

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

**TYPE I - RENEWABLE ENERGY PROJECTS**

*Note: Categories I.A, I.B and I.C involve renewable energy technologies that supply electricity, mechanical and thermal energy, respectively, to the user directly. Renewable energy technologies that supply electricity to a grid fall into category I.D.*

Follow the link for [General guidance](#) / [Abbreviations](#) / [Full version of appendix B](#)

***I.C. Thermal energy for the user***

**Technology/measure**

15. This category comprises renewable energy technologies that supply individual households or users with thermal energy that displaces fossil fuel or non-renewable sources of biomass. Examples include solar thermal water heaters and dryers, solar cookers, energy derived from biomass for water heating, space heating, or drying, and other technologies that provide thermal energy that displaces fossil fuel. Biomass-based co-generating systems that produce heat and electricity for use on-site are included in this category.

16. Where generation capacity is specified by the manufacturer, it shall be less than 15MW. For co-generation systems to qualify under this category, the sum of all forms of energy output shall not exceed 45 MW<sub>thermal</sub>. E.g., for a biomass based co-generating system the rating for the primary boiler shall not exceed 45 MW<sub>thermal</sub>.

**Boundary**

17. The physical, geographical site of the renewable energy technologies generating the thermal energy and the equipment that uses the thermal energy produced delineates the project boundary.

**Baseline**

18. For renewable energy technologies that displace technologies using fossil fuels, the simplified baseline is the fuel consumption of the technologies that would have been used in the absence of the project activity times an emission coefficient for the fossil fuel displaced. IPCC default values for emission coefficients may be used.

19. For renewable energy technologies that displace non-renewable sources of biomass, the simplified baseline is the non-renewable sources of biomass consumption of the technologies times an emission coefficient for the non-renewable sources of biomass displaced. IPCC default values for emission coefficients may be used.

20. For renewable energy technologies that displace electricity the simplified baseline is the electricity consumption times the relevant emission factor calculated as described in category I.D, paragraphs 28 and 29.

**Leakage**

21. If the renewable energy technology is equipment transferred from another activity, leakage calculation is required.

## Appendix B of the simplified modalities and procedures for small-scale CDM project activities

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#### *I.C. Thermal energy for the user (Cont.)*

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##### **Monitoring**

22. Monitoring shall consist of:

(a) Metering the energy produced by a sample of the systems where the simplified baseline is based on the energy produced multiplied by an emission coefficient.

OR

(b) Metering the thermal and electrical energy generated for co-generation projects;

OR

(c) If the emissions reduction per system is less than 5 tonnes of CO<sub>2</sub> a year:

- (i) Recording annually the number of systems operating (evidence of continuing operation, such as on-going rental/lease payments could be a substitute); and
- (ii) Estimating the annual hours of operation of an average system, if necessary using survey methods. Annual hours of operation can be estimated from total output (e.g. tonnes of grain dried) and output per hour if an accurate value of output per hour is available.

## **Appendix B<sup>13</sup> of the simplified modalities and procedures for small-scale CDM project activities**

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

#### **B. General guidance**

91. 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.

92. 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.

93. 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.

94. 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.

95. 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.

96. Project participants have the option of using performance data from test results conducted by an independent entity for equipment installed under the project activity.

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<sup>13</sup> This appendix has been developed in accordance with the simplified modalities and procedures for small-scale CDM project activities (contained in annex II to decision 21/CP.8, see document FCCC/CP/2002/7/Add.3) and it constitutes appendix B to that document. For the full text of the annex II to decision 21/CP.8 please see reference/documents section on UNFCCC CDM web site <http://unfccc.int/cdm> ).

97. 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.

98. Biomass projects: In the case of project activities using biomass, leakage shall be considered.

99. In the cases where leakage is to be considered, it shall be considered only within the boundaries of non-Annex I Parties.

100. 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 “IPCC Good Practice and Guidance and Uncertainty Management in National Greenhouse Gas Inventories” 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/ssc.htm>.

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**Attachment A to Appendix B**

1. Project participants shall provide an explanation to show that the project activity would not have occurred anyway due to at least one of the following barriers:

- (a) Investment barrier: a financially more viable alternative to the project activity would have led to higher emissions;
- (b) Technological barrier: a less technologically advanced alternative to the project activity involves lower risks due to the performance uncertainty or low market share of the new technology adopted for the project activity and so would have led to higher emissions;
- (c) Barrier due to prevailing practice: prevailing practice or existing regulatory or policy requirements would have led to implementation of a technology with higher emissions;
- (d) Other barriers: without the project activity, for another specific reason identified by the project participant, such as institutional barriers or limited information, managerial resources, organizational capacity, financial resources, or capacity to absorb new technologies, emissions would have been higher.

## Appendix B of the simplified modalities and procedures for small-scale CDM project activities

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

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#### Attachment B to Appendix B

#### ACRONYMS, ABBREVIATIONS AND UNITS OF MEASURE

<i>Acronyms and abbreviations</i>	
EB	Executive Board
EE	Energy efficiency
CER	Certified emission reduction
CO <sub>2</sub>	Carbon dioxide
BAU	Business as usual
ESCO	Energy service company
GHG	Greenhouse gas
IEC	International Electrotechnical Commission
IPCC	Intergovernmental Panel on Climate Change
ISO	International Organization for Standardization
PV	Photovoltaic
T&D	Transmission and distribution
<i>Units of measure</i>	
h	Hour
d	Day
y	Year
k	Kilo (10 <sup>3</sup> )
M	Mega (10 <sup>6</sup> )
G	Giga (10 <sup>9</sup> )
T	Tera (10 <sup>12</sup> )
g	Gramme
W	Watt
m	Metre
J	Joule