



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 to find [General guidance](#) / [Abbreviations](#)

**I.C. Thermal energy for the user****Technology/measure**

1. This category comprises renewable energy technologies that supply individual households or users with thermal energy that displaces fossil fuels. **Upgrading of existing equipment is not allowed.** Examples include solar thermal water heaters and dryers, solar cookers, energy derived from renewable 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.

2. Where generation capacity is specified by the manufacturer, it shall be less than 15MW.

3. For co-generation systems and/or co-fired systems to qualify under this category, the energy output shall not exceed 45 MW<sub>thermal</sub>. E.g., for a biomass based co-generating system the capacity for all the boilers affected by the project activity combined shall not exceed 45 MW<sub>thermal</sub>. In the case of the co-fired system the installed capacity (specified for fossil fuel use) for each boiler affected by the project activity combined shall not exceed 45 MW<sub>thermal</sub>.

4. **Project activities adding renewable energy capacity should consider the following cases:**

- 1) Adding new units;
- 2) Replacing old units for more efficient units.

**To qualify as a small scale CDM project activity, the aggregate installed capacity after adding the new units (case 1) or of the more efficient units (case 2) should be lower than 45 MW<sub>thermal</sub><sup>1</sup>**

**Boundary**

5. The physical, geographical site of the renewable energy generation delineates the project boundary.

**Baseline**

6. 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

<sup>1</sup> Ex: 15 MW<sub>thermal</sub> of new capacity is added to existing 27 MW<sub>thermal</sub> to make the aggregate capacity of 42 MW<sub>thermal</sub> which is within the allowed limits for capacity



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

***I.C. Thermal Energy for the User (cont)***

---

project activity times an emission coefficient for the fossil fuel displaced. IPCC default values for emission coefficients may be used.

7. 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 6 and 7.

**Leakage**

8. If the energy generating equipment is transferred from another activity or if the existing equipment is transferred to another activity, leakage is to be considered.

**Monitoring**

9. 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. In the case of co-fired plants, the amount of fossil fuel input shall be monitored;

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.