



Indicative simplified baseline and monitoring methodologies  
for selected small-scale CDM project activity categories

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**INDICATIVE SIMPLIFIED BASELINE AND MONITORING METHODOLOGIES FOR  
SELECTED SMALL-SCALE CDM PROJECT ACTIVITY CATEGORIES**

(Version 12)

**A. General guidance**

1. This appendix contains indicative simplified baseline and monitoring methodologies for selected small-scale CDM project activity categories, including recommendations for determining the project boundary, leakage, baseline and monitoring.
2. In accordance with paragraphs 15 and 16 of the simplified modalities and procedures for small-scale CDM project activities (annex II to decision 21/CP.8 contained in document FCCC/CP/2002/7/Add.3), project participants involved in small-scale CDM project activities may propose changes to the simplified baseline and monitoring methodologies specified in this appendix or propose additional project categories for consideration by the Executive Board. Project participants willing to submit a new small-scale project activity category or revisions to a methodology shall make a request in writing to the Board providing information about the technology/activity and proposals on how a simplified baseline and monitoring methodology would be applied to this category. The Board may draw on expertise, as appropriate, in considering new project activity categories and/or revisions of and amendments to simplified methodologies. The Executive Board shall expeditiously, if possible at its next meeting, review the proposed methodology. Once approved, the Executive Board shall amend Appendix B.
3. In accordance with paragraph 28 of the simplified modalities and procedures for small-scale CDM project activities, a simplified baseline and monitoring methodology listed in this appendix may be used for a small-scale CDM project activity if project participants are able to demonstrate to a designated operational entity that the project activity would otherwise not be implemented due to the existence of one or more barrier(s) listed in [attachment A of this appendix](#).
4. The appendix reflects the following guidance regarding equipment performance, project boundary, biomass projects, leakage and use of Intergovernmental Panel on Climate Change (IPCC) default values for emission coefficients.
5. Equipment performance: To determine equipment performance, project participants shall use:
  - (a) The appropriate value specified in Appendix B;
  - (b) If the value specified in sub-paragraph (a) is not available, the national standard for the performance of the equipment type (project participants shall identify the standard used);
  - (c) If the value specified in sub-paragraph (b) is not available, an international standard for the performance of the equipment type, such as International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC) standards (project participants shall identify the standard used);
  - (d) If a value specified in sub-paragraph (c) is not available, the manufacturer's specifications provided that they are tested and certified by national or international certifiers.



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6. Project participants have the option of using performance data from test results conducted by an independent entity for equipment installed under the project activity.
7. **Output capacity of renewable energy equipment:** Definition of “maximum output capacity equivalent of up to 15 megawatts (or an appropriate equivalent)”:
- (a) Definition of “maximum output”: “output” is the installed/rated capacity, as indicated by the manufacturer of the equipment<sup>1</sup> or plant, disregarding the actual load factor of the plant;
  - (b) Definition of “appropriate equivalent” of 15 megawatts: Whereas decision 17/CP.7, paragraph 6 (c) (i), refers to megawatts (MW), project proposals may refer to MW(p)<sup>1</sup>, MW(e) or MW(th). As MW(e) is the most common denomination, the Executive Board has agreed to define MW as MW(e) and otherwise to apply an appropriate conversion factor;
  - (c) For biomass, biofuel and biogas project activities, the maximal limit of 15MW(e) is equivalent to 45 MW thermal output of the equipment or the plant (e.g. boilers). For thermal applications of biomass, biofuels or biogas (e.g. the cookstoves), the limit of 45 MWth is the installed/rated capacity of the thermal application equipment or device/s (e.g. biogas stoves). For electrical or mechanical applications, the limit of 15 MW installed/rated output shall be used. In case of cofiring renewable and fossil fuels, the rated capacity of the system when using fossil fuel shall apply;
  - (d) For thermal applications of solar energy projects<sup>2</sup>, ‘maximum output’ shall be calculated using a conversion factor of 700 Wth/m<sup>2</sup> of aperture area of glazed flat plate or evacuated tubular collector i.e. eligibility limit in terms of aperture area is 64000 m<sup>2</sup> of the collector. Project participants may also use other conversion factors determined as per the procedures prescribed for ‘equipment performance’ under paragraph 5 above, however it shall be justified why the chosen conversion factor is more appropriate to the project activity.
8. **Project boundary:** The project boundary shall be limited to the physical project activity. Project activities that displace energy supplied by external sources shall earn certified emission reductions (CERs) for the emission reductions associated with the reduced supply of energy by those external sources.
9. **Biomass projects:** In the case of project activities using biomass, emission reductions may only be accounted for the combustion of “renewable biomass”.
10. In the cases where leakage is to be considered, it shall be considered only within the boundaries of non-Annex I Parties.

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<sup>1</sup> For solar photovoltaic applications 15 MW(p) may be defined by manufacturers specifications under testing conditions of 1000 W/m<sup>2</sup> & 25 deg C or 600 W/m<sup>2</sup> & 35 deg C.

<sup>2</sup> This conversion is not applicable for solar thermal parabolic and trough type collectors used for high grade solar thermal energy applications.



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11. In the case of project participants using IPCC default values for emission coefficients, these shall be the most up-to-date values available in the “2006 IPCC Guidelines for National Greenhouse Gas Inventories”<sup>3</sup> “IPCC Good Practice and Guidance and Uncertainty Management in National Greenhouse Gas Inventories”<sup>2</sup> and the “Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories”. A link providing more updated information on IPCC default values for emission coefficients is available on the page for small-scale CDM project activities on the UNFCCC CDM web site: <http://unfccc.int/cdm>

12. Monitoring: while monitoring the emission reductions from the Small-scale Project Activity, project participants shall:

- (a) Electronically archive all data collected as part of monitoring for a period of 2 years from the end of the crediting period;
- (b) Data variables that are most directly related to the emission reductions (e.g. quantity of the fuel inputs, the amount of heat or electricity produced, gas captured) should be measured continuously. Data elements that are generally constant and indirectly related to the emission reductions (e.g. Emission factors, Calorific Value, System Efficiencies) should be measured or calculated at least once in an year, unless detailed specifications are provided as part of the indicated methodology;
- (c) Measuring equipment should be certified to national or IEC standards and calibrated according to the national standards and reference points or IEC standards and recalibrated at appropriate intervals according to manufacturer specifications, but at least once in 3 years;
- (d) The measured data with high levels of uncertainty or without adequate calibration should be compared with location/national data and commercial data to ensure consistency;
- (e) Wherever a statistical sample is proposed for monitoring, the sample should be representative of the population and should have a minimum level of confidence of one times the standard deviation (one sigma), unless detailed specifications are provided as part of the indicated methodology.

13. In relation to revisions and amendments to simplified baseline and monitoring methodologies contained in Appendix B, revisions shall not affect (a) registered CDM project activities during their crediting period; and (b) project activities that use the previously approved methodology for which requests for registration are submitted before or within eight (8) weeks after the methodology was revised.

14. Type II and III Greenfield projects (new facilities): may use a Type II and Type III small-scale methodology provided that they can demonstrate that the most plausible baseline scenario for this project activity is the baseline provided in the respective Type II and III small-scale methodology. The demonstration should include the assessment of the alternatives of the project activity. For the purpose of the demonstration, project participants may apply the steps 1 to 3 of the latest version of “Combined tool to identify the baseline scenario and demonstrate additionality”<sup>3</sup> to identify the baseline scenario. If the identified baseline scenario is the same as the baseline of the methodology, and it can be demonstrated that the implementation of the project as ‘the proposed project activity undertaken without being

<sup>3</sup> <[http://cdm.unfccc.int/methodologies/Tools/EB28\\_repan14\\_Combined\\_tool\\_rev\\_2.1.pdf](http://cdm.unfccc.int/methodologies/Tools/EB28_repan14_Combined_tool_rev_2.1.pdf)>



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registered as CDM', is not the common practice in the region, project participants can apply the methodology.

15. **Retrofit:** For project activities that seek to retrofit or modify an existing unit or equipment, the baseline may refer to the characteristics (i.e., emissions) of the existing unit or equipment only to the extent that the project activity does not increase capacity or output or level of service unless detailed specifications are provided as part of the indicated methodology. For any increase of capacity or output or level of service beyond this range, which is due to the project activity, a different baseline shall apply.

16. **Capacity increase:** Type II and III project activities involving capacity increase may use a Type II and Type III SSC methodology provided that they can demonstrate that the most plausible baseline scenario for the additional (incremental) capacity is the baseline provided in the respective Type II and III small-scale methodology. The demonstration should include the assessment of the alternatives of the project activity. For the purpose of the demonstration, project participants may apply the Steps 1 to 3 of the latest version of "Combined tool to identify the baseline scenario and demonstrate additionality" to identify the baseline scenario. If the identified baseline scenario for the additional (incremental) capacity is the same as the baseline of the methodology, and it can be demonstrated that the implementation of the project as 'the proposed project activity undertaken without being registered as CDM', is not the common practice in the region, project participants can apply the respective methodology. If the most plausible scenario for the additional capacity is the project activity, the baseline emissions are considered only to the extent of the capacity of the facility, which is being replaced.

17. **Lifetime of existing equipments:** In case of replacement of existing equipment, project participants shall use the following approach to estimate the point in time where the existing equipment would be replaced in the absence of the project activity:

- (i) The typical average technical lifetime of the equipment concerned may be determined and documented on the basis of common practices in the sector and the country (e.g. based on industry surveys, statistics, technical literature, etc.);
- (ii) The practices of the responsible company regarding replacement schedules may be evaluated and documented (e.g. based on historical replacement record of similar equipment);
- (iii) For project activities employing equipments that use refrigerants, the service lifetime assessment should also take into account the applicable regulations in the Host country regarding the phasing out of certain types of refrigerants.

18. The time of replacement of the existing equipment in the absence of the project activity should be chosen in a conservative manner, i.e. the earliest point in time should be chosen in cases where only a time frame can be estimated. The determination of this date shall be made on a case-by-case basis, or, as specified by the applicable methodology. In general for household devices/appliances, the remaining lifetime may be disregarded.

19. For guidance on consideration of national policies and circumstances in baseline scenarios, 'Annex 3 - Additional clarifications regarding the treatment of national/sectoral policies and circumstances' of the 22<sup>nd</sup> meeting report of the Executive Board shall be referred.

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**History of the document \***

Version	Date	Nature of revision
12	EB 41, Annex 20 02 August 2008	Additional guidance on baseline for Type II Greenfield projects (new facilities), retrofit of existing equipment and capacity increase, consideration of lifetime of existing equipment, consideration of national policies in the baseline added.
11	EB 35, Annex 35 19 October 2007	Additional guidance to expand the applicability of all approved Type III methodologies to include Greenfield projects (new facilities).
10	EB 26, Annex 27 29 September 2006	General guidance on conversion factor for solar collectors to calculate output capacity from the area.
09	EB 25, Annex 32 21 July 2006	Revised general guidance on output capacity of renewable based energy generating equipment.
08	EB 23, Annex 33 24 February 2006	General guidance on monitoring from the simplified modalities and procedures for small-scale CDM project activities.

\* This document, together with all approved SSC methodologies, was part of a single document entitled: Appendix B of the Simplified Modalities and Procedures for Small-Scale CDM project activities until version 07.

**History of the document: Appendix B of the Simplified Modalities and Procedures for Small-Scale CDM project activities**

Version	Date	Nature of revision
Appendix B of the Simplified Modalities and Procedures for Small-Scale CDM project activities contained both the General Guidance and Approved Methodologies until version 07. After version 07 the document was divided into separate documents: 'General Guidance' and separate approved small-scale methodologies (AMS).		
07	EB 22, Para. 59 25 November 2005	References to "non-renewable biomass" in Appendix B deleted.
06	EB 21, Annex 22 20 September 2005	Guidance on consideration of non-renewable biomass in Type I methodologies, thermal equivalence of Type II GWhe limits included.
05	EB 18, Annex 6 25 February 2005	Guidance on 'capacity addition' and 'cofiring' in Type I methodologies and monitoring of methane in AMS III.D included.
04	EB 16, Annex 2 22 October 2004	AMS II.F was adopted, leakage due to equipment transfer was included in all Type I and Type II methodologies.
03	EB 14, Annex 30 June 2004	New methodology AMS III.E was adopted.
02	EB 12, Annex 2 28 November 2003	Definition of build margin included in AMS I.D, minor revisions to AMS I.A, AMS III.D, AMS II.E.
01	EB 7, Annex 6 21 January 2003	Initial adoption. The Board at its seventh meeting noted the adoption by the Conference of the Parties (COP), by its decision 21/CP.8, of simplified modalities and procedures for small-scale CDM project activities (SSC M&P).