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

TYPE I - RENEWABLE ENERGY PROJECTS

Project participants shall apply the general guidelines to the SSC CDM methodologies, information on additionality (attachment A to Appendix B) and general guidance on leakage in biomass project activities (attachment C to Appendix B) provided at <http://cdm.unfccc.int/methodologies/SSCmethodologies/approved.html> *mutatis mutandis*.

I.C. Thermal energy production with or without electricity

Technology/measure

1. This methodology ~~category~~ comprises renewable energy technologies that supply users[1] with thermal energy that displaces fossil fuel use. These units include technologies such as solar thermal water heaters and dryers, solar cookers, energy derived from renewable biomass and other technologies that provide thermal energy that displaces fossil fuel.

Applicability

2. Biomass-based cogeneration systems ~~consisting of steam generator(s) and steam turbine(s)~~ are included in this category. For the purpose of this methodology "cogeneration" shall mean the simultaneous generation of thermal energy and electrical energy in one process.[2] Project activities that produce heat and power in separate element processes (for example heat from a boiler and electricity from a biogas engine) do not fit under the definition of cogeneration project.

3. Emission reductions from a biomass cogeneration system can accrue from one of the following activities:

   (a) Electricity supply to a grid;

   (b) Electricity and/or thermal energy (steam or heat) production for on-site consumption or for consumption by other facilities;

   (c) Combination of (a) and (b).

4. The total installed/rated thermal energy generation capacity of the project equipment is equal to or less than 45 MW thermal[3] (see paragraph 6 for the applicable limits for cogeneration project activities).

5. For co-fired[4] systems, the total installed thermal energy generation capacity of the project equipment, when using both fossil and renewable fuel, shall not exceed 45 MW thermal (see paragraph 6 for the applicable limits for cogeneration project activities).

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[1] That is residential, industrial or commercial facilities.

[2] This methodology however does not preclude production of heat and power from the same heat generating equipment, for example a portion of steam produced in a boiler is used for process heat and another portion of steam from the same boiler is used for electricity production.

[3] Thermal energy generation capacity shall be manufacturer's rated thermal energy output, or if that rating is not available the capacity shall be determined by taking the difference between enthalpy of total output (for example steam or hot air in kcal/kg or kcal/m^3) leaving the project equipment and the total enthalpy of input (for example feed water or air in kcal/kg or kcal/m^3) entering the project equipment. For boilers, condensate return (if any) must be incorporated into enthalpy of the feed.

6. The following capacity limits apply for biomass cogeneration units:

(a) If the project activity includes emission reductions from both the thermal and electrical energy components, the total installed energy generation capacity (thermal and electrical) of the project equipment shall not exceed 45 MW thermal. For the purpose of calculating this capacity limit the conversion factor of 1:3 shall be used for converting electrical energy to thermal energy (i.e. for renewable energy project activities, the maximal limit of 15 MW(e) is equivalent to 45 MW thermal output of the equipment or the plant);

(b) If the emission reductions of the cogeneration project activity are solely on account of thermal energy production (i.e. no emission reductions accrue from the electricity component), the total installed thermal energy production capacity of the project equipment of the cogeneration unit shall not exceed 45 MW thermal;

(c) If the emission reductions of the cogeneration project activity are solely on account of electrical energy production (i.e. no emission reductions accrue from the thermal energy component), the total installed electrical energy generation capacity of the project equipment of the cogeneration unit shall not exceed 15 MW.

7. The capacity limits specified in the above paragraphs apply to both new facilities and retrofit projects. In the case of project activities that involve the addition of renewable energy units at an existing renewable energy facility, the total capacity of the units added by the project should comply with capacity limits in paragraphs 4 to 6~~7~~, and should be physically distinct[5] from the existing units.

8. Project activities that seek to retrofit or modify an existing facility for renewable energy generation are included in this category.

9. New Facilities (Greenfield projects) and project activities involving capacity additions compared to the baseline scenario are only eligible if they comply with the related and relevant requirements in the "General Guidelines to SSC CDM methodologies".

10. If solid biomass fuel (e.g. briquette) is used, it shall be demonstrated that it has been produced using solely renewable biomass and all project or leakage emissions associated with its production shall be taken into account in the emissions reduction calculation.

11. Where the project participant is not the producer of the processed solid biomass fuel, the project participant and the producer are bound by a contract that shall enable the project participant to monitor the source of the renewable biomass to account for any emissions associated with solid

[4] A co-fired system uses both fossil and renewable fuels, for example the simultaneous combustion of both biomass residues and fossil fuels in a single boiler. Use of fossil fuel during a period of time when the biomass is not available is permitted.

[5] Physically distinct units are those that are capable of producing thermal/electrical energy without the operation of existing units, and that do not directly affect the mechanical, thermal, or electrical characteristics of the existing facility. For example, the addition of a steam turbine to an existing combustion turbine to create a combined cycle unit would not be considered "physically distinct".

biomass fuel production. Such a contract shall also ensure that there is no double-counting of emission reductions.

12. If electricity and/or steam/heat produced by the project activity is delivered to a third party i.e. another facility or facilities within the project boundary, a contract between the supplier and consumer(s) of the energy will have to be entered into that ensures there is no double-counting of emission reductions. ~~into contract specifying that only the facility generating the energy can claim emission reductions from the energy displaced.~~

13. If the project activity recovers and utilizes biogas for power/heat production and applies this methodology on a stand alone basis i.e. without using a Type III component of a SSC methodology, any incremental emissions occurring due to the implementation of the project activity (e.g. physical leakage of the anaerobic digester, emissions due to inefficiency of the flaring), shall be taken into account either as project or leakage emissions.

14. Charcoal based biomass energy generation project activities are eligible to apply the methodology only if the charcoal is produced from renewable biomass sources[6] provided:

(a) Charcoal is produced in kilns equipped with methane recovery and destruction facility; or

(b) If charcoal is produced in kilns not equipped with a methane recovery and destruction facility, methane emissions from the production of charcoal shall be considered. These emissions shall be calculated as per the procedures defined in the approved methodology AMS-III.K.[7] Alternatively, conservative emission factor values from peer reviewed literature or from a registered CDM project activity can be used, provided that it can be demonstrated that the parameters from these are comparable e.g. source of biomass, characteristics of biomass such as moisture, carbon content, type of kiln, operating conditions such as ambient temperature.

Project Boundary

~~15. The physical, geographical site of the project equipment producing the renewable energy delineates the project boundary. The boundary also extends to the industrial, commercial or residential facility, or facilities, consuming energy generated by the system and the processes or equipment that is affected by the project activity.~~

15. The spatial extent of the project boundary encompasses:

(a) All plants generating power and/or heat located at the project site, whether fired with biomass, fossil fuels or a combination of both;

(b) All power plants connected physically to the electricity system (grid) that the project plant is connected to;

[6] Refer to EB 23, annex 18 for the definition of renewable biomass.

[7] AMS-III.K "Avoidance of methane release from charcoal production by shifting from traditional open-ended methods to mechanized charcoaling process"

(c) Industrial, commercial or residential facility, or facilities, consuming energy generated by the system and the processes or equipment affected by the project activity;

(d) The processing plant of biomass residues, for project activities using solid biomass fuel (e.g. briquette), unless all associated emissions are accounted for as leakage emissions;

(e) The transportation itineraries, if the biomass is transported over distances greater than 200 kilometres, unless all associated emissions are accounted for as leakage emissions;

(f) The site of the anaerobic digester in the case of project activity that recovers and utilizes biogas for power/heat production and applies this methodology on a stand alone basis i.e. without using a Type III component of a SSC methodology.

Baseline Emissions

General criteria on determining baseline emissions

16. 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 factor for the fossil fuel displaced. ~~For calculating the emission factor of the fossil fuel, reliable local or national data shall be used. IPCC default values shall be used only when country or project specific data are not available or demonstrably difficult to obtain~~.

17. Existing facilities are those that have been in operation for at least three years immediately prior to the start date of the project activity. For project activities ~~fuel switching from fossil fuel to renewable biomass~~ implemented in existing facilities, baseline calculations shall be based on historical data on energy use (e.g. electricity, fossil fuel) and plant output (e.g. steam/electricity) in the baseline plant for at least three years prior to project implementation. For existing facilities with ~~that are~~ less than three years of operational data~~old~~, all historical data shall be available (a minimum of one year data would be required). For existing facilities having no historical data/information on baseline parameters such as efficiency, energy consumption and output (e.g. the available data is not reliable due to various factors such as the use of imprecise or non-calibrated measuring equipment), the baseline parameters can be determined using a performance test/measurement campaign to be carried out prior to the implementation of the project activity. The project proponent may follow the relevant provisions from the "Tool to determine baseline efficiency of thermal and electricity systems". In the case of project activities that export to other facilities within ~~in~~ the project boundary, historical data from the recipient plants is also required.

18. For project activities implemented in existing facilities where the additionality is demonstrated based on a baseline scenario that is not the continuation of the current practice (e.g. continued use of the fossil fuel that was used prior to the implementation of the project activity), the baseline emission factor is chosen as lower of the two: a) the emission factor of the fossil fuel that would have been used in the identified baseline scenario and b) the emission factor of the fossil fuel that was used prior to the implementation of the project activity.

Baseline scenario for power and heat production

19. Project activities producing both heat and electricity using biomass cogeneration shall use one of the following baseline scenarios:[8]-

(a) Electricity is imported from a the grid and thermal energy (steam/heat) is produced using fossil fuel;

(b) Electricity is produced in an on-site captive power plant using fossil (with a possibility of export to the grid) and thermal energy (steam/heat) is produced using fossil fuel;

(c) A combination of (a) and (b);

(d) Electricity and thermal energy (steam/heat) are produced in a cogeneration unit using fossil fuel (with a possibility of export of electricity to a the grid/other facilities and/or thermal energy to other facilities);

(e) Electricity is imported from a the grid and/or produced in an on-site captive power plant using fossil fuels (with a possibility of export to the grid); steam/heat is produced from biomass;

(f) Electricity is produced in an on-site captive power plant using biomass (with a possibility of export to -the a grid) and/or imported from a the grid; steam/heat is produced using fossil fuel;

(g) Electricity and thermal energy (steam/heat) are produced in a biomass fired cogeneration unit (without a possibility of export of electricity either to a the grid or to other facilities and without a possibility of export of thermal energy to other facilities)[9]. This scenario applies to a project activity that installs a new grid connected biomass cogeneration system that produces surplus electricity and this surplus electricity is exported to a grid. The baseline scenario is that the electricity would otherwise have been generated by the operation of grid-connected power plants and by the addition of new generation sources to the grid;

(h) Electricity and/or thermal energy produced in a co-fired system;

(i) Electricity is imported from a grid and/or produced in a biomass fired cogeneration unit (without a possibility of export of electricity either to the grid or to other facilities); steam/heat is produced in a biomass fired cogeneration unit and/or a

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[8] Cases where no historical information is available, the most plausible energy supply sources shall be established in accordance with the guidance on Greenfield projects in the general guidelines to SSC CDM methodologies.

[9] This scenario applies to the situation where a new grid connected biomass cogeneration system/s installed by the project activity produces surplus electricity compared to the pre-project situation and this surplus electricity is exported to a grid. All the services provided in pre-project scenario baseline i.e. energy supply (process heat and electricity) are maintained at the same level or improved during the crediting period. This shall be demonstrated using the most recent three years of historical data. (see also paragraph 3632).

biomass fired boiler (without a possibility of export of thermal energy to other facilities). This scenario applies to a project activity that installs a new biomass cogeneration system that displaces electricity which otherwise would have been imported from a grid.[10]

Baseline emissions for electricity production

20. Baseline emissions for electricity produced in captive plants shall be calculated as follows:

$$BE_{captelec,y} = (EG_{captelec,PJ,y} / \eta_{BL,captive\ plant}) * EF_{BL,FF,CO_2} \quad (1)$$

Where:

$BE_{captelec,y}$	The baseline emissions from electricity displaced by the project activity during the year *y* (tCO_2)
$EG_{captelec,PJ,y}$	The amount of electricity produced by the project activity during the year *y* (MWh)
EF_{BL,FF,CO_2}	The CO_2 emission factor of the fossil fuel that would have been used in the baseline plant obtained from reliable local or national data if available; alternatively ~~otherwise~~, IPCC default emission factors can be used ~~are used;~~ (tCO_2/MWh)
$\eta_{BL,captive\ plant}$	The efficiency of the plant using fossil fuel that would have been used in the absence of the project activity

21. Baseline emissions for supply of electricity to and/or displacement of electricity from a grid shall be calculated as per the procedures detailed in AMS-I.D[11] or AMS-I.F as applicable.

Baseline emissions for heat production

22. For steam/heat produced using fossil fuels the baseline emissions are calculated as follows:

$$BE_{thermal,CO_2,y} = (EG_{thermal,y} / \eta_{BL,thermal}) * EF_{FF,CO_2} \quad (2)$$

Where:

$BE_{thermal,CO_2,y}$	The baseline emissions from steam/heat displaced by the project activity during the year *y* (tCO_2)
$EG_{thermal,y}$	The net quantity of steam/heat supplied by the project activity during the year *y* (TJ)

[10] It shall be demonstrated using the three most recent years of historical data that electricity imported from the grid is more than captive electricity generated using biomass. All the services provided in pre-project scenario i.e. energy supply (process heat and electricity) are maintained at the same level or improved during the crediting period (see also paragraph 36)

[11] AMS-I.D "Grid connected renewable electricity generation"

EF_{FF,CO_2}	The CO_2 emission factor of the fossil fuel that would have been used in the baseline plant~~; tCO_2/TJ,~~ obtained from reliable local or national data if available, alternatively, ~~otherwise,~~ IPCC default emission factors can be used ~~are used~~ (tCO_2/TJ)~~.~~
$\eta_{BL,thermal}$	The efficiency of the plant using fossil fuel that would have been used in the absence of the project activity

23. For cases ~~15~~ 19 (a), (b) and (c), baseline emissions shall be calculated as the sum of emissions from the production of electricity and steam/heat considering most recent historical records (average of the data from a minimum of the three most recent years excluding abnormal years is required).

Determination of emission factor for electricity

24. For project activities that displace on-site captive electricity and/or displace grid electricity import and/or supply electricity to a grid, the electricity emission factor ~~for the electricity~~ should reflect the emissions intensity of the captive power plant and the grid of the baseline scenario. If annual electricity produced in the project activity is less than or equal to the sum of on-site captive generation and net grid import[12] (average of the most recent three years' data) in the baseline scenario, the emission factor shall be calculated as the weighted average of on-site captive electricity generation and the net grid electricity import in the baseline.[13] If annual electricity produced in the project activity is greater than the sum of on-site captive generation and net grid import (average of the most recent three years' data) in the baseline, the lower of the two i.e. the emission factor of the grid or the emission factor of the baseline captive plant shall be used for the incremental generation (i.e. the difference between the electricity generation in the project activity and the sum of captive generation and net grid import).

25. For project activities that do not displace captive electricity generated by an existing plant but displace grid electricity import and/or supply electricity to a grid, the emission factor of the grid shall be calculated as per the procedures detailed in AMS-I.D.

26. For new facilities, the most conservative (lowest) emission factor of the two power sources (captive power plant and grid) should be used.

Baseline emissions for power and heat production

27. For electricity and thermal energy (steam/heat) produced in a baseline cogeneration unit, using fossil fuel (case ~~15~~ 19 (d)), the following equation shall be used to determine baseline emissions:

$$BE_{cogen,CO_2,y} = [(EG_{PJ,thermal,y} + EG_{PJ,electrical,y} * 3.6) / \eta_{BL,cogen}] * EF_{FF,CO_2} \quad \textbf{(3)}$$

[12] Difference of total electricity imported from the grid and total electricity exported to the grid.

[13] For example in the baseline if 80% of annual electricity requirement was met by grid import and the rest by captive generation, the weighted average emission factor (EF) would be 0.8 EF_{grid}+ 0.2 $EF_{captive}$

Where:

$BE_{cogen,CO_2,y}$	Baseline emissions from electricity and thermal energy displaced by the project activity during the year *y* (tCO_2)
$EG_{PJ,electrical,y}$	The amount of electricity supplied by the project activity during the year *y*; GWh
3.6	Conversion factor (TJ/GWh)
$EG_{PJ,thermal,y}$	The net quantity of thermal energy supplied by the project activity during the year *y* (TJ)
EF_{FF,CO_2}	The CO_2 emission factor of the fossil fuel that would have been used in the baseline cogeneration plant~~; tCO_2/TJ~~ obtained from reliable local or national data if available, alternatively, ~~otherwise~~ IPCC default emission factors can be used ~~are used~~ (tCO_2/TJ)
$\eta_{BL,cogen}$	The total annual average efficiency of the cogeneration plant using fossil fuel determined in accordance with paragraphs 28 ~~24~~ and 29 ~~25~~ below

28. In the case of an existing baseline cogeneration plant, the efficiency shall be calculated as the total annual energy produced over the last three years using the historical data as prescribed in paragraph ~~14~~ 17 (total electricity generated and total steam/heat extracted divided by the thermal energy value of the fuel use).

29. In the case of a Greenfield project cogeneration plant where the baseline is a cogeneration plant (e.g. using a steam turbine and steam generator that would have been built in the absence of the project activity), the total annual average efficiency of the cogeneration plant using fossil fuel shall be defined as the ratio of thermal energy (steam/heat) and electricity produced to total thermal energy value of the fuel use. This ratio shall be determined using one of the two following options (in preferential order):

(a) Calculated as a single value with consideration of the following:

Step 1:

The total annual average efficiency of the cogeneration plant using fossil fuel is determined using documented efficiency specification for new steam turbines and steam generators provided by two or more manufacturers for each type of such equipment within in the region:[14]

- Efficiency values for the steam turbine(s) and steam generator(s) shall be based on turbines and steam generators with specifications nearly equivalent to baseline units that would have been utilized in the absence of the project activity;
- The efficiency values utilized shall be the highest individual efficiency values (over the full range of expected operating conditions of the baseline

[14] In case equipment is not available within the region the project proponent shall consider adjoining regions.

cogeneration system) that can be achieved by the steam turbine(s) and steam generator(s).

Step 2:

The total annual average efficiency of the cogeneration plant using fossil fuel is then calculated as the product of the highest efficiency value for the steam turbine(s) and the highest efficiency value of the steam generator(s), assuming both efficiencies are in the form of a percentage of output per input.

(b) Calculated as a single value with consideration of the following:

Step 1:

- A default steam turbine efficiency of 100%;
- A default steam generator efficiency determined using the "Tool to determine the baseline efficiency of thermal or electric energy generation systems".

Step 2:

- The total annual average efficiency of the cogeneration plant using fossil fuel is then calculated as the product of the efficiency value for the steam turbine(s) and the efficiency value of the steam generator(s), assuming both efficiencies are in the form of a percentage of output per input.

30. Efficiency of the baseline units (excluding cogeneration plants) shall be determined by adopting one of the following criteria (in ~~a~~ preferential order):

(a) Highest measured operational efficiency over the full range of operating conditions of a unit with similar specifications, using baseline fuel. The efficiency tests shall be conducted following the guidance provided in relevant national/international standards;

(b) Highest of the efficiency values provided by two or more manufacturers for units with similar specifications, using the baseline fuel;

(c) Default efficiency of 100%.

31. For household or commercial applications/systems, whose maximum output capacity is less than 45 kW thermal and where it can be demonstrated that the metering of thermal energy output is not plausible, as in the case of cooking stoves, gasifiers, driers, water heaters etc., efficiency of the baseline units shall be determined by adopting one of the following criteria:

(a) Highest measured operational efficiency over the full range of operating conditions of a representative sample of units with similar specifications, using baseline fuel. The efficiency tests shall be conducted following the guidance provided in relevant national/international standards;

(b) Highest of the efficiency values provided by two or more manufacturers for units with similar specifications using the baseline fuel;

(c) Highest efficiency from referenced literature values or default efficiency of 100%.

32. For case ~~15~~ 19 (e), baseline emissions from the production of electricity shall be calculated as per paragraph ~~19 to 22~~. 20 and 21. Emission reductions from heat generation are not eligible.

33. For case ~~15~~ 19 (f), baseline emissions from the production of steam/heat using fossil fuel shall be calculated as per paragraph ~~18~~ 22. Emission reductions from displacing on-site electricity generation are not eligible.

34. For case ~~15~~ 19 (g) and (i), baseline emissions from the additional production of electricity that displaces grid electricity import and/or supply electricity to the grid, shall be calculated as per paragraph 21 ~~17~~. ~~Emission reductions from both the generation of electricity and thermal energy (steam/heat) for on-site consumption are not eligible~~.

Baseline for co-fired systems

35. For ~~15~~ 19 (h) and other project activities where the baseline is co-fired system,[15] baseline emissions shall be determined based on three years average historical data on the relative share of fossil fuel and biomass in the baseline fuel mix. The relative share is determined based on the energy content of each fuel.

$$BE_{cofire,CO_2,y} = (EG_{cofire,PJ,y} / \eta_{BL,cofire}) * EF_{cofire,CO_2} \quad \textbf{(4)}$$

Where:

$BE_{cofire,CO_2,y}$	The baseline emissions from thermal and/or electrical energy displaced by the project activity during the year y (tCO_2e)
$EG_{cofire,PJ,y}$	The net quantity of energy (electricity/thermal) supplied by the project activity during the year y (TJ)
EF_{cofire,CO_2}	CO_2 emission factor of the baseline co-fired plant established using three years average historical data (tCO_2/TJ). In the case where more than one fossil fuel is used by the co-fired plant, the weighted average emission factor (in energy basis) among the identified fossil fuels shall be used
$\eta_{BL,cofire}$	The efficiency of the co-fired plant that would have been used in the absence of the project activity

Baseline for project activities involving new renewable energy units

36. In the case of project activities that involve the addition of renewable energy units at an existing renewable energy production facility, where the existing and new units share the use of common and limited renewable resources (e.g. biomass residues), the potential for the project activity to reduce the amount of renewable resource available to, and thus thermal energy production by, existing units must be considered in the determination of baseline emissions, project emissions, and/or leakage, as relevant.

[15] For project activities where the baseline is not a co-fired system equation (1) for electricity and equation (2) for heat/steam can be applied.

37. For project activities that involve the addition of new energy production units (e.g. turbines) at an existing facility, net increase in thermal energy generation should be calculated as follows:

$$EG_{thermal,add,y} = EG_{thermal,PJ,y} - EG_{thermal,old,y} \quad \textbf{(5)}$$

Where:

$EG_{thermal,add,y}$	Net increase in thermal energy generation at existing plant in year *y* that should be considered as energy baseline (EG_{BL}) (TJ)
$EG_{thermal,PJ,y}$	Total actual thermal energy produced in year *y* by all units, existing and new project units (TJ)
$EG_{thermal,old,y}$	Estimated thermal energy that would have been produced by existing units (installed before the project activity) in year *y* in the absence of the project activity; (TJ)

The value $EG_{thermal,old,y}$ is given by:

$$EG_{thermal,old,y} = MAX\left(EG_{thermal,actual,y}, EG_{thermal,estimated,y}\right) \quad \textbf{(6)}$$

Where:

$EG_{thermal,actual,y}$	The actual, measured thermal energy production of the existing units in year *y* (TJ)
$EG_{thermal,estimated,y}$	The estimated thermal energy that would have been produced by the existing units under the observed availability of the renewable resource for year *y* (TJ)

If the existing units shut down, are derated, or otherwise become limited in production, the project activity should not get credit for generating thermal energy from the same renewable resources that would have otherwise been used by the existing units (or their replacements). Therefore, the equation for $EG_{thermal,old,y}$ still holds, and the value for $EG_{thermal,estimated,y}$ should continue to be estimated assuming the capacity and operating parameters are the same as that at the time of the start of the project activity.

If the existing units are subject to modifications or retrofits that increase production, then $EG_{thermal,old,y}$ can be estimated using the procedures described for $EG_{BL,thermal,retrofit,y}$ below.

Baseline emissions for retrofit project activities

38. For project activities that seek to retrofit or modify an existing facility for renewable energy generation, the baseline scenario is the following:

In the absence of the CDM project activity, the existing facility would continue to provide thermal energy $EG_{BL,thermal,retrofit,y}$ at historical average levels $EG_{HY,thermal,retrofit,y}$, until the time at which the thermal energy facility would be likely to be replaced or retrofitted in the absence of the CDM project activity ($DATE_{BaselineRetrofit}$). From that point of time onwards, the baseline scenario is assumed to correspond to the project activity, and baseline thermal energy production is assumed to equal project thermal energy production and no emission reductions are assumed to occur.

~~$$EG_{BL,thermal,retrofit,y} = MAX\left(EG_{historical,thermal,y}, EG_{estimated,thermal,y}\right) \quad until \quad DATE_{BaselineRretrofit} \quad (7)$$~~

$$EG_{BL,thermal,retrofit,y} = MAX\left(EG_{HY,thermal,retrofit,y}, EG_{estimated,thermal,y}\right) \quad until \quad DATE_{BaselineRretrofit} \quad (7)$$

Where:

$EG_{BL,thermal,retrofit,y}$	Thermal energy production by an existing facility in the absence of the project activity in year *y* (TJ)
~~$EG_{historical,thermal,y}$~~ $EG_{HY,thermal,retrofit,y}$	Average of historical thermal energy levels delivered by the existing facility, spanning all data from the most recent available year (or month, week or other time period) to the time at which the facility was constructed, retrofitted, or modified in a manner that significantly affected output (i.e. by 5% or more). ~~A minimum of three years (excluding abnormal years) of historical production data is required. In the case that three years of historical data are not available - e.g. due to recent retrofits or exceptional circumstances, a new methodology or methodology revision must be proposed~~ (TJ)
$EG_{estimated,thermal,y}$	Estimated thermal energy that would have been produced by the existing units under the observed availability of renewable resources in year *y* (TJ)
$DATE_{BaselineRretrofit}$	Date at which the existing generation facility is likely to be replaced or retrofitted in the absence of the CDM project activity

39. For project activities that seek to retrofit or modify an existing facility to enhance the energy conversion efficiency, the baseline emissions $BE_{retrofit,CO_2,y}$ then correspond to the difference of the thermal energy supplied by the project activity and the baseline thermal energy supplied in the case of modified or retrofit facilities multiplied by the emission factor of the fuel that would have been used to generate the incremental energy:

$$BE_{retrofit,CO2,y} = \left(EG_{thermal,retrofit,y} - EG_{BL,thermal,retrofit,y}\right) * EF_{FF,CO2} \quad (8)$$

Where:

$BE_{retrofit,CO2,y}$	Baseline emissions from the incremental thermal energy supplied due to retrofit (tCO_2)
$EG_{thermal,retrofit,y}$	Thermal energy supplied by the project activity (after retrofit) in year *y* (TJ)
$EG_{BL,thermal,retrofit,y}$	Thermal energy production by an existing facility in the absence of the project activity (before retrofit) in year *y* (TJ)
$EF_{FF,CO2}$	The CO_2 emission factor of the fossil fuel that would have been used in the baseline plant to generate the incremental energy~~; tCO_2/TJ~~ obtained from

reliable local or national data if available, alternatively, ~~otherwise~~ IPCC default emission factors can be used ~~are used~~ (tCO_2/TJ)

40. The requirements concerning demonstration of the remaining lifetime of the replaced equipment shall be met as described in the "General Guidelines to SSC CDM methodologies". If the remaining lifetime of the affected systems increases due to the project activity, the crediting period shall be limited to the estimated remaining lifetime, i.e. the time when the affected systems would have been replaced in the absence of the project activity.

41. In order to estimate the point in time when the existing equipment would need to be replaced in the absence of the project activity ($DATE_{BaselineRretrofit}$), project participants may follow the procedures described in the "General Guidelines to SSC CDM methodologies" ~~general guidelines~~.

42. For project activities that seek to retrofit or modify an existing facility for the purpose of fuel switch from fossil fuels to biomass ~~residues~~ in heat generation equipment, the baseline emissions shall be calculated as per equation (2).

43. For household or commercial applications/systems, whose maximum output capacity is less than 45 kW thermal and where it can be demonstrated that the metering of thermal energy output is not plausible, as in the case of biomass stoves, gasifiers, driers, water heaters etc., the project output energy shall be estimated based on consumption of the biomass (in terms of energy quantity) times the efficiency of the project equipment. The equation below shall be used :

$$BE_y = [HG_{PJ,y} / \eta_{BL}] * EF_{FF,CO2}$$
$$= \{[B_{biomass,PJ,y} * NCV_{biomass} * \eta_{PJ}] / \eta_{BL}\} * EF_{FF,CO2} \quad \textbf{(9)}$$

Where:

BE_y	The baseline emissions from thermal energy displaced by the project activity using renewable biomass during the year *y* (tCO_2)
$HG_{PJ,y}$	The net quantity of thermal energy supplied by the project activity using renewable biomass during the year *y* (TJ)
η_{BL}	Efficiency of the baseline equipment being replaced (determined as per paragraph 30 or 31 ~~26 or 27~~)
η_{PJ}	Efficiency of the project equipment measured using representative sampling methods or based on referenced literature values. The efficiency tests shall be conducted following the guidance provided in the relevant national/international standards
$EF_{FF,CO2}$	The CO_2 emission factor of the fossil fuel that would have been used in the baseline (tCO_2/TJ)
$B_{biomass,PJ,y}$	The net quantity of the biomass consumed in year *y* (tons)
$NCV_{biomass}$	The net calorific value of the biomass (TJ/tons)

43. In the case of project activity consuming biomass and fossil fuel to produce thermal and or electrical energy, specific energy consumption[16] of each type of fuel (biomass or fossil) to be used shall be specified *ex ante*. The consumption of each type of fuel shall be monitored.

Specific energy consumption can be derived as follows:

$$SEC_{j,PJ,y,measured} = \frac{\sum_j (FC_{j,PJ,y} * NCV_{j,y})}{EG_{PJ,y}} \quad (10)$$

Where:

$SEC_{j,PJ,y,measured}$	Specific energy consumption of fuel type *j* of the project activity in year *y* (TJ/MWh)
$EG_{PJ,y}$	Energy generation in year *y* (MWh)
$FC_{j,PJ,y}$	Quantity of fuel type *j* combusted in the project activity during the year *y* (volume or mass unit)
$NCV_{j,y}$	Average net calorific value of fuel type *j* combusted during the year *y* (TJ per unit volume or mass unit)

44. For the specific case of co-fired plants, the baseline emissions for the amount of thermal energy or electricity produced corresponding to biomass fuels use shall be calculated as follows:

$$BE_{cofire,y} = \frac{\sum_k (FC_{biomass,k,y} \times NCV_{biomass,k,y})}{SEC_{PJ,j,y,measured} \times \eta_{BL}} * EF_{BL} \quad (11)$$

Where:

$BE_{cofire,y}$	Baseline emissions during the year *y* (tCO_2)
$FC_{biomass,k,y}$	Quantity of biomass type *k* combusted during the year *y* (volume or mass unit)
$NCV_{biomass,k,y}$	Average net calorific value of biomass type *k* combusted during the year *y* (TJ per unit volume or mass unit)
EF_{BL}	CO_2 emission factor of the fossil fuel that would have been used in the baseline co-fired plant established using three years average historical data (tCO_2/MWh)
η_{BL}	Energy efficiency of the equipment that would have been used in the baseline

45. For the co-fired systems, baseline emissions calculated as per paragraph 31 shall be compared with the baseline emissions calculated as per paragraph 41. The lower of the two values shall be used to calculate emission reductions.

[16] Specific energy consumption is the fuel consumption (in energy basis) per unit of thermal energy or electricity generated (e.g. TJ of bagasse energy per MWh output).

Ex ante estimations

44. The quantities and types of biomass and the biomass to fossil fuel ratio (in the case of co-fired systems) to be used during the crediting period should be explained and documented transparently in the CDM-PDD. For the selection of the baseline scenario, an *ex ante* estimation of these quantities should be provided.

Project Emissions

45. Project emissions include:

- CO_2 emissions from on-site consumption of fossil fuels due to the project activity shall be calculated using the latest version of the "Tool to calculate project or leakage CO_2 emissions from fossil fuel combustion";
- CO_2 emissions from electricity consumption by the project activity using the latest version of the "Tool to calculate baseline, project and/or leakage emissions from electricity consumption";
- Any other significant emissions associated with project activity within the project boundary;
- For geothermal project activities, project participants shall account for the following emission sources, where applicable: fugitive emissions of carbon dioxide and methane due to release of non-condensable gases from produced steam; and carbon dioxide emissions resulting from combustion of fossil fuels related to the operation of the geothermal power plant.[17]

46. Project emissions in the case of geothermal project activities are calculated as follows:

$$PE_{Geo,y} = PE_{s,y} + PE_{FF,y} \qquad \textbf{(12)}$$

Where:

$PE_{Geo,y}$	Project emissions in year y (tCO_2/y)
$PE_{s,y}$	Project emissions of carbon dioxide and methane due to the release of non-condensable gases from the steam produced in the geothermal power plant in year y (tCO_2)
$PE_{FF,y}$	Project emissions from combustion of fossil fuels related to the operation of the geothermal power plant in year y (tCO_2)

Project emissions of carbon dioxide and methane due to the release of non-condensable gases from the steam produced in the geothermal power plant are ~~is~~ calculated as:

$$PE_{s,y} = \left(w_{Main,CO2} + w_{Main,CH4} * GWP_{CH4}\right) * M_{S,y} \qquad \textbf{(13)}$$

[17] Fugitive carbon dioxide and methane emissions due to well testing and well bleeding are not considered, as they are negligible.

Where:

$w_{Main,CO2}$	Average mass fraction of carbon dioxide in the produced steam (non-dimensional)
$w_{Main,CH4}$	Average mass fraction of methane in the produced steam (non-dimensional)
GWP_{CH4}	Global warming potential of methane valid for the relevant commitment period (tCO_2e/tCH_4)
$M_{S,y}$	Quantity of steam produced during the year *y* (tonnes)

Project emissions from combustion of fossil fuels related to the operation of the geothermal power plant are ~~is~~ calculated as:

$$PE_{FF,y} = PE_{FC,j,y} \quad (14)$$

Where:

$PE_{FC,j,y}$	CO_2 emissions from fossil fuel combustion in process *j* during the year *y* (tCO_2). This parameter shall be calculated as per the latest version of the "Tool to calculate project or leakage CO_2 emissions from fossil fuel combustion" where *j* stands for the processes required for the operation of the geothermal power plant

Leakage

47. If the energy generating equipment currently being utilised is transferred from outside the boundary to the project activity, leakage is to be considered.

48. In cases where the collection/processing/transportation of biomass residues is outside the project boundary CO_2 emissions from the collection/processing/transportation[18] of biomass residues to the project site shall be taken into account as leakage.

Emission reductions

49. Emission reductions are calculated as follows:

$$ER_y = BE_y - PE_y - LE_y \quad (15)$$

[18] If biomass residues are transported over a distance of more than 200 kilometres due to the implementation of the project activity then this leakage source attributed to transportation shall be considered, otherwise it can be neglected.

Where:

ER_y	Emission reductions in year *y* (tCO_2e)
BE_y	Baseline emissions in year *y* (tCO_2e)
PE_y	Project emissions in year *y* (tCO_2)
LE_y	Leakage emissions in year *y* (tCO_2)

Monitoring

50. Relevant parameters shall be monitored as indicated in the table below:

Table 1: Parameters for monitoring during the crediting period

No.	Parameter	Description	Unit	Monitoring/recording frequency	Measurement methods and procedures
1		Continuous operation of the equipment/ system		Annual check of all appliances or a representative sample thereof to ensure that they are still operating or are replaced by an equivalent in service appliance	If the emissions reduction per system is less than five tonnes of CO_2e a year; or In the case of household or commercial applications/systems, whose maximum output capacity is less than 45 kW thermal and where it can be demonstrated that the metering of thermal energy output is not plausible: (i) Recording annually the number of systems operating (evidence of continuing operation, such as on-going rental/lease payments could be a substitute), if necessary using survey methods; (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. Where necessary refer to the "General guidelines for sampling and surveys for SSC project activities"

No.	Parameter	Description	Unit	Monitoring/recording frequency	Measurement methods and procedures
2	EF_{CO2}	CO_2 emission factor for the grid electricity in year *y*	tCO_2e/kWh		As described in AMS-I.D
3	$EF_{CO2,i}$	CO_2 emission factor of fossil fuel type *i*	tCO_2e/GJ	As per the "Tool to calculate project or leakage CO_2 emissions from fossil fuel combustion"	As per the "Tool to calculate project or leakage CO_2 emissions from fossil fuel combustion"
4		Quantity of electricity generated/ supplied	MWh	Continuous monitoring, integrated hourly and at least monthly recording	Measured using calibrated meters. Calibration shall be as per the relevant paragraphs of "General guidelines to SSC CDM methodologies". In case the project activity is exporting electricity to other facilities, the metering shall be carried out at the recipient's end and measurement results shall be cross checked with records for sold/purchased electricity (e.g. invoices/receipts). 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

No.	Parameter	Description	Unit	Monitoring/recording frequency	Measurement methods and procedures
5		Quantity of hot air	Nm^3/hr	Continuous monitoring, integrated hourly and at least monthly recordings	Measured using calibrated meters. Calibration shall be as per the relevant paragraphs of "General guidelines to SSC CDM methodologies". If applicable, measurement results shall be cross checked with records for sold/purchased electricity (e.g. invoices/receipts). Where it is not feasible (e.g. because of too high temperature), spot measurements can be used through sampling with a 90% confidence level and a 10% precision
6		Quantity of steam	Nm^3/hr	Continuous monitoring, integrated hourly and at least monthly recording	Measured using calibrated meters. Calibration shall be as per the relevant paragraphs of the "General guidelines to SSC CDM methodologies". If applicable, measurement results shall be cross checked with records for sold/purchased electricity (e.g. invoices/receipts)

No.	Parameter	Description	Unit	Monitoring/recording frequency	Measurement methods and procedures
7		Net quantity of thermal energy supplied by the project activity during the year *y*	TJ	Continuous monitoring, aggregated annually	Heat generation is determined as the difference of the enthalpy of the steam or hot fluid and/or gases generated by the heat generation equipment and the sum of the enthalpies of the feed-fluid and/or gases blow-down and if applicable any condensate returns. The respective enthalpies should be determined based on the mass (or volume) flows, the temperatures and, in case of superheated steam, the pressure. Steam tables or appropriate thermodynamic equations may be used to calculate the enthalpy as a function of temperature and pressure. In case of equipment that produces hot water/oil this is expressed as the difference in the enthalpy between the hot water/oil supplied to and returned by the plant. In case of equipment that produces hot gases or combustion gases, this is expressed as the difference in the enthalpy between the hot gas produced and all streams supplied to the plant. The enthalpy of all relevant streams shall be determined based on the monitored mass flow, temperature, pressure, density and specific heat of the gas. In case the project activity is exporting heat to other facilities, the metering shall be carried out at the recipient's end and measurement results shall be cross checked with records for sold/purchased thermal energy (e.g. invoices/receipts). 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

No.	Parameter	Description	Unit	Monitoring/recording frequency	Measurement methods and procedures
8		Quantity of fossil fuel type *j* combusted in year *y*	Mass or volume unit	As per the "Tool to calculate project or leakage CO_2 emissions from fossil fuel combustion"	As per the "Tool to calculate project or leakage CO_2 emissions from fossil fuel combustion"
9	$B_{Biomass,y}$	Net quantity of biomass consumed in year *y*	~~Ton~~ Mass or volume	Continuously and estimate using annual mass/energy balance	Use mass or volume based measurements. Adjust for the moisture content in order to determine the quantity of dry biomass. ~~And/or perform an annual energy/mass balance that is based on purchased quantities and stock.~~ The quantity of biomass shall be measured continuously or in batches. If more than one type of biomass fuel is consumed, each shall be monitored separately. For the case of processed renewable biomass (e.g. briquettes) data shall be collected for mass, moisture content, NCV of the processed biomass that is supplied to users with an appropriate sampling frequency. Cross-check: Cross-check the measurements with an annual energy balance that is based on purchased quantities (e.g., with sales receipts) and stock changes. In cases where emission reductions are calculated based on energy output, check the consistency of measurements ex post with annual data on energy generation, fossil fuels and biomass used and the efficiency of energy generation as determined *ex ante*.

No.	Parameter	Description	Unit	Monitoring/recording frequency	Measurement methods and procedures
10		Moisture content of the biomass ~~residues~~ (wet basis)	%	The moisture content of biomass of homogeneous quality shall be monitored for each batch of biomass ~~at least on a monthly basis.~~ The weighted average should be calculated for each monitoring period and used in the calculations	On-site measurements. This applies in the case where emission reductions are calculated based on energy input. For all cases, ex ante estimates should be provided in the PDD and use during the crediting period. In case of dry biomass, monitoring of this parameter is not necessary
11	*T*	Temperature	°C	Continuous monitoring, integrated hourly and at least monthly recording	Measured using calibrated meters. Calibration shall be as per the relevant paragraphs of the “General guidelines to SSC CDM methodologies”
12	*P*	Pressure	kg/cm^2	Continuous monitoring, integrated hourly and at least monthly recording	Measured using calibrated meters. Calibration shall be as per the relevant paragraphs of the “General guidelines to SSC CDM methodologies”

No.	Parameter	Description	Unit	Monitoring/recording frequency	Measurement methods and procedures
13	$NCV_{i,y}$	Net calorific value of fossil fuel type *i*	GJ/mass or volume unit	As per the "Tool to calculate project or leakage CO_2 emissions from fossil fuel combustion"	As per the "Tool to calculate project or leakage CO_2 emissions from fossil fuel combustion"
14	NCV_k	Net calorific value of biomass ~~residue~~ type *k*	GJ/mass or volume unit	~~Annually~~ Determine once in the first year of the crediting period	Measurement in laboratories according to relevant national/international standards. Measure quarterly, taking at least three samples for each measurement. The average value can be used for the rest of the crediting period. Measure the NCV based on dry biomass. Check the consistency of the measurements by comparing the measurement results ~~with measurements from previous years~~ with, relevant data sources (e.g. values in the literature, values used in the national GHG inventory) and default values by the IPCC. (If the measurement results differ significantly from previous measurements or other relevant data sources, conduct additional measurements)

No.	Parameter	Description	Unit	Monitoring/recording frequency	Measurement methods and procedures
Parameters related to Geothermal project activity					
15	$w_{Main,CO2}$	Average mass fraction of carbon dioxide in the produced steam	tCO_2/t steam	At least every three months and more frequently, if necessary	Non-condensable gases sampling should be carried out in production wells and at the steam field-power plant interface using ASTM Standard Practice E1675 for Sampling 2-Phase Geothermal Fluid for Purposes of Chemical Analysis (as applicable to sampling single phase steam only). The CO_2 and CH_4 sampling and analysis procedure consists of collecting non-condensable gases samples from the main steam line with glass flasks, filled with sodium hydroxide solution and additional chemicals to prevent oxidation. Hydrogen sulphide (H2S) and carbon dioxide (CO_2) dissolve in the solvent while the residual compounds remain in their gaseous phase. The gas portion is then analyzed using gas chromatography to determine the content of the residuals including CH_4. All alkanes concentrations are reported in terms of methane
16	$w_{Main,CH4}$	Average mass fraction of methane in the produced steam	tCH_4/t steam	At least every three months and more frequently, if necessary	As per the procedures outlined for $wMain,CO_2$

No.	Parameter	Description	Unit	Monitoring/recording frequency	Measurement methods and procedures
17	$M_{S,y}$	Quantity of steam produced during the year *y*	Nm^3/hr	Daily	The steam quantity discharged from the geothermal wells should be measured with a venture flow meter (or other equipment with at least the same accuracy). Measurement of temperature and pressure upstream of the venture meter is required to define the steam properties. The calculation of steam quantities should be conducted on a continuous basis and should be based on international standards. The measurement results should be summarized transparently in regular production reports

Project activity under a Programme of Activities

51. The following conditions apply for use of this methodology in a project activity under a programme of activities:

(a) In the specific case of biomass project activities the applicability of the methodology is limited to either project activities that use biomass residues or processed biomass (e.g. briquette) only or biomass from dedicated plantations complying with the applicability conditions of AM0042;[19]

(b) In the specific case of biomass project activities the determination of leakage shall be done following the general guidance for leakage in small-scale biomass project activities (attachment C of Appendix B[20] of simplified modalities and procedures for small-scale clean development mechanism project activities; decision 4/CMP.1) or following the procedures included in the leakage section of AM0042;

(c) In case the project activity involves the replacement of equipment, and the leakage from the use of the replaced equipment in another activity is neglected, because the replaced equipment is scrapped, an independent monitoring of scrapping of replaced equipment needs to be implemented. The monitoring should include a check if the number of project activity equipment distributed by the project and the number of scrapped equipment correspond with each other. For this purpose scrapped equipment should be stored until such correspondence has been checked. The scrapping of replaced equipment should be documented and independently verified.

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History of the document*

Version	Date	Nature of revision(s)
19	EB 61, Annex # 03 July 2011	To simplify the monitoring requirements for quantity, net calorific value and moisture content of biomass; and include an additional scenario for cogeneration project activities.
18	EB 56, Annex 18 17 September 2010	To include a procedure for determining baseline efficiency for a new cogeneration system.
17	EB 54, Annex 9 28 May 2010	To include additional guidelines on determining baseline emissions for project activities involving fuel switch from fossil fuel to biomass in thermal generating equipment. An applicability criterion on the use of biomass briquette has also been provided.
16	EB 51, Annex 19 04 December 2009	To expand the applicability of the methodology to biomass based cogeneration project activities supplying surplus electricity to a grid.

[19] AM0042 "Grid-connected electricity generation using biomass from newly developed dedicated plantations"

[20] Available at <http://cdm.unfccc.int/methodologies/SSCmethodologies/approved.html>.

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

I.C. Thermal energy production with or without electricity (cont)

15	EB 48, Annex 24 17 July 2009	To: (a) Include simplified procedures for determining efficiency of small thermal appliances used in household or commercial applications (<45kW thermal capacity); and (b) Include procedures for the estimation of baseline emission factors for co-fired systems.
14	EB 46, Annex 21 25 March 2009	To include additional baseline scenarios; expanded applicability of the methodology for renewable fuel based heat and/or power generation project activities (including cogeneration) that supply: (a) Electricity to a grid and/or displace grid electricity; (b) Electricity and/or thermal energy for on-site consumption or for consumption by other facilities and combination of (a) and (b); guidance on use of charcoal from renewable biomass sources; procedures for project emission calculations when applying to geothermal projects; more guidance on metering of thermal energy output.
13	EB 38, Annex 9 14 March 2008	To expand its applicability to include additional baseline scenarios (e.g. steam/heat produced from renewable biomass and electricity imported from the grid and/or generated in a captive plant in the baseline, while in the project case heat and electricity are produced by a renewable biomass based co-generation unit).
12	EB 33, Annex 22 27 July 2007	To allow for their application under a programme of activities (PoA), where the limit of the entire PoA exceeds the limit for small-scale CDM project activities.
11	EB 32, Annex 27 22 June 2007	To clarify the monitoring of biomass in project activities that apply these methodologies which is consistent with monitoring of biomass in the approved methodology AMS-I.D.
10	EB 31, Annex 20 04 May 2007	To provide options for baseline calculations when cogeneration from fossil fuels is the baseline activity thereby broadening the applicability of AMS-I.C.
09	EB 28, Annex 23 23 December 2006	To align the guidance on capacity addition and retrofit activities to be consistent with the revisions of AMS-I.D.
08	EB 23, Annex 31 24 February 2006	To: (i) Include provisions for retrofit and renewable energy capacity additions as eligible activities; (ii) Provide clarification for baseline calculations under category I.D; and (iii) Provide clarification on the applicability of Category I.A as against Category I.D.
Decision Class: Regulatory **Document Type**: Standard **Business Function**: Methodology		

* This document, together with the 'General Guidance' and all other 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.

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).

Version	Date	Nature of revision
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 2	New methodology AMS-III.E was adopted.

	30 June 2004	
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).
Decision Class: Regulatory **Document Type**: Standard **Business Function**: Methodology		