

Three proposed options for amending the small scale modalities and procedures to include energy efficiency of biomass derived thermal energy for the user

Note: The suggested amendments have been made on the basis of the original text of the indicative simplified baseline and monitoring methodologies for selected small-scale CDM project activity categories. Changes or omissions of text are indicated through the Microsoft Word “track changes mode”. The original numbering of paragraphs has not been altered.

1.) Including efficiency of thermal (biomass and fossil fuel based) installations into Type I.C

[Original methodology: 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 increase efficiency or 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_{thermal}. E.g., for a biomass based co-generating system the rating for the primary boiler shall not exceed 45 MW_{thermal}.

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 or increase the efficiency of biomass use, the simplified baseline is the non-renewable sources or inefficient use of biomass consumption of the technologies times an emission coefficient for the non-renewable sources or inefficient use 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.

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 CO₂ 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.

2.) Including efficiency of thermal (biomass and fossil fuel based) installations into Type II.E

[Original Methodology: *II.E. Energy efficiency and fuel switching measures for buildings*]

Technology/measure

64. This category comprises any energy efficiency and fuel switching measure implemented at a single building, such as a commercial, institutional or residential building, or group of similar buildings, such as a school, district or university. This category covers project activities aimed primarily at energy efficiency; a project activity that involves primarily fuel switching falls into category III.B¹.

Examples include technical energy efficiency measures (such as efficient heating and cooking devices, appliances, better insulation and optimal arrangement of equipment) and fuel switching measures (such as switching from oil to gas). The technologies may replace existing equipment or be installed in new facilities. The aggregate energy savings of a single project may not exceed the equivalent of 15 GWh per year.

Boundary

65. The project boundary is the physical, geographical site of the building(s).

Baseline

66. The energy baseline consists of the energy use of the existing equipment that is replaced in the case of retrofit measures and of the facility that would otherwise be built in the case of a new facility. In both cases, the electricity component of the energy baseline is adjusted for technical transmission and distribution losses for the electrical grid serving the building(s).

67. Each energy form in the emission baseline is multiplied by an emission coefficient. For the electricity displaced, the emission coefficient is calculated in accordance with provisions of paragraphs 28 and 29 for category I.D projects. For fossil and solid biomass fuels, the IPCC default values for emission coefficients may be used.

Leakage

68. If the energy efficiency technology is equipment transferred from another activity, leakage calculation is required.

Monitoring

69. In the case of retrofit measures, monitoring shall consist of:

- (a) Documenting the specifications of the equipment replaced;
- (b) Metering the energy use of the building(s) before and after the replacement equipment is installed;
- (c) Calculating the energy savings due to the measures installed.

70. In the case of a new facility, monitoring shall consist of:

- (a) Metering the energy use of the building(s);
- (b) Calculating the energy savings of the new building(s).

71. Published values for technical transmission and distribution losses may be used. Alternatively technical transmission and distribution losses for the grid that supplies the building(s) may be monitored.

¹ Thus, fuel switching measures that are part of a package of energy efficiency measures at a single location, may be part of a project activity included in this project category.

3.) Adapting methodology Type II.C to include thermal energy for the user

[Original methodology: *II.C. Demand-side energy efficiency programmes for specific technologies*]

II.C.b Demand-side energy efficiency programmes for specific technologies providing thermal energy to the user

Technology/Measure

46. This category comprises programmes that encourage the adoption of energy-efficient equipment, boilers, stoves, etc. that supply individual households or users with thermal energy at many sites. These technologies may replace existing equipment or be installed at new sites. The aggregate energy savings by a single project may not exceed the equivalent of 15 GWh per year.

Boundary

47. The project boundary is the physical, geographical location of each measure (each piece of equipment) installed.

Baseline

48. If the energy displaced is a fossil or biomass fuel, the energy baseline is the existing fuel consumption or the amount of fuel that would be used by the technology that would have been installed otherwise. The emissions baseline is the energy baseline multiplied by an emission coefficient for the fuel displaced. IPCC default values for emission coefficients may be used.

Leakage

51. If the energy efficiency practice involves equipment transferred from another activity, leakage calculation is required.

Monitoring

52. If the devices used replace existing devices, the number and “power” of the replaced devices shall be recorded and monitored.

53. Monitoring shall consist of monitoring either the “power” and “operating hours” or the “energy use” of the devices installed using an appropriate methodology. Possible methodologies include:

- (a) Recording the “energy use” of the technology installed by recording the operating hours and multiplying them with the average energy use (as indicated by the manufacturer)
- (b) Calculating the energy savings using the recorded energy use obtained from subparagraph (a)

OR

- (c) Metering the “energy use” of an appropriate sample of the devices installed by measuring the actual fuel use.
- (d) Calculating the energy savings using the metered energy use obtained from subparagraph (c)

54. Monitoring shall include annual checks of a sample of non-metered systems to ensure that they are still operating (other evidence of continuing operation, such as on-going rental/lease payments could be a substitute).