to grid electricity	(See paragraph 6)
SSC_251	Clarification on consideration of leakage on non-POA SSC bundling project activities applying AMS-III.B	(See paragraph 26)
SSC_252	Applicability of AMS-III.B version 13 to a project activity involving multiple fuel switching	(See paragraph 6)
SSC_254	Clarification on the baseline development for multiple fuel switch under AMS-III.B	(See paragraph 6)
SSC_255	Clarification on vintage of data and survey period for assessment of biomass availability in AMS-I.D	(See paragraph 33)
SSC_256	Clarification on monitoring of biogas temperature and pressure using integrated flow meter in AMS-III.D	(See paragraph 27)
SSC_258	Clarification on applicability of AMS-I.D and AMS-I.C to a greenfield cogeneration project that is not implemented by a captive user	(See paragraph 5)

SSC_259	Applicability of AMS-III.B for project facility not owned or operated by the user of energy	(See paragraph 6)
SSC_260	Clarification on AMS-III.Q for project activity exporting thermal energy to other facilities included in the boundary	(See paragraph 28)
SSC_261	Clarification on applicability of AMS-III.F for composting manure project	(See paragraph 29)
SSC_262	Clarification on AMS-III.Q about estimating baseline emissions for thermal energy	(See paragraph 30)
SSC_263	Charcoal emission factor for project emission calculations	(See paragraph 5)
SSC_264	Applicability of SSC Type I methodologies for fossil fuel displacement in metal ore reduction processes	(See paragraph 5)
SSC_265	Applicability of AMS-I.C for project activity generating heat whose direct measurement is not possible	(See paragraph 5)
SSC_266	Clarification on requirement of linear <i>ex ante</i> lamp failure rate of CFLs in AMS-II.J	(See paragraph 11)
SSC_267	Applicability of AMS-III.H for greenfield project activity	(See paragraph 7)
SSC_270	Clarification on applicability of AMS-I.C regarding installed capacity limit for project activity with back-up capacity	(See paragraph 5)
SSC_271	Clarification on determining the occurrence of debundling in SSC project activities	(See paragraph 37)
SSC_272	Clarification about the project boundary in AMS-I.C for cogeneration projects that run in parallel with existing cogeneration unit	(See paragraph 34)
SSC_273	Applicability of AMS-I.C to cogeneration projects displacing grid electricity and surplus electricity exporting to the grid	(See paragraph 5)
SSC_274	Clarification on the residence time of the non-soluble part of the organic matter in anaerobic lagoons in AMS-III.H	(See paragraph 7)
SSC_280	Clarification on the applicable urea emission factor, bundling of farms and acceptable farm management practices in AMS-III.A	(See paragraph 9)
SSC_281	Consideration of leakage due to transfer of equipment outside the project boundary in SSC methodologies in AMS-II.D	(See paragraph 35)
SSC_283	Clarification on bundling of projects involving Animal Waste Management Systems	(See paragraph 36)
SSC_284	Clarification regarding lumen equivalence table and using information from baseline survey in AMS-II.J	(See paragraph 11)

C. Proposed new methodologies

4. **Energy management measures at brick works:** in response to the submission SSC-NM015-rev and other related submissions, the SSC WG agreed to recommend a new methodology titled “SSC-III.Z Fuel switch, process improvement and energy efficiency in brick manufacture” as contained in annex 1. The methodology covers activities involving change in fuels, raw materials and/or the production process of brick manufacture to result in reduced or

avoided fossil fuel combustion for forming, sintering (burning) and drying of the brick. The production process change may also involve improvement in energy efficiency of the facility.

D. Revisions & requests for revision of approved methodologies

5. **Revision of AMS-I.C:** in response to the submissions SSC_247, SSC_258, SSC_263, SSC_264, SSC_265 and SSC_273, the SSC WG agreed to recommend a revision of AMS-I.C as contained in annex 2. The recommended revision includes additional baseline scenarios and results in expanded applicability of the methodology for renewable fuel based heat and/or power generation project activities (including cogeneration) that supply: (a) electricity to a grid and/or displace grid electricity or both; (b) electricity and/or thermal energy for on-site consumption or for consumption by other facilities. It includes guidance on estimating thermal energy output of technologies/measures such as biomass stoves or water heaters whose metering of thermal energy output is not plausible. Further, in response to submission SSC_270, the SSC WG agreed to indicate that the Small Scale CDM project output capacity limits cover all facilities in a project activity including main and marginal units such as back-up units in accordance with the approved guidance. Taking into account several issues listed in the detailed response by the SSC WG, the project proponent may propose criteria that could possibly allow back-up units to be excluded from consideration in the determination of installed capacity limits when applying AMS-I.C.
6. **Revision of AMS-III.B:** in response to the submissions SSC-NM014-rev, SSC_249, SSC_250, SSC_252, SSC_254 and SSC_259, the SSC WG recommended a revision of AMS-III.B as contained in annex 3. The recommended revision broadens the applicability of the methodology by including options to consider multiple fuel use in the baseline and the project case as well as grid electricity use/displacement. Additional procedures for determining baseline emissions for Greenfield facilities have been provided.
7. **Revision of AMS-III.H:** in response to SSC_274 and SSC_267, the SSC WG agreed to recommend a revision of AMS-III.H as contained in annex 4. The proposed revision clarifies the methods for determination of baseline for Greenfield projects. Further, minimum requirements concerning sludge removal interval in the baseline anaerobic lagoon have been specified.
8. **Revision of AMS-III.N:** in response to SSC_253, the SSC WG agreed to recommend a revision of AMS-III.N as contained in annex 5 to expand the applicability of the methodology to include integral skin type of polyurethane foam (PUF) that uses HFC refrigerants in existing facilities.
9. **Revision of AMS-III.A:** in response to the submissions SSC_279 and SSC_280, the SSC WG clarified the method for determination of emission factor for urea production and acceptable farm management practices. It requested further inputs from the project proponent, e.g. assessment of the availability of suitable inoculants and corresponding test methods to validate the actual application of inoculants versus urea use for different combination of rotation crops proposed for inclusion in the methodology.
10. **Revision of AMS-III.F:** in response to the submissions SSC_278, the SSC WG agreed to clarify that assessment of baseline disposal methods for solid waste needs to be done *ex ante* when applying AMS-III.F.
11. **Revision of AMS-II.J:** The SSC WG conducted extended discussions on submissions SSC_266, SSC_269, SSC_276, SSC_277 and SSC_284, all requesting clarification on or revision of AMS-II.J. The SSC WG agreed to continue consideration of the methodology, with a view to recommend its revision at the next meeting. In this context *inter alia* the following issues will be addressed taking into account expert inputs:

- Provide definitions of Net to Gross, Baseline Penetration, undesired secondary market effects, and leakage (SSC_276);
- Clarify and possibly modify CFL marking requirements (SSC 276);
- Address potential overlap of net to gross ratio and BP (SSC 269 and 276);
- Review of lumen table in paragraph 2 and possibly propose its modification (SSC 266, 277 and 284);
- Remove or clarify reference to lock in and screw in lamps for BP and surveys (SSC 276);
- Review and possibly modify lamp failure rate calculations including use of survey data to revise ex-ante estimates (SSC 266 and 269);
- Review and possibly modify approach to estimate cross effects leakage items (18 b) for POAs (SSC 269);
- Review and possibly modify surveying requirements in 16 (i) (SSC 284 and SSC 269);
- Review and possibly modify PoA versus CPA requirements (SSC 269 and 276);
- Review and possibly modify requirements on surveying and sample size estimation (consistency with other approved methodologies).

12. **Revision of AMS-II.B:** in response to submission SSC_282, the SSC WG agreed that the suggested revisions proposed by the project proponent are inadequate to enable the applicability of AMS-II.B to the proposed project activity. The eligibility of proposed measures under the CDM will need further analysis and justification, especially with respect to supply of natural gas at higher operating pressure to gas turbine power plants primarily by modifying certain passive mechanisms to result in reduced use of electrical compressors to boost the gas supply pressure to the turbines.

13. **Revision of AMS-III.X:** in response to submission SSC_268, the SSC WG agreed to indicate that cap on emission reductions from refrigerant component has been introduced in the methodology following evaluation of relevant issues (e.g. low fugitive refrigerant emission rates in sealed systems such as domestic refrigerators, uncertainties related to estimation of refrigerant baseline emissions). Therefore the SSC WG agreed not to recommend the revision as proposed. However, considering that AMS-III.X projects are expected to have all of the refrigerators replaced in the first or second years of a project, the cap of 15% per year may result in a much lower average annual limitation during the entire crediting period. Project proponent may consider proposing a revision of the methodology to account for this issue, i.e. cap on annual reduction versus cap on reductions during the crediting period.

14. **Revision of AMS-III.Q:** in response to submission SSC_275, the SSC WG agreed to that applicability of AMS-III.Q in principle can be expanded to include new captive power plant in the baseline. The project proponent may consider submitting a request for revision considering elements from ACM0012 and including guidance specifying situations under which the grid cannot be considered as the baseline although the plant is grid connected.

E. Response to requests for new methodologies

15. **Promotion of natural refrigerants in air-conditioning and refrigeration:** in response to the submission SSC-NM013, the SSC WG agreed not to recommend the methodology. The SSC WG agreed that there were fundamental concerns related to monitoring of the conversion of mobile airconditioning units (MACs) to use hydrocarbon refrigerants. The methodology, while

relying on self declared labelling by the service technicians, did not include adequate provisions to ensure that the converted MACs continue to use hydrocarbon refrigerants during the crediting period and do not revert back to using baseline HFC refrigerants. Extended efforts by the project proponent and the working group over time could not resolve these issues.

16. Avoidance of HFC emissions in Standalone Commercial Ice Cream Cabinets

(SSC-NM016-rev): the SSC WG noted that the methodology submission contains issues which need to be addressed, consisting *inter alia* of inclusion of manufacturing locations in the boundary, data vintage of freezer ice cream cabinets, options to use fugitive refrigerant emission rates (IPCC rates v/s documented operation of equipment) and the monitoring requirements apart from the improvement of drafting quality. The group agreed to continue working on the methodology with a view to finalising it at its twentieth meeting, taking into account an expert input, and feedback from the project proponents.

17. Recovery of spent sulphuric acid avoiding CO₂ emissions from its neutralisation with hydrated lime or lime stone and energy production: in response to SSC-NM017 requesting a methodology for application in manufacturing of chemicals, dyes, pigments, drugs etc., the SSC WG agreed to request further input from the project proponent such as guidance on choosing of baseline for energy generation, potential use of other raw material in the recycling plant and transportation of spent sulfuric acid.

18. Switching from fossil fuels to biomass residues or other renewable fuels: SSC-NM018 proposed a methodology for substitution of fossil fuels in large kilns associated with manufacturing of specific products, like clinker or chalk. The SSC WG agreed to seek further clarifications from project proponent (e.g. definition of alternative fuel, guidance to identify the baseline scenario, procedures to calculate project emissions for biomass production) before making a recommendation to the Board.

19. Transportation Energy Efficiency Activities using Retrofit Technologies:

SSC-NM019 is for retrofit of vehicles for commercial passenger vehicles (e.g. those equipped with 2-stroke engine) using technologies such as direct in-cylinder fuel injection systems. The SSC WG agreed that further improvements would be required in the proposed approach, e.g. further clarity on technology/measure, guidance to ensure comparable service level between project and the baseline.

20. Electricity and/or heat generation using fuel cell: SSC-NM020 proposed a methodology for electricity or heat generation (including cogeneration) with fuel cell technologies using natural gas. The generated heat and/or electricity will be supplied to existing or new users and facilities and will displace heat and/or electricity generated using more carbon intensive fossil fuel that would have been used in the baseline. The SSC WG agreed to seek further clarification from the project proponents such as the lifetime of the molten carbonate fuel cell and sources of oxygen and carbon dioxide that is used in the fuel cell.

21. Reduction of energy consumption during hydraulic lime production: SSC-NM021 is for alternative hydraulic lime production for construction purposes utilising non-calcined mineral components and additives. The SSC WG agreed to seek further inputs (e.g. analysis of competing demand for alternative materials and determination of the service level of the alternative lime) before making a recommendation to the Board.

22. Reduction of steam consumption with process optimisation in alumina production: SSC-NM022 is for improving the energy efficiency of a sub-process within an existing industrial, mining, or mineral production facility where the saved energy is utilised for the increased generation of electricity which displaces electricity from another source. The SSC WG agreed that

further improvements such as impact of changes in the quality of the raw material, QA/QC procedures on monitoring of input and output parameters of process/sub-process and delineation of project boundary would be required before a recommendation to the Board can be made.

23. **Energy efficiency and renewable energy measures in new housing:** SSC-NM023 proposed a methodology for new residential developments that use efficiency and/or renewable energy technologies to reduce greenhouse gas emissions from existing similar individual residences or a group of residences. The SSC WG agreed that further improvements in the proposed approach would be required before a recommendation to the Board can be made. Numerous comments and suggestions were provided with some areas of consideration including focusing on comprehensive efficiency and renewable projects, perhaps eliminating water conservation measures, and better defining the baseline.

24. **Methodology for using recycling material instead of virgin material:** SSC-NM024 proposed a methodology for project activities that involve recycling facilities to recover material e.g. High-Density Polyethylene (HDPE) and Low-Density Polyethylene (LDPE) residues. Recycled materials displace virgin inputs (e.g. pellets) for the production of finished or intermediary plastic products, thereby reducing greenhouse gases. The SSC WG agreed that further improvements in the proposed approach (e.g. equivalence of service of the end products, prevention of anaerobic decay of the remaining waste at the recycling facility, ensuring the use of appropriate emission factors for the virgin materials) would be required before a recommendation to the Board can be made.

F. Response to request for clarification - considered prior to the meeting¹

25. SSC_248 requested clarification on the definition/scope of an industrial facility in AMS-II.H. The SSC WG agreed to clarify that the methodology is applicable to commercial/non commercial buildings (e.g. schools, hospitals, hotels and office buildings) as also indicated in the response SSC_197 by SSC WG 17.

26. SSC_251 requested clarification on the consideration of leakage in non-POA SSC bundling project activities applying AMS-III.B. The SSC WG agreed to clarify that version 13 of AMS-III.B does not require the consideration of leakage emission resulting from fuel extraction, processing, liquefaction, transportation, re-gasification and distribution of fossil fuels outside the project boundary when being applied to a bundled project activity. Such leakages are to be considered only in the context of a project activity under a programme of activities in accordance with version 13 of AMS-III.B.

27. SSC_256 requested clarification on the monitoring of biogas temperature and pressure using integrated flow meter in AMS-III.D. The SSC WG agreed to clarify that in the context of paragraph 25 of AMS-III.D, if the biogas flow meter employed measures flow, pressure and temperature and displays/outputs normalised flow of biogas, there is no need for separate monitoring of pressure and temperature of the biogas. The project proponent may also wish to refer to the response provided by SSC WG to the clarification request SSC_185 available at <http://cdm.unfccc.int/methodologies/SSCmethodologies/Clarifications/index.html?p=5>.

28. SSC_260 requested clarification on AMS-III.Q for project activity exporting thermal energy to other facilities included in the boundary. The SSC WG agreed to clarify that the described project activity is in principle eligible to apply AMS-III.Q; however, as currently written, AMS-III.Q does not include specific provisions for steam/heat export to third party. The project proponent may submit a request for revision of AMS-III Q, as also indicated in SSC_146,

¹ Considered in accordance with paragraph 8 of annex 6 of the thirty-fourth report of the Board.

including additional guidance on project boundary, baseline and monitoring to cover the described situation.

29. SSC_261 requested clarification on the applicability of AMS-III.F for composting manure project. The SSC WG agreed to clarify that as currently written AMS-III.F is not applicable to composting of manure however treatment of manure in composts as one of the options can be accommodated in the methodology through a request for revision process.

30. SSC_262 requested clarification on AMS-III.Q about estimating baseline emissions for thermal energy. The ACM0012 version 3.1 procedures cited by the query author to calculate the baseline emissions for project activities that utilize waste heat as an energy source for direct use as process heat displacing fossil fuel use are appropriate to use when applying AMS-III.Q. The SSC WG agreed to recommend including the procedures and the equation at the next revision of AMS-III.Q.

G. Response to request for clarification - considered at the meeting

31. In response to SSC_245, the SSC WG agreed that the project proponent may propose a method to demonstrate the absence of anaerobic conditions in which case the project methane emissions can be neglected.

32. In response to SSC_246, requesting clarification on the applicability of AMS-I.D for project activity using biomass sourced from another country and using bunker fuel for the biomass transportation, the SSC WG agreed to clarify that emissions from transportation on international waters would be considered as leakage.

33. In response to SSC_255, requesting clarification on the vintage of data for assessment of biomass availability² for AMS-I.D project, the SSC WG agreed to clarify that published data (e.g. official reports, survey results etc.) not older than 3 years at the time of start of commercial operation of the project may be used.

34. In response to SSC_272, the SSC WG clarified that, as biomass used by the project activity is diverted from other units, natural gas consumption above historical level should be accounted for as leakage emissions.

35. In response to SSC_281, requesting clarification on the consideration of leakage due to transfer of equipment to outside of the project boundary when applying AMS-II.D, the SSC WG agreed to clarify that the guidance from the Board indicating that such leakages can be neglected can be applied without explicit inclusion in the methodology.

36. In response to SSC_283, requesting clarification on the bundling of projects involving Animal Waste Management Systems, the SSC WG agreed to clarify that two project activities at the same farm, with the same project participants or with new project participants can be submitted for registration as long as the combined size of the project activities does not exceed the small scale limit of 60 kt CO₂e emission reductions.

H. General guidance

37. The SSC WG noted that several requests for clarifications have been received concerning the guidance on 'determining the occurrence of debundling' (e.g. SSC_182, SSC_283 and SSC_271). In order to comprehensively respond to these requests, the SSC WG requests the following guidance from the Board:

² In accordance with Attachment C (information on leakage in biomass project activities) found at <<http://cdm.unfccc.int/methodologies/SSCmethodologies/approved.html>>.

- In case the start date of the new project activity requesting registration is within two years of the registration of the existing project, there will be a need for guidance on condition 3 of the procedure, i.e. 'Registered within the previous 2 years', in the context that the dates of registration or request for registration of project activities are separated by more than 2 years.
- Further guidance on Type I project activities providing energy to the same user in the context of a project activity with more than one component is requested. The context involved two project activities at a palm oil mill facility. One of the project activities is under category III.E (methane avoidance from empty fruit bunches, a type of solid waste) that includes an additional AMS-I.D component to generate electricity via controlled combustion of empty fruit bunches. The second project is under category III.H, methane avoidance from waste water (palm oil mill effluent) that includes an additional AMS-I.D component for combustion of recovered biogas to generate electricity. If the two projects were implemented without the category I.D component, the projects would not be deemed to be a debundled component of a large project activity in accordance with the current guidance as the projects are applying different project categories. Because of the I.D component that would provide energy to the same user, they would be considered a debundled component in accordance with the EB36 guidance, even though I.D is only a secondary component of the two projects. The SSC WG agreed to recommend a revision of the guidance to address the issue as contained in annex 6.

38. As requested by the Board at its forty-first meeting (see annex 13, EB 41), the SSC WG started developing a draft guidance on sampling and surveys for SSC project activities with a view to recommend to the Board. First and second drafts of the guidance have been reviewed by the SSC WG and the group agreed to further work on the guidance to make it more practicable, e.g. by including illustrative examples based on typical SSC projects, with a view to recommend a final version to the Board at its twentieth meeting.

I. Schedule of meetings

39. The SSC WG agreed to schedule its twentieth meeting from 29 April–02 May 2009 taking into account the schedule of the Board. The deadline for new methodology submissions to this meeting is 03 March 2009 and the deadline for submitting requests for clarifications/revisions for this meeting is **31 March 2009**.

J. Desk Reviews

40. The SSC WG noted the satisfactory completion of the desk reviews undertaken for the proposed new SSC methodologies considered at the meeting.

External annexes to the nineteenth meeting of the SSC WG

- Annex 1: SSC-III.Z Fuel switch, process improvement and energy efficiency in brick manufacture
- Annex 2: Revision of AMS-I.C
- Annex 3: Revision of AMS-III.B
- Annex 4: Revision of AMS-III.H
- Annex 5: Revision of AMS-III.N
- Annex 6: Guidance on ‘determining the occurrence of debundling’