

**REPORT OF THE FORTY-NINTH MEETING OF  
THE METHODOLOGIES PANEL**

Langer Eugen, UN Campus, Bonn, Germany

2 - 6 May 2011

**RECOMMENDATIONS BY THE METHODOLOGIES PANEL  
TO THE CDM EXECUTIVE BOARD**

*A. Opening of the meeting and adoption of the agenda*

1. The Chair of the Methodologies Panel (the panel), Mr. Philip Gwage opened the meeting.
2. The Chair on behalf of the panel welcomed the new members Mr. Ambachew F. Admassie and Mr. Hemant Nandanpawar, and expressed his deep appreciation to the outgoing members, Mr. Felix Dayo and Mr. Sanjay Mande for their contributions to the work of the panel.
3. The agenda was adopted as proposed.

*B. Proposed new methodologies*

4. The panel considered the proposed new methodologies listed in the table below, as well as desk reviews and public inputs received, where applicable.
5. The final recommendations, proposed by the panel for consideration by the CDM Executive Board (the Board), are made available on the UNFCCC CDM website at <http://cdm.unfccc.int/goto/MPpropmeth>.
6. In accordance with the procedures for submission and consideration of a proposed new methodology, project participants may submit, via the DOE, technical clarifications to preliminary recommendations. Provided these are received within four weeks then the preliminary recommendations shall be reconsidered at the next meeting of the panel. If project participants do not provide clarifications related to the preliminary recommendation within a timeframe of three months, the case will be considered withdrawn.
7. The panel agreed on the following recommendations:

**Table 1: Proposed new methodologies**

<b>Proposed new methodology</b>	<b>Recommendation<sup>1</sup></b>
<b>NM0292:</b> Highly efficient power plant fuelled with blast furnace gas at TKCSA, in Rio de Janeiro, Brazil	<b>WIP</b> <b>(see paragraph 8)</b>
<b>NM0328:</b> Energy efficiency and fuel switching measures in new buildings	<b>A</b> <b>(see annex 1)</b>
<b>NM0330:</b> Substitution of Fluorinated Compound (FC) gases for cleaning Chemical Vapor Deposition (CVD) reactors in the semiconductor industry	<b>WIP</b> <b>(see paragraph (10a))</b>

<sup>1</sup> Recommendations on the proposed new methodologies from the panel A (recommended for approval) and C (recommended for non-approval) are final recommendations to the Board. Preliminary recommendations are technical clarifications requested by the panel from project participants before finalizing its recommendation to the Board.

<b>Proposed new methodology</b>	<b>Recommendation<sup>1</sup></b>
<b>NM0332:</b> PFCs emission reduction from installation of an abatement device in a semiconductor manufacturing facility	<b>WIP</b> <b>(see paragraph (10b))</b>
<b>NM0333:</b> Avoidance of landfill gas emissions by passive aeration of landfills	<b>WIP</b> <b>(see paragraph (10c))</b>
<b>NM0334:</b> Installation of high efficient technology for power transmission	<b>WIP</b> <b>(see paragraph (10d))</b>
<b>NM0335:</b> PFC emission reduction by gas replacement in the process of CVD cleaning in semiconductor production	<b>C</b>
<b>NM0337:</b> Replacement of fossil fuel fired heaters with biomass residue fired heaters	<b>WIP</b> <b>(see paragraph (10e))</b>
<b>NM0339:</b> N <sub>2</sub> O abatement in New Capacity nitric acid plants	<b>A</b> <b>(see paragraph 9 and annex 2)</b>
<b>NM0340:</b> N <sub>2</sub> O abatement in New Nitric Acid Plants	<b>A</b> <b>(see paragraph 9 and annex 2)</b>
<b>NM0341:</b> Mitigation of methane emissions from charcoal production by recovering and burning carbonization gases	<b>WIP</b> <b>(see paragraph (10f))</b>
<b>NM0343:</b> Methodology for RHF-based energy efficient iron-making technology	<b>Preliminary recommendation</b>
<b>NM0344:</b> Introduction of a New Natural Gas Based Gas Turbine Cogeneration in Existing CHP Facilities Connected to the Electricity Grid	<b>Preliminary recommendation</b>
<b>NM0345:</b> Methodology for conversion of a Combined Cycle Power Plant to an Integrated Solar Combined Cycle (ISCC)	<b>WIP</b> <b>(see paragraph 10(g))</b>
<b>NM0346:</b> Utilization of ammonia-plant off gas for heat generation	<b>Preliminary recommendation</b>
<b>NM0347:</b> Biomass residue co-firing at an existing or a new boiler(s)	<b>WIP</b> <b>(see paragraph 10(h))</b>

8. In response to the request contained in paragraph 20 of the report of the forty-seventh meeting of the Board concerning the proposed new methodology NM0292 “Highly efficient power plant fuelled with blast furnace gas at TKCSA, in Rio de Janeiro, Brazil”, the panel requested the Board to take note it could not conclude its consideration of this proposed new methodology, as it needs to seek feedback from the project participants on the issues contained in the Board’s request.

9. The panel requested the Board to take note of an information note on the draft consolidated new methodology based on the proposed new methodologies NM0339 “N<sub>2</sub>O abatement in New Capacity nitric acid plants” and NM0340 “N<sub>2</sub>O abatement in New Nitric Acid Plants”. The information note explains: (i) the rationale for the determination of the emissions benchmark used to determine baseline emissions and (ii) how the methodology addresses the issues identified by the Board in its “Guidance on the expansion of industrial gas recovery methodologies to new facilities” contained in annex 10 of the report of its forty-sixth meeting. The information note is contained in annex 12.

10. The panel requested the Board to take note that it could not conclude its consideration of the following proposed new methodologies:

(a) NM0330 “Substitution of Fluorinated Compound (FC) gases for cleaning Chemical Vapor Deposition (CVD) reactors in the semiconductor industry”, due to the high workload. The panel will continue its consideration of the proposed new methodology at its next meeting;

(b) NM0332 “PFCs emission reduction from installation of an abatement device in a semiconductor manufacturing facility”, due to the high workload. The panel will continue its consideration of the proposed new methodology at its next meeting;

(c) NM0333 “Avoidance of landfill gas emissions by passive aeration of landfills” as external expertise on appropriate N<sub>2</sub>O emission factor is needed;

(d) NM0334 “Installation of high efficient technology for power transmission”, as further feedback from the project participants is needed on issues concerning: (i) further improvement of the revised submission, in particular the application of the solutions which are contained in the response to the preliminary recommendation; (ii) the emission factor for the electricity to be used for the emission reduction calculation;

(e) NM0337 “Replacement of fossil fuel fired heaters with biomass residue fired heaters”, as further work is needed on issues concerning the: (i) demonstration of additionality; (ii) determination of the baseline emission factor; (iii) determination of the efficiency of heaters; and (iv) calculation of leakage emissions;

(f) NM0341 “Mitigation of methane emissions from charcoal production by recovering and burning carbonization gases”, as additional experimental data are required from the project participants to resolve issues concerning the determination of the burner destruction efficiency;

(g) NM0345 “Methodology for conversion of a Combined Cycle Power Plant to an Integrated Solar Combined Cycle (ISCC)”, due to the high workload. The panel will continue its consideration of the proposed new methodology at its next meeting;

(h) NM0347 “Biomass residue co-firing at an existing or a new boiler(s)”, as further work is needed concerning the possibility and impact of consolidating this methodology into AM0085 and/or ACM0006.

### *C. Development of new methodologies and tools*

11. Work on development of top-down methodologies

In response to the task of developing top-down methodologies contained in the 2011 work plan of the panel, approved by the Board at its sixtieth meeting, the panel requested the Board to take note that the panel agreed to address this task by initiating in 2011 work on the development of two new methodologies, for the following project types:

(a) Renewable power generation in isolated systems for finalization by the fifty-first panel meeting;

(b) Rice cultivation for finalization in 2012.

12. Draft “Tool to determine project emissions from freight transport”

The panel requested the Board to take note that it could not conclude its consideration of the draft “Tool to determine project emissions from freight transport” because the external expertise required on default emission factors was not available. The panel intends to conclude its consideration of the tool at its next meeting.

**D. Revisions of approved methodologies and tools**

13. The panel requested the Board to take note of the following responses to requests for revision related to the application of approved baseline and monitoring methodologies and methodological tools. The requests submitted and the responses provided by the panel are made publicly available on the UNFCCC CDM website at <http://cdm.unfccc.int/methodologies/PAmethodologies/revisions> and <http://cdm.unfccc.int/methodologies/PAmethodologies/tools-revisions>.

**Table 2: Requests for revision**

<b>Number of the request for revision</b>	<b>Approved methodology or tool</b>	<b>Title of the request for revision</b>	<b>MP response</b>
<b>REV_TOOL_0002</b>	<b>Tool to determine methane emissions avoided from disposal of waste at a solid waste disposal site</b>	Addition of a DOCj value from IPCC 2006 to provide a default value for domestic sludge for Dongtai Dalian sludge digestion project	<b>To amend (see paragraph 22)</b>
<b>AM_REV_0197</b>	<b>AM0063</b>	Revision of AM0063 for applicability to new industrial facilities/integrated complex	<b>To amend (see paragraph 18)</b>
<b>AM_REV_0209</b>	<b>AM0049</b>	Revision in AM0049 to incorporate usage of natural gas in the baseline scenario	<b>Not to revise</b>
<b>AM_REV_0210</b>	<b>ACM0001</b>	Revision of ACM0001 to include landfill gas utilization in kilns	<b>Not to revise</b>
<b>AM_REV_0211</b>	<b>AM0038</b>	Extending the applicability from SiMn production to FeSi production and other silicon- and ferro alloys	<b>To revise (see paragraph 16)</b>

14. AM0001 “Incineration of HFC 23 waste streams”

In response to the requests contained in paragraph 28 of the report of the fifty-eighth meeting of the Board and in paragraph 52 of the report of the sixtieth meeting of the Board, the panel recommended the Board to approve a draft revision of the approved methodology AM0001 as contained in annex 3.

The draft revised methodology addresses the issues identified by the panel’s report on the methodology, prepared at its forty-seventh meeting, and includes options for consideration by the Board with regard to:

(a) The cap on the baseline HFC-23 generation rate, i.e. the amount of HFC-23 formed per amount of HCFC-22 produced; and

(b) Whether HFC-23 emissions from HCFC-22 production lines that are not eligible for crediting should be accounted as project emissions.

The panel also requested the Board to take note that it prepared an information note that provides rationale for the approaches applied and the options contained in the draft revised methodology. The information note is contained in annex 13.

## 15. AM0033 “Use of non-carbonated calcium sources in the raw mix for cement processing”

In response to the request contained in paragraph 29(d) of the report of the forty-fifth meeting of the Board concerning the determination of the loss of ignition (LoI) in methodology AM0033 “Use of non-carbonated calcium sources in the raw mix for cement processing”, the panel requested the Board to take note that it concluded that no further guidance is currently necessary on the use of the LoI method under the baseline scenario. The panel noted that the methodology AM0033 was consolidated with AM0040 into ACM0015 on 30 November 2007, and both AM0033 and AM0040 ceased to be valid from 13 December 2007. The panel further noted that the latest approved consolidated methodology ACM0015 does not apply the LoI method.

## 16. AM0038 “Methodology for improved electrical energy efficiency of an existing submerged electric arc furnace used for the production of SiMn”

In response to the request for revision AM\_REV\_0211, the panel recommended the Board to approve a draft revision of the approved methodology AM0038. The draft revision: (i) expands the applicability of the methodology to projects improving the efficiency of production of various alloys; (ii) takes into account the chemical composition of various reductants that may be used in the alloy production, in the calculation of the project and baseline emissions; (iii) replaces the existing methodological approach with the “Tool to determine the remaining lifetime of equipment”; and (iv) changes the historical data requirement from minimum three years to the most recent three years. The draft revised methodology is contained in annex 4.

## 17. AM0055 “Baseline and monitoring methodology for the recovery and utilization of waste gas in refinery facilities”

In response to the request contained in paragraph 21 of the report of the forty-ninth meeting of the Board to revise approved methodologies to further improve their objectivity, applicability, usability and consistency, the panel requested the Board to approve a draft revision of the approved methodology AM0055. The draft revised methodology simplifies the procedures for calculating baseline emissions; it eliminates the requirement to identify a representative element process at the refinery to measure the baseline efficiency and introduces two simplified options to determine baseline emissions. The methodology also introduces a reference to the “Tool to determine the baseline efficiency of thermal or electric energy generation systems” and addresses a comment submitted through the UNFCCC website. The draft revised methodology was finalized at the forty-eighth meeting of the panel and the Chair of the panel launched a call for public inputs on the draft. No public inputs were received during the call. The draft revised methodology is contained in annex 5.

18. AM0063 “Recovery of CO<sub>2</sub> from tail gas in industrial facilities to substitute the use of fossil fuels for production of CO<sub>2</sub>”

In response to the request for revision AM\_REV\_0197, the panel requested the Board to approve a draft amendment of the approved methodology AM0063. The draft amendment expands the applicability of the methodology to new integrated industrial facilities recovering CO<sub>2</sub> from the intermediate gas and reducing emissions associated with CO<sub>2</sub> production in other conventional CO<sub>2</sub> production facilities. The draft amended methodology is contained in annex 6.

## 19. AM0090 “Modal shift in transportation of cargo from road transportation to water or rail transportation”

In response to the request contained in paragraph 22 of the report of the fifty-sixth meeting of the Board, the panel requested the Board:

(a) To approve a draft amendment of the approved methodology AM0090 in order to remove the reference to the “Procedures for notifying and requesting approval of changes from the project activity as described in the registered project design document”; and

- (b) To take note of the response of the panel to the issues contained in the request as follows:
- (i) The explanation provided in the monitoring tables of AM0090 for parameters  $T_y$  and  $T_{RT,y}$  was intended to emphasize the fact that changes in the level of service of the project activity are subject to the “Procedures for notifying and requesting approval of changes from the project activity as described in the registered project design document”;
  - (ii) The methodology is applicable to project activities that use idle capacity for rail and navigation as long as those project activities include an investment in transport infrastructure of the types described in the applicability conditions of the methodology;
  - (iii) In view of the unavailability of default emission factors applicable to the diverse conditions of rail transportation, the panel agreed that further revising the methodology would lead to a significant increase in its complexity.

The draft amended methodology is contained in annex 7.

20. ACM0009 “Consolidated baseline and monitoring methodology for fuel switching from coal or petroleum fuel to natural gas”

In response to the request contained in paragraph 20 of the report of the forty-sixth meeting of the Board, the panel requested the Board to take note that the panel will continue its work with the support of external experts on how emission reductions from fuel switches can be estimated in the case where multiple fuels are used in the baseline scenario, with the aim of providing a recommendation to address the issue at its fifty-first meeting.

21. ACM0015 “Consolidated baseline and monitoring methodology for project activities using alternative raw materials that do not contain carbonates for clinker production in cement kilns”

In response to the requests contained in paragraph 28 of the report of the fifty-third meeting of the Board, the panel requested the Board to take note that it will continue its work to develop the provisions required for the determination of baseline emissions for greenfield cement plants within the context of ACM0015.

22. “Tool to determine methane emissions avoided from disposal of waste at a solid waste disposal site”

In response to the request for revision REV\_TOOL\_0002, the panel requested the Board to approve a draft amendment of the approved “Tool to determine methane emissions avoided from disposal of waste at a solid waste disposal site” to include a default value for the fraction of degradable organic carbon of sludge from domestic wastewater treatment plants (domestic sludge). The draft amended tool is contained in annex 8.

23. “Tool to calculate the emission factor for an electricity system”

In response to the request contained in paragraph 32 of the report of the fifty-eighth meeting of the Board, the panel requested the Board to approve a draft revision of the approved “Tool to calculate the emission factor for an electricity system”. The draft revision provides:

- (a) More clarity on the set of power plants to be included in the determination of the build margin emission factor, and
- (b) Simplified options for the project activities hosted in: (i) countries with a paucity of relevant data; (ii) LDCs; and (iii) countries with less than 10 registered projects at the starting date of validation.

The draft revised tool is contained in annex 9.

In response to the request contained in paragraph 24 of the report of the fiftieth meeting of the Board, the panel requested the Board to take note that the inclusion of off-grid power plants in the determination of the grid emission factor was not raised as an issue in the responses by DNAs to a questionnaire on the application of the tool, hence, further work on this request may not be necessary at this point in time. In response to the requests contained in paragraph 25 of the report of the fifty-fourth meeting of the Board and in paragraph 32 of the report of the fifty-sixth meeting of the Board, the panel requested the Board to take note that it was not able to conclude the assessment of the variability of Dispatch Analysis results and will continue to work on this issue.

24. “Tool to assess the validity of the original/current baseline and to update the baseline at the renewal of a crediting period” - Annex 1 of the “Procedures for renewal of the crediting period of a registered CDM project activity”

In response to the requests contained in paragraph 30 and 31 of the fifty-sixth meeting of the Board and paragraph 43 of the report of the sixtieth meeting of the Board, the panel requested the Board to take note that the panel could not conclude its consideration of this matter. The panel will continue to work on a draft revision to the tool with the view to finalize a recommendation at its next meeting.

25. “Tool to determine the mass flow of a greenhouse gas in a gaseous stream”

In response to the request contained in paragraph 32 of the report of the forty-seventh meeting of the Board, the panel requested the Board to approve a draft revision of the approved “Tool to determine the mass flow of a greenhouse gas in a gaseous stream”. The draft revision implements editorial and format improvements, corrects inconsistencies in how some parameters were expressed, improves the readability and consistency and simplifies the tool. The draft revised tool is contained in annex 10.

26. Methodology improvement

Based on the 2011 work plan for the panel, adopted by the Board at its sixtieth meeting, the panel requested the Board to take note that it agreed to initiate a revision of the following methodologies:

(a) ACM0001: “Consolidated baseline and monitoring methodology for landfill gas project activities”; and

(b) AM0025: “Avoided emissions from organic waste through alternative wastetreatment processes”.

The revisions aim to simplify the methodologies and to improve the clarity, objectivity and consistency, taking into account environmental integrity.

#### ***E. Clarifications to approved methodologies and tools***

27. The panel requested the Board to take note of the following responses to requests for clarification related to the application of approved baseline and monitoring methodologies and methodological tools. The requests submitted and the responses provided by the panel are made publicly available on the UNFCCC CDM website at <http://cdm.unfccc.int/methodologies/PAmethodologies/clarifications> and <http://cdm.unfccc.int/methodologies/PAmethodologies/tools-clarifications>. If requests for clarification resulted in a recommendation by the panel to revise an approved methodology or approved tool they are reflected in section D.

**Table 3: Requests for clarification**

<b>Number of the request for clarification</b>	<b>Approved methodology or tool</b>	<b>Title of the request for clarification</b>	<b>MP response</b>
<b>CLA_TOOL_0012</b>	Tool to calculate the emission factor for an electricity system	Applicability of a shorter period for financial analysis	<b>Clarified</b>
<b>AM_CLA_0191</b>	AM0001	Use of historical data if the key components of a HCFC-22 plants have been retrofitted or replaced	<b>WIP (see paragraph 28)</b>
<b>AM_CLA_0205</b>	ACM0003	Use of Refuse Derived Fuel (RDF) made from Municipal Solid Waste as an alternative fuel under this Methodology	<b>Clarified (fast track)</b>
<b>AM_CLA_0206</b>	ACM0006	Use of wood (non-residue biomass)	<b>Clarified (fast track)</b>
<b>AM_CLA_0207</b>	AM0080	Applicability of the methodology for an existing project considering the activity starting date at the beginning of the operational phase	<b>Clarified (fast track)</b>

28. The panel requested the Board to take note that it continued its consideration of the request for clarification AM\_CLA\_0191 on AM0001 “Incineration of HFC 23 waste streams”.

29. ACM0012 “Consolidated baseline methodology for GHG emission reductions from waste energy recovery projects”

In response to the request from the Board, on the issue of applicability of the approved methodology ACM0012 version 03.2 to new facilities (hereafter referred as greenfield facilities), the panel assessed the issue. The panel noted that for greenfield CDM facilities dealing with waste energy recovery the original specifications of process plant manufacturers may be used to estimate the quantity and the energy content of the waste energy.

The panel agreed that the demonstration that the energy from waste energy streams would have been released without its recovery (or with partial recovery) in the absence of the project activity could be made through the following steps:

- (a) The project participants obtain from the manufacturer(s) of the project facility alternative designs including the usage of waste energy that is recovered under the project; and
- (b) The project participants determine, through investment analysis, which design would be the baseline scenario for the greenfield facility.

If the capacity of production is added or replaced, then the added or replaced capacity shall be treated as a greenfield facility.

The panel recommended the Board to consider whether a clarification may be issued on the treatment of greenfield facilities in the approved methodology ACM0012.



*F. Other issues*

## 30. Work on development of standardized baselines

In response to the task of developing standardized baselines contained in the 2011 work plan of the panel, approved by the Board at its sixtieth meeting, the panel requested the Board to take note that the panel agreed to address this task by forming a small group to assess where standardized baselines could be derived from approved methodologies, with a view to present a proposal by the fiftieth panel meeting.

## 31. Background document on baseline determination

In response to the task of developing a background document on baseline determination contained in the 2011 work plan of the panel, approved by the Board at its sixtieth meeting, the panel requested the Board to take note that the panel agreed to consider a draft of the concept note, to be prepared by the secretariat, at its fifty-first meeting.

## 32. Guidelines on the assessment of investment analysis

In response to the request contained in paragraph 27 of the report of the fifty-ninth meeting of the Board, the panel requested the Board to approve a draft revision of the guidelines. The draft revision of the guidelines is contained in annex 11 and an information note is contained in annex 14.

## 33. Small Scale Working Group on revision SSC\_486

In response to a request by the SSC WG on the request for revision of AMS-I.D (SSC\_486), the panel requested the Board to take note that it agreed that further analysis of the proposal is required. The panel intends to provide a recommendation at its next meeting.

## 34. Small Scale Working Group on revision SSC\_488

In response to a request by the SSC WG on the request for revision of AMS-III.W (SSC\_488), the panel requested the Board to take note that it considered the request from the SSC WG. The panel agreed that external expertise is needed to assess the proposed revision, it also agreed to consider to improve the methodology AM0064 once the SSC WG has finalized its work on AMS-III.W, taking into account input from external expertise, in order to ensure consistency among the two methodologies.

## 35. Project Activity: Methane Recovery and Utilisation Project at TSH Kunak Oil Palm Mill (0916)

In response to the request contained in paragraph 61 of the report of the fifty-ninth meeting of the Board, the panel requested the Board to take note that: (i) the methodology AM0013 does not prevent the implementation of an aerobic effluent treatment system together with the anaerobic digestion system; (ii) the measurement of COD should be undertaken both before and after the anaerobic digester to estimate emission reductions.

## 36. Project Activity: Siam Quality Starch Wastewater Treatment and Energy Generation Project in Chaiyaphum, Thailand” (1993)

In response to the request contained in paragraph 65 of the report of the fifty-ninth meeting of the Board, the panel requested the Board to take note that it recommended to accept the alternative approach for the monitoring and determination of the parameter “Flow rate of the heat generation equipment stack gases” contained in the revision of the monitoring plan. Furthermore, the panel agreed to recommend to remove the requirement of monitoring the project emission source “Stack emissions from the flare or energy generation” contained in the approved methodology AM0013 version 04 in the case the biogas is used for electricity and/or heat production. The panel noted that the methodology AM0013 version 04 is not active since 13 December 2007 as it was replaced by

the methodology ACM0014 “Mitigation of greenhouse gas emissions from treatment of industrial wastewater”. The rationale behind the removal of this project emission source is that when the biogas is burned in energy generation equipment at high temperature, it is very unlikely that there will be any methane emissions coming out of the stack. In addition, the panel noted that other similar approved methodologies, for example ACM0014, exclude this emission source in case the biogas is used for electricity and/or heat production.

***G. Schedule of meetings and rounds of submissions***

37. The panel confirmed that the date for its 50<sup>th</sup> meeting is 27 June to 1 July 2011, as per annex 29 of the report of the sixtieth meeting of the Board.

38. Following the guidance contained in paragraph 5 of the “Procedure for the submission and consideration of a proposed new baseline and monitoring methodology for large scale CDM project activities”, the panel considers proposed new methodologies submitted by a deadline at a subsequent meeting conditional to priorities set by the Board and by the Chair of the panel.

39. Project participants may note that the deadline for the 40<sup>th</sup> round of submission of proposed new methodologies to be considered at the fiftieth meeting of the panel on 27 June to 1 July 2011 was 18 April 2011, the deadline for the 41<sup>st</sup> round of submission of proposed new methodologies to be considered at the fifty-first meeting of the panel on 15 to 19 August 2011 is 6 June 2011.

40. The panel also informed project participants that the deadline for submission of requests for revision and requests for clarification to be considered at the fiftieth meeting of the panel to be held from 27 June to 1 July 2011 was 18 April 2011, 24:00 GMT.

***H. Desk Reviews***

41. The panel noted the satisfactory completion of the desk reviews undertaken for the proposed new methodologies.

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**Annexes to the external report of the forty-ninth meeting of the Methodologies Panel**

- Annex 1: Draft reformatted baseline and monitoring methodology based on NM0328;
- Annex 2: Draft reformatted consolidated baseline and monitoring methodology based on NM0339 and NM0340;
- Annex 3: Draft revision of AM0001 “Incineration of HFC 23 waste streams”
- Annex 4: Draft revision of AM0038 “Methodology for improved electrical energy efficiency of an existing submerged electric arc furnace used for the production of SiMn”;
- Annex 5: Draft revision of AM0055 “Baseline and monitoring methodology for the recovery and utilization of waste gas in refinery facilities”
- Annex 6: Draft amendment of AM0063 “Recovery of CO<sub>2</sub> from tail gas in industrial facilities to substitute the use of fossil fuels for production of CO<sub>2</sub>”;
- Annex 7: Draft amendment of AM0090 “Modal shift in transportation of cargo from road transportation to water or rail transportation”;
- Annex 8: Draft amendment of the “Tool to determine methane emissions avoided from disposal of waste at a solid waste disposal site”;
- Annex 9: Draft revision of the “Tool to calculate the emission factor for an electricity system”;
- Annex 10: Draft revision of the “Tool to determine the mass flow of a greenhouse gas in a gaseous stream”;
- Annex 11: Draft revision of the “Guidelines on the assessment of investment analysis”;
- Annex 12: Information note on the benchmark for the N<sub>2</sub>O emission factor from nitric acid plants;
- Annex 13: Information note on the revision of AM0001;
- Annex 14: Information note on the default values for the expected return on equity.