REPORT OF THE FOURTEENTH MEETING
OF THE SMALL-SCALE WORKING GROUP

UNFCCC Headquarters, Bonn, Germany
11 - 13 February 2008

RECOMMENDATIONS BY THE SSC WG TO THE EXECUTIVE BOARD

A. Opening of the meeting and adoption of the agenda

1. The Chair of the Small-Scale Working Group (SSC WG), Ms. Ulrika Raab, opened the meeting. Mr. Kamel Djemouai, Vice-Chair of the SSC WG, was absent providing ample justifications.

2. On behalf of the SSC WG, the Chair expressed deep appreciation to the outgoing Vice-Chair Mr. Richard Muyungi for the excellent contributions to the work of the group.

3. The agenda was adopted as proposed.

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

4. The SSC WG considered submissions requesting revision 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>.

Proposed new methodologies		
Submission number	**Title**	**Recommendation**
SSC_140	Demand-side programs to promote high-efficiency electrical end-use technologies using deemed savings	(See paragraph 17)
SSC_148	Energy efficiency measures through centralization of utility provisions in an industrial facility, as contained in annex 1	(See paragraph 5)
SSC_149	Transportation energy efficiency activities using retrofit technologies	(See paragraph 18)
SSC_151	Promotion of natural refrigerants in air-conditioning and refrigeration systems	(See paragraph 19)
SSC_155	E-Diesel for Stationary or Mobile Sources	(See paragraph 12)
SSC_156	Emission reductions by low greenhouse gas emitting transportation media	(See paragraph 20)
SSC-NM0001	Fugitive methane recovery from mining operations	(See paragraph 13)
SSC-NM0002	Methodology for energy efficiency improvement in industrial facilities - Generation projects	(See paragraph 14)
SSC-NM0003	Switching from High Carbon-Intensive Energy Source (HCES) to Low Carbon-intensive Energy Source (LCES) in a facility	(See paragraph 15)
SSC-NM0004	Methane avoidance in animal waste management systems (AWMS) through separation of volatile solids	(See paragraph 16)

Requests for revisions		
SSC_142	Revision of AMS III.E. to include controlled anaerobic digestion of biogenic waste for power generation	(See paragraph 6)
SSC_143	Revision of AMS I.C. to broaden the applicability of the methodology for cogeneration system by including additional baseline scenarios	(See paragraph 7)

Requests for clarifications		
SSC_141	Clarification on the Applicability of Methodology AMS I.D. version 10	(See paragraph 22)
SSC_144	Clarification on applicability of AMS I.C. for co-generation projects	(See paragraph 27)
SSC_145	Applicability of AMS III.B and AMS III.Q. for generation of process steam using Hydrogen and Fuel Oil	(See paragraph 23)
SSC_146	Query on one of the applicability conditions of AMS III.Q.	(See paragraph 24)
SSC_147	Clarification on AMS III.B concerning displacement of high carbon intensive grid power with low carbon intensive captive power	(See paragraph 25)
SSC_150	Query on applicability of AMS II.D. for cement kilns energy efficiency activities	(See paragraph 28)
SSC_152	Inclusion of Montreal Protocol gases in the baseline under AMS II.C.	(See paragraph 26)
SSC_153	Applicability of AMS I.C. to solar thermal water heaters displacing heat produced by a fossil fuel-fired cogeneration plant	(See paragraph 29)
SSC_154	Applicability of AMS I.D. to installation of a backpressure turbine generator to use a steam source existing in the baseline	(See paragraph 30)
SSC_158	Calculations of baseline emissions in AMS III.H. from wastewater systems which are partially anaerobic	(See paragraphs 8, 31)
SSC_159	Clarification on fossil fuel combustion in hydro projects applying AMS I.D.	(See paragraph 32)
SSC_160	Limit for emission reductions defined in the monitoring methodology of AMS III.G.	(See paragraph 10)
SSC_161	Identification of baseline scenario at an existing renewable energy facility in AMS I.C.	(See paragraph 7)

C. Proposed new methodologies

5. **Proposal for a new type II methodology for energy efficiency measures through centralization of utility provisions of an industrial facility (SSC_148):** in response to the submission SSC_148 (linked to SSC_126) the SSC WG agreed to recommend a new methodology titled 'SSC II.H. Energy efficiency measures through centralization of utility provisions of an industrial facility' for project activities that implement more efficient technologies to produce electrical energy, thermal energy and cooling in addition to switching fossil fuels in an integrated manner. Emission reductions are achieved through the introduction of a combined heat and power unit or a combined cooling, heat and power unit that uses a less carbon intensive fuel. The recommended methodology is contained in annex 1.

D. Revisions & requests for revision of approved methodologies

6. **Request for revision of AMS III.E. (SSC_142): t**he SSC WG noted that SSC_142 requested a revision of AMS III.E. to extend the applicability to treatment of biogenic organic waste in anaerobic digesters that would otherwise have been deposited in a solid waste disposal site. The submission included relevant guidance from the approved methodology AMS III.D. for this purpose, stating that such a revision would facilitate application of the methodology to integrated energy generation systems equipped to combust biogas and/or producer gas generated in a gasifier or in an anaerobic digestor. The submission also stated that the proposed project activity is planned for implementation under a programme of activities. The SSC WG agreed not to recommend a revision of AMS III.E. as proposed, considering that the technology/measure and the underlying process of AMS III.E. i.e. controlled

combustion and that of AMS III.D. i.e. anaerobic digestion of readily degradable agricultural waste are significantly different. The SSC WG recommended that the project participants may propose a revision of AMS III.F. instead, to include anaerobic digestion and mechanical-biological treatment technologies. A detailed response can be found at row SSC_142 at <http://cdm.unfccc.int/goto/SSCclar>.

7. **Request for revision of AMS I.C. (SSC_143):** the SSC WG agreed to recommend a revision to AMS I.C. as contained in annex 2 in response to the submissions SSC_143 & SSC_161 to expand the applicability of the methodology to include additional baseline scenarios (e.g. steam/heat is produced from renewable biomass and electricity is imported from grid and/or generated in a captive plant in the baseline while in the project situation heat and electricity are produced by a renewable biomass based cogeneration unit). A detailed response can be found at row SSC_143 and at row SSC_161 at <http://cdm.unfccc.int/goto/SSCclar>.

8. **Revision of AMS III.H. (SSC_158):** in response to the request from the Board at its thirty-sixth meeting to further expand the applicability of AMS III.H. to include the possibility for pipeline transport of the recovered biogas from the wastewater treatment facility, the SSC WG recommended a revision of the approved methodology as contained in annex 3. The proposed revisions envisage that the recovered biogas will be upgraded (purified to ensure higher methane content) and then injected into a natural gas distribution grid or transported in a dedicated piped network to the end user sites. In proposing this revision the SSC WG took into account the guidance of approved large-scale methodology AM0053. Further, in response to request for clarification SSC_158, the SSC WG proposed revisions in the approved methodology to clarify that COD removed by the baseline wastewater treatment plants shall be considered to conservatively calculate the baseline emissions. A detailed response can be found at row SSC_158 at <http://cdm.unfccc.int/goto/SSCclar>.

9. **Revision of AMS III.D.:** in response to the request from the Board at its thirty-fifth meeting the SSC WG proposed additional guidance in AMS III.D. to clarify the use of the tier 2 approach of 2006 IPCC guidelines for emission reduction calculations for manure management systems. The revised methodology is contained in annex 4. Proposed revisions also include the possibility for pipeline transport of the recovered biogas.

10. **Revision of AMS III.G. (SSC_160):** in response to SSC_160 the SSC WG agreed to recommend a revision to the approved methodology AMS III.G. to exclude the consideration of landfill gas collection efficiency in the ex-ante calculation of emission reduction. The revised methodology is contained in annex 5. The SSC WG considered this is justified as the ex post emission reductions calculations are based on actual measurement of landfill gas collected. Further recent literature on the topic showed that maximum achievable collection efficiencies in the case of engineered landfills was as high as 90%. Proposed revisions also include the possibility for pipeline transport of the recovered landfill gas. A detailed response can be found at row SSC_160 at <http://cdm.unfccc.int/goto/SSCclar>.

11. **Revision of type II methodologies**: the Board at its thirty-third meeting requested the SSC WG to analyse the application of type II methodologies for energy efficiency project activities in the CDM pipeline with a view to identify any further guidance or revisions that may be necessary to clarify the application of these methodologies, and to do this in conjunction with the work being undertaken by the secretariat. Following a preliminary analysis of the expert work on energy efficiency, as commissioned by the secretariat, the SSC WG recognised a need to prioritise its work on the revision of AMS II.C., applicable to efficient electrical equipment (e.g. lighting) projects. In particular it noted that the monitoring in AMS II.C. should be strengthened and agreed to continue to consider the issue and make a final recommendation to the Board at its next meeting.

E. Response to request for new methodologies

12. **Proposal for a new type III methodology for use of bioethanol-diesel blends in stationary or mobile applications (SSC_155):** in response to the submission SSC_155 (linked to SSC_124), the SSC WG agreed that further improvements in the proposed methodology would be required (e.g. equal treatment of upstream emissions from bioethanol production as against fossil fuel production, further guidance on data sources for leakage emissions). The SSC WG also noted that the Meth Panel is engaged in proposing a revision of AM0047 to include applications similar to those covered under SSC_155 taking into account the guidance from the Board. The SSC WG agreed to finalize its recommendation on the submission at a future meeting taking into account the outcome of the work in the Meth Panel and any additional input received from the project participant. A detailed response can be found at row SSC_155 at <http://cdm.unfccc.int/goto/SSCclar>.

13. **Proposal for a new type III methodology for fugitive methane recovery from non-hydrocarbon mining operations (SSC-NM0001):** the SSC WG noted that the submission SSC-NM001 proposed a methodology for the capture and destruction of anthropogenic methane emitted from non-hydrocarbon mining operations. The SSC WG agreed that further improvements in the proposed approach (e.g. to include conditions that avoid drilling of additional boreholes, inclusion of more comprehensive project emission calculations) would be required before a recommendation to the Board can be made. A detailed response can be found at row SSC-NM001 at <http://cdm.unfccc.int/methodologies/SSCmethodologies/NewSSCMethodologies/index.html>.

14. **Proposal for a new type II methodology for energy efficiency improvements in industrial facilities (SSC-NM0002):** the SSC WG noted that the submission SSC-NM002 proposed a methodology for technologies/measures which improve the efficiency of utility provisions that supply electricity or thermal energy at industrial, mining or mineral production facilities, e.g. a process change prior to a generating unit by the replacing a wet-type with a dry-type dust removal system before a Top Gas Pressure Recovery Turbine in the iron and steel industry. The SSC WG agreed that further guidance would be required in the methodology to establish the energy savings of the project activity, which is a direct consequence of the measures taken under the project activity. A detailed response can be found at row SSC-NM002 at <http://cdm.unfccc.int/methodologies/SSCmethodologies/NewSSCMethodologies/index.html>.

15. **Proposal for a new type III methodology for switching from High Carbon-Intensive Energy Source (HCES) to Low Carbon-intensive Energy Source (LCES) in a facility (SSC-NM0003):** the SSC WG noted that the submission SSC-NM003 (linked to request for clarification SSC_147, see paragraph 25) proposed a new methodology for switching from high carbon intensive energy sources such as diesel generator to a low carbon intensive energy source at a facility such as natural gas based energy generating systems, including displacement of grid electricity for cases where the emission factor of the grid is high. The SSC WG agreed that further improvements (e.g. in the procedures to calculate emission reductions due to displacement of electricity from a carbon intensive grid, treatment of lifetime of equipment, capacity increase and vintage of data use) would be required before a recommendation to the Board can be made. A detailed response can be found at row SSC-NM003 at <http://cdm.unfccc.int/methodologies/SSCmethodologies/NewSSCMethodologies/index.html>.

16. **Request for a new type III methodology for methane avoidance in animal waste management systems (AWMS) through separation of volatile solids (SSC-NM0004):** the SSC WG noted that the submission SSC-NM004 (linked to SSC_109, SSC_104, SSC_091 and SSC_084) was for project activities that implement measures (e.g. filtration using geo-textile bags) to separate the volatile animal solid wastes, thereby avoiding methane emissions from the manure that would otherwise be treated in a lagoon or a liquid based system in the absence of the project activity. The SSCWG agreed not to recommend the proposed methodology to the Board due to the uncertainties associated with effectiveness of GHG reduction measures by the proposed means of separation, for example filling of the

geo-textile bags and further dewatering of the manure slurry over a long period of time may create favourable moisture and temperature conditions for anaerobic decomposition and resultant methane release. A detailed response can be found at row SSC-NM004 at <http://cdm.unfccc.int/methodologies/SSCmethodologies/NewSSCMethodologies/index.html>.

17. **Proposal for a new type II methodology for demand-side programs to promote high-efficiency electrical end-use technologies using deemed savings (SSC_140):** the SSC WG noted that the submission SSC_140 was for project activities adopting household efficient electrical end-use equipment such as CFLs to replace incandescent lamps. The submission provided relevant and useful information to substantiate the approach in the draft methodology, which significantly facilitated the SSC WG's consideration of the proposal. After consideration of the submission the SSC WG agreed that further improvements would be required to make the methodology more robust and applicable in different and varied circumstances. A detailed response can be found at row SSC_140 at <http://cdm.unfccc.int/goto/SSCclar>.

18. **Proposal for a new type II methodology for transportation energy efficiency activities using retrofit technologies (SSC_149):** the SSC WG noted that the submission SSC_149 (linked to SSC_125) concerns retrofitting of vehicles by e.g. replacing a two-stroke carburetted engine with a two-stroke in chamber direct-injection engine to reduce fossil fuel consumption. The SSC WG agreed that further improvements in the proposed approach (e.g. differentiation between emission reductions directly attributable to the project activity and those due to external conditions e.g. changing traffic conditions) would be required before a recommendation to the Board can be made. A detailed response can be found at row SSC_149 at <http://cdm.unfccc.int/goto/SSCclar>.

19. **Proposal for a new type III methodology for the promotion of natural refrigerants in air-conditioning and refrigeration systems (SSC_151):** the SSC WG noted that the submission SSC_151 (linked to SSC_131, SSC_095, SSC_087, SSC_066, SSC_057 and SSC_052) concerns project activities that shift from the use of HFC refrigerants (e.g. HFC 134a) to alternate refrigerants such as hydrocarbons with negligible global warming potential and ozone depletion potential in refrigeration and air conditioning sector such as mobile air conditioning, domestic refrigeration, industrial and commercial refrigeration activities). The SSC WG noted that, based on the illustration in the draft PDD, the project activity intends to progressively retrofit during the crediting period a number of car conditioners charged with HFC 134a refrigerant with alternate drop in refrigerants (with negligible GWP) and may therefore be eligible only under a program of activities. Improvements in the proposed approach such as further guidance on energy efficiency gains from the drop in refrigerants (e.g. whether and how monitoring can capture the influence of weather conditions, road conditions etc.) would be required before a recommendation to the Board can be made. A detailed response can be found at row SSC_151 at <http://cdm.unfccc.int/goto/SSCclar>.

20. **Proposal for a new type III methodology for emission reductions by low greenhouse gas emitting transportation media (SSC_156):** the SSC WG noted that the submission SSC_156 (linked to SSC_128) is for project activities that implement a new transportation media (e.g. shift from rail transport to a dedicated pipeline transport) to achieve reduced emissions per unit quantity of goods transported. The SSC WG agreed that further improvements in the submission would be required (e.g. clear definition of the unit of service and quantification of emissions during the construction of the pipeline to be treated as leakage) before a recommendation to the Board can be made. A detailed response can be found at row SSC_156 at <http://cdm.unfccc.int/goto/SSCclar>.

21. **Proposal for a new type III methodology for demand-side GHG emission reduction through reduction in ordinary portland cement consumption during concrete mix preparation:** in response to the recommendation of the SSC WG on SSC_105, the Board at its thirty-fifth meeting requested the SSC WG to consult the Meth Panel which was considering a similar proposed large-scale methodology and making recommendations on the case. The SSC WG noted that based on the

recommendations of the Meth Panel, the Board agreed not to approve the proposed large-scale methodology (NM0225). In line with this guidance from the Board the SSC WG agreed not to recommend the proposed small-scale methodology, as factors leading to uncertainties in emission reduction calculations of NM0225 are equally relevant to SSC_105.

F. Response to request for clarification - considered prior to the meeting[1]

22. The SSC WG noted that submission SSC_141 requested a clarification whether a renewable (biomass) based cogeneration activity involving an addition of a turbine besides enhancing the capacity of the existing boilers is eligible under AMS I.D. The SSC WG agreed to clarify that the proposed project activity was not eligible under AMS I.D., but AMS I.C. would be applicable provided that all the other applicability criteria of the methodology are met. A detailed response can be found at row SSC_141 at <http://cdm.unfccc.int/goto/SSCclar>.

23. The SSC WG noted that submission SSC_145 requested a clarification whether a project activity involving installation of a new steam boiler based on hydrogen and (FO) for generation of process steam is eligible under AMS III.B. and/or AMS III.Q. The SSC WG agreed to clarify that the project activity as proposed was not eligible under AMS III.B. Concerning its applicability to AMS III.Q. the SSC WG agreed to clarify that further substantiation of the remark in the submission 'in the absence of the project activity the hydrogen fired at the boiler would have been vented off to the atmosphere' would be required to determine if AMS III.Q. would be applicable to the proposed project activity. A detailed response can be found at row SSC_145 at <http://cdm.unfccc.int/goto/SSCclar>.

24. The SSC WG noted that submission SSC_146 requested a clarification on AMS III.Q. in the context of a project activity that involves production of steam in a waste heat recovery boiler (utilizing waste heat from gas based IC engines) and where the produced steam is sold to an adjacent plant through a steam purchase agreement between the parties. The SSC WG clarified that AMS III.Q. is applicable to such cases only if the end use of the steam is included in the boundary and monitored. A detailed response can be found at row SSC_146 at <http://cdm.unfccc.int/goto/SSCclar>.

25. The SSC WG noted that submission SSC_147 requested clarification as to whether AMS III.B. is applicable to a project activity involving the installation of a new gas-based energy generation system that will substitute on-site diesel generation (component A) as well as the importation of grid electricity (component B). The SSC WG agreed to clarify that AMS III.B is applicable to the component A of the planned project activity, but component B is not covered in AMS III.B. A detailed response can be found at row SSC_147 at <http://cdm.unfccc.int/goto/SSCclar>.

26. The SSC WG noted that submission SSC_152 requested clarification on the inclusion of Montreal Protocol gases in the baseline emission calculations under AMS II.C. The SSC WG agreed to clarify that when applying approved small-scale methodologies, consistent with the decision of EB 34 (paragraph 17), the leakage/project emissions of all greenhouse gases as included in Annex A of the Kyoto Protocol (KP) as well as those defined in paragraph 1 of the Convention should be accounted for, if the CDM project activity results in an increase in emissions of those gases. Consistent with paragraph 44 of the Modalities and Procedures for the CDM, only gases listed in Annex A of KP shall be included in baseline emission calculations. A detailed response can be found at row SSC_152 at <http://cdm.unfccc.int/goto/SSCclar>.

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

27. The SSC WG noted that submission SSC_144 requested clarification on the applicability of AMS I.C. to renewable (biomass) based co-generation project for which only grid electricity

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

displacement is considered for emission reduction calculations because no (or very small) baseline emissions occur from the heat component. The SSC WG agreed to clarify that the current version of the methodology AMS I.C is not applicable to the project activity, however SSC WG recommended a revision of the approved methodology as reflected in paragraph 7 above. Should the Board approve the proposed revision as it is, the project activity will be eligible to apply the approved version of AMS I.C. A detailed response can be found at row SSC_144 at <http://cdm.unfccc.int/goto/SSCclar>.

28. The SSC WG noted that submission SSC_150 requested clarification on AMS II.D. whether the technology provider's certification of energy savings data for the application of a six stage pre-heater in a new cement kiln instead of a five stage pre-heater is acceptable for emission reduction calculations given that there is no actual monitored data for the latter case. The SSC WG agreed to clarify that the technology provider's certification of energy savings due to the application of six-stage pre-heater is not acceptable as there are a number of exogenous upstream and downstream factors that may affect heat inputs or outputs in the project and baseline case, which may significantly impact emission reductions. It is also not clear from the submission how these factors are sufficiently taken into account in applying AMS II.D. A detailed response can be found at row SSC_150 at <http://cdm.unfccc.int/goto/SSCclar>.

29. The SSC WG noted that submission SSC_153 requested clarification of AMS I.C on the use of efficiency values in the baseline district heating cogeneration plant (gas based) where the heat generation will be partially displaced by the installation of solar thermal water heater in the project activity. The SSC WG agreed to clarify that the overall efficiency of the cogeneration plant shall be used to ensure a conservative calculation of baseline emissions. A detailed response can be found at row SSC_153 at <http://cdm.unfccc.int/goto/SSCclar>.

30. The SSC WG noted that submission SSC_154 requested clarification on installation of a backpressure turbo generator where the extracted steam is fed to process operations. The SSC WG agreed the described project is a cogeneration project activity. The SSC WG recommended a revision of AMS I.C (see paragraph 7 above), which if approved by the Board will be applicable to the proposed project activity. A detailed response can be found at row SSC_154 at <http://cdm.unfccc.int/goto/SSCclar>.

31. The SSC WG noted that submission SSC_158 requested clarification on calculation of baseline emissions in AMS III.H from wastewater treatment systems involving sequential lagoon systems some of which may be aerobic systems. The SSC WG agreed to clarify that the COD removed in the anaerobic lagoon/s shall be considered for baseline calculation in such cases. A detailed response can be found at row SSC_158 at <http://cdm.unfccc.int/goto/SSCclar>.

32. In response to submission SSC_159, the SSC WG agreed to clarify that AMS I.D. does not specify the monitoring of electricity generation from diesel generators used as a stand-by/emergency unit exclusively for operation of gates at the intake site of hydropower project. The SSC WG noted that this approach is consistent with the corresponding large-scale methodology ACM0002. A detailed response can be found at row SSC_159 at <http://cdm.unfccc.int/goto/SSCclar>.

H. Issues of general guidance

33. As requested by the Board at its thirty-sixth meeting the SSC WG analysed the issues related to consideration of leakage due to transfer of used equipment, such leakage is specified in a number of small-scale methodologies. Following a consistency check with the corresponding large-scale methodologies, the SSC WG noted that leakage due to equipment transfer was also addressed in AM0046 and AM0060, where specific guidance to ensure that the replaced equipment is destroyed has been included. For instance AM0046 requires that that the returned light bulbs in exchange for CFLs distributed in the project are destroyed. The SSC WG agreed to recommend that the use of the replaced baseline equipment with low residual value outside the project boundary should continue to be addressed

in the methodology. It noted on the other hand that in other cases the emission impact of continued use of displaced equipment outside the project boundary is subject to uncertainty and difficult to quantify. The SSC WG agreed to carry out further work for estimating the emission impact of equipment displaced by the project activity. Furthermore, it agreed to recommend that the revenue from the sale of replaced equipment by the project proponent should be incorporated in the barrier analysis, where relevant.

I. Schedule of meetings

34. The SSC WG agreed to schedule its fifteenth meeting from 14 - 16 April 2008 taking into account the schedule of the Board.

External annexes to the fourteenth meeting of the SSC WG

Annex 1: SSC II.H.: Energy efficiency measures through centralization of utility provisions of an industrial facility

Annex 2: Revision of AMS I.C.: Thermal energy for the user with or without electricity

Annex 3: Revision of AMS III.H.: Methane Recovery in Wastewater Treatment

Annex 4: Revision of AMS III.D.: Methane recovery in animal manure management systems

Annex 5: Revision of AMS III.G.: Landfill Methane Recovery