

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 [Full version of appendix B \(http://cdm.unfccc.int/Projects/pac/sselistmeth.pdf\)](http://cdm.unfccc.int/Projects/pac/sselistmeth.pdf) to find [General guidance](#) / [Abbreviations](#)

***I.B. Mechanical energy for the user***

**Technology/measure**

1. This category comprises renewable energy technologies that supply individual households or users with a small amount of mechanical energy. These technologies include hydropower, wind power, and other technologies that provide mechanical energy, all of which is used on-site by the household or user, such as wind-powered pumps, solar water pumps, water mills and wind mills.
2. Where generation capacity is specified, it shall be less than 15MW. If the generation capacity is not specified, the estimated diesel-based electricity generating capacity that would be required to provide the same service or mechanical energy shall be less than 15 MW. In the case of irrigation where diesel-fuelled pumps are used directly, the cumulative rating of diesel-fuelled pumps shall not exceed 15 MW. The size of a diesel-based generator or a diesel pump that would be required shall be justified.

**Boundary**

3. The physical, geographical site of the renewable energy technology and the equipment that uses the mechanical energy produced delineates the project boundary.

**Baseline**

4. The simplified baseline is the estimated emissions due to serving the same load with a diesel generator consumption saved times the emission coefficient for diesel. The diesel emissions displaced annually are calculated either as:
  - (a) The power requirements times hours of operation per year times the emission factor for diesel generator systems in Table I.D.1

OR

- (b) The diesel fuel consumption per hour times hours of operation per year times the default value for the emission coefficient for diesel fuel (3.2 kg CO<sub>2</sub> per kg of diesel fuel).

**Leakage**

5. If the energy efficiency technology is equipment transferred from another activity or if the existing equipment is transferred to another activity, leakage is to be considered.

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*I.B. Mechanical energy for the user (Cont.)*

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**Monitoring**

6. Monitoring shall consist of:

- (a) Recording annually the number of systems operating (evidence of continuing operation, such as on-going rental/lease payments could be a substitute); and
- (b) Estimating the annual hours of operation for the equipment that uses the mechanical energy produced, if necessary using sampling methods. Annual hours of operation can be estimated from total output (tonnes of grain milled) and output per hour if an accurate value of output per hour is available.