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

TYPE III - OTHER PROJECT ACTIVITIES

Project participants shall take into account the general guidance to the methodologies, information on additionality, abbreviations and general guidance on leakage provided at http://cdm.unfccc.int/methodologies/SSCmethodologies/approved.html.

III.F. Avoidance of methane ~~production~~ emissions through controlled biological treatment of biomass ~~from decay of biomass through composting~~

Technology/measure

1. This ~~project category~~methodology comprises measures to avoid the ~~production of~~ emissions of methane to the atmosphere from biomass or other organic matter that would have otherwise been left to decay anaerobically in a solid waste disposal site ~~without methane recovery~~. ~~Due to~~ In the project activity, ~~decay is prevented through~~ controlled biological treatment of biomass is introduced through one, or a combination, of the following measures:

(a) Aerobic treatment by composting and proper soil application of the compost;

(b) Anaerobic digestion in closed reactors equipped with biogas recovery and combustion/flaring system.

2. The project activity does not recover or combust ~~methane~~ landfill gas from the disposal site (unlike AMS III.G), and does not undertake controlled combustion of the waste that is not treated biologically in a first step (unlike AMS III.E). Project activities that recover biogas from wastewater treatment shall use methodology AMS III.H.

3. Measures are limited to those that result in emission reductions of less than or equal to 60 kt CO_2 equivalent annually.

~~3.~~ 4. This methodology is applicable to the treatment of the organic fraction of municipal solid waste and biomass waste from agricultural or agro-industrial activities. The treatment of manure is not eligible under this methodology. Project activities involving anaerobic digestion and biogas recovery from manure shall apply AMS III.D or AMS III.R.

~~2.~~ 5. This ~~project category~~ methodology includes construction and expansion of ~~compost production~~ treatment facilities as well as activities that increase capacity utilization at an existing ~~composting production~~ facility. For project activities that increase capacity utilization at existing ~~composting~~ facilities, project participant(s) shall demonstrate that special efforts are made to increase the capacity utilization, that the existing ~~composting~~ facility meets all applicable laws and regulations and that the existing ~~composting~~ facility is not included in a separate CDM project activity. The special efforts should be identified and described.

~~3.~~ 6. This ~~category~~ methodology is also applicable for co-~~composting~~ treating wastewater and solid biomass waste, where wastewater would otherwise have been treated in an anaerobic wastewater treatment system without ~~methane~~ biogas recovery. The wastewater in the project scenario is used as a source of moisture and/or nutrients to the ~~composting~~ biological treatment process e.g. composting of empty fruit bunches (EFB), a residue from palm oil production, with the addition of palm oil mill effluent (POME) which is the wastewater co produced from palm oil production.

7. The location and characteristics of the disposal site of the biomass in the baseline condition shall be known, in such a way as to allow the estimation of its methane emissions. Guidance in paragraphs 4, 6 and 7 in AMS III.E shall be followed in this regard.

8. In case residual waste from the biological treatment (slurry, compost or products from those treatments) are handled aerobically and submitted to soil application, the proper conditions and procedures (not resulting in methane emissions) must be ensured.

9. In case residual wastes from the biological treatment (slurry, compost or products from those treatments) are treated thermally/mechanically, the provisions in AMS III.E related to thermal/mechanical treatment shall be applied.

10. In case residual waste from the biological treatment (slurry, compost or products from those treatments) are stored under anaerobic conditions and/or delivered to a landfill, emissions from the residual waste shall to be taken into account and calculated as per the "Tool to determine methane emissions avoided from dumping waste at a solid waste disposal site".

11. For project activities involving controlled anaerobic digestion and production of biogas, technical measures shall be used (e.g. flared, combusted) to ensure that all biogas produced by the digester is captured and gainfully used or combusted/flared.

12. The recovered biogas from anaerobic digestion may also be utilised for the following applications instead of flaring or combustion:

- (a) Thermal or electrical energy generation directly; or
- (b) Thermal or electrical energy generation after bottling of upgraded biogas; or
- (c) Thermal or electrical energy generation after upgrading and distribution using one of the following options:
  - (i) Upgrading and injection of biogas into a natural gas distribution grid with no significant transmission constraints; or
  - (ii) Upgrading and transportation of biogas via a dedicated piped network to a group of end users; or
- (d) Hydrogen production.

13. If the recovered biogas is used for project activities covered under paragraph 12 (a), that component of the project activity shall use a corresponding category under type I.

14. If the recovered biogas is used for project activities covered under paragraph 12 (b) or 12 (c) relevant provisions in AMS III.H related to upgrading of biogas, bottling of biogas, injection of biogas into a natural gas distribution grid and transportation of biogas via a dedicated piped network shall be used.

15. If the recovered biogas is used for project activities covered under paragraph 12 (d) that component of the project activity shall use corresponding methodology AMS III.O.

Boundary

~~4.~~ 16. The project boundary is the physical, geographical site:

(a) Where the solid waste would have been disposed and the methane emission occurs in absence of the proposed project activity,

(b) In the case of projects co-composting wastewater, where the co-composting wastewater would have been treated anaerobically in the absence of the project activity,

(c) Where the treatment of biomass through composting or anaerobic digestion takes place,

(d) Where the residual waste from biological treatment or products from those treatments, like compost and slurry, are handled, disposed, submitted to soil application, or treated thermally/mechanically, ~~of the produced compost takes place~~;

(e) Where biogas is burned/flared or gainfully used,

(f) And the itineraries between them (a, b, c, ~~and~~ d and e), where the transportation of waste, wastewater, ~~or~~ compost/slurry/products of treatment or biogas occurs.

[Please note: the order of the paragraphs in the methodology has been changed. Baseline emissions come first, followed by project emissions.]

Baseline

~~15.~~ 17. The baseline scenario is the situation where, in the absence of the project activity, biomass and other organic matter are left to decay within the project boundary and methane is emitted to the atmosphere. The baseline emissions are the amount of methane emitted from the decay of the degradable organic carbon in the biomass solid waste composted or anaerobically digested in the project activity. When wastewater is co-composted, baseline emissions include emissions from wastewater co-composted in the project activity. The yearly Methane Generation Potential for the solid waste is calculated using the first order decay model as described in ~~category AMS III.G.~~ the ‘Tool to determine methane emissions avoided from dumping waste at a solid waste disposal site’.

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III.F. ***Avoidance of methane emissions through controlled biological treatment of biomass****(cont)*

Baseline emissions shall exclude emissions of methane ~~emissions~~ that would have to be captured, fuelled or flared to comply with national or local safety requirement or legal regulations.

$$BE_y = BE_{CH4,SWDS,y} - (MD_{y,reg} * GWP\_CH_4) + (MEP_{y,ww} * GWP\_CH_4) \quad \textbf{(1)}$$

Where:

$BE_{CH4,SWDS,y}$	Yearly methane generation potential of the solid waste composted or anaerobically digested by the project activity during the years "x" from the beginning of the project activity (x=1) up to the year "*y*", estimated as per ~~described in AMS III~~.G the 'Tool to determine methane emissions avoided from dumping waste at a solid waste disposal site' (tCO_2e). The tool may be used with the factor "f=0.0" assuming that no biogas is captured and flared. With the definition of year x as 'the year since the landfill started receiving wastes, x runs from the first year of landfill operation (x=1) to the year for which emissions are calculated (x=y)'.
$MD_{y, reg}$	Amount of methane that would have to be captured and combusted in the year "*y*" to comply with the prevailing regulations (tonne)
$MEP_{y,ww}$	Methane emission potential in the year "*y*" of the wastewater co-composted. The value of this term is zero if co-composting of wastewater is not included in the project activity (tonne)
GWP_CH4	*GWP* for CH_4 (value of 21 is used)

~~16.~~ 18. Methane emission potential of co-composted wastewater is estimated as ~~described in category AMS III.H~~ follows:

$$MEP_{y,ww} = Q_{y,ww,in} * COD_{y,ww,untreated} * B_{o,ww} * MCF_{ww,treatment} * UF_b \quad \textbf{(2)}$$

[Please note: UF_b added to formula.]

Where:

$Q_{y,ww,in}$	Volume of wastewater entering the co-compost~~ed~~ ing facility in the year "*y*" (m^3)
$COD_{y,ww,untreated}$	Chemical oxygen demand of the wastewater entering the co-composting facility in the year "*y*" ($tonnes/m^3$)
$B_{o,ww}$	Methane producing capacity for the wastewater (IPCC default value for domestic wastewater of 0.21 kg CH_4/kg.COD)[1]

[1] The IPCC default value of 0.25 kg CH_4/kg COD was corrected to take into account the uncertainties. For domestic waste water, a COD based value of $B_{o,ww}$ can be converted to BOD_5 based value by dividing it by 2.4, i.e. a default value of 0.504 kg CH_4/kg BOD can be used.

$MCF_{ww,treatment}$	Methane correction factor for the wastewater treatment system in the baseline scenario (MCF ~~lower~~ value as per table III.~~H~~.F.1)
UF_b	Model correction factor to account for model uncertainties (0.94)[2]

19. The Methane Correction Factor (MCF) shall be determined based on the following table:

Table III.F.1. IPCC default values[3] for Methane Correction Factor (MCF)

Type of wastewater treatment and discharge pathway or system	MCF value
Discharge of wastewater to sea, river or lake	0.1
Aerobic treatment, well managed	0
Aerobic treatment, poorly managed or overloaded	0.3
Anaerobic digester for sludge without methane recovery	0.8
Anaerobic reactor without methane recovery	0.8
Anaerobic shallow lagoon (depth less than 2 metres)	0.2
Anaerobic deep lagoon (depth more than 2 metres)	0.8
Septic system	0.5

Project Activity Emissions

~~5.~~ 20. Project activity emissions consist of:

(a) CO_2 emissions due to incremental transportation distances;

(b) CO_2 emissions ~~on account of~~ from electricity and/or fossil fuel consumption ~~based energy used~~ by the project activity facilities;

(c) In case of anaerobic digestion: methane emissions from physical leakages of the anaerobic digester;

(d) In case of composting: methane emissions during composting process;

(e) In case of composting (including co-composting of wastewater): methane emissions from runoff water;

(f) In case the residual waste from the biological treatment (slurry, compost or products from those treatments) are stored under anaerobic conditions and/or delivered to a landfill: the methane emissions from the disposal/storage of these residual waste/products.

$$PE_y = PE_{y,transp} + PE_{y,power} + PE_{y,phy\ leakage} + PE_{y,comp} + PE_{y,runoff} + PE_{y,res\ waste} \quad (3)$$

[2] Reference: FCCC/SBSTA/2003/10/Add.2, page 25.

[3] Default values from chapter 6 of volume 5. Waste in 2006 IPCC Guidelines for National Greenhouse Gas Inventories.

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*III.F. **Avoidance of methane emissions through controlled biological treatment of biomass**(cont)*

[Please note: $PE_{y,phy\ leakage} + PE_{y,comp} + PE_{y,runoff} + PE_{y,res\ waste}$ added to formula.]

Where:

PE_y	Project activity emissions in the year *y* ((tCO_2e)~~tonnes of CO_2 equivalent)~~
$PE_{y,transp}$	Emissions from incremental transportation in the year *y* (tCO_2e)
$PE_{y,power}$	Emissions from electricity or ~~diesel~~ fossil fuel consumption in the year *y* (tCO_2e)
$PE_{y,phy\ leakage}$	In case of anaerobic digestion: methane emissions from physical leakages of the anaerobic digester in year "*y*" (tCO_2e)
$PE_{y,comp}$	In case of composting: methane emissions during composting process in the year *y* (tCO_2e)
$PE_{y,runoff}$	In case of composting: methane emissions from runoff water in the year *y* (tCO_2e)
$PE_{y,res\ waste}$	In case residual waste/slurry/products are subjected to anaerobic storage or disposed in a landfill: methane emissions from the anaerobic decay of the residual waste/products (tCO_2e)

21. Project emissions due to incremental transport distances ($PE_{y,transp}$) are calculated based on the incremental distances between:

(i) The collection points of biomass and the ~~composting~~ treatment site/site where anaerobic digestion takes place as compared to the baseline solid waste disposal site;

(ii) When applicable, the collection points of wastewater and ~~composting~~ treatment site as compared to baseline wastewater treatment site;

(iii) ~~Composting/~~Treatment sites and the ~~soil application~~ sites for soil application, landfi~~l~~lling and further treatment of the residual waste/products.

$$PE_{y,transp} = (Q_y / CT_y) * DAF_w * EF_{CO2} + (Q_{y,treatment,i} / CT_{y,treatment,i}) * DAF_{treatment,i} * EF_{CO2} \quad (4)$$

Where:

Q_y	Quantity of raw waste ~~composted/~~treated and/or wastewater co-~~composted~~ treated in the year *y* (tonnes)
CT_y	Average truck capacity for ~~waste~~ transportation (tonnes/truck)
DAF_w	Average incremental distance for raw solid waste and/or wastewater transportation (km/truck)
EF_{CO2}	CO_2 emission factor from fuel use due to transportation ($kgCO_2$/km, IPCC default values or local values may be used)
i	Type of residual waste/products and or compost

$Q_{y,treatmentcomp,i}$	Quantity of final residual waste/products and/or compost i/ product produced in the year *y* (tonnes)
$CT_{y,comp\ treatment,i}$	Average truck capacity for final residual waste/products/compostproduct *i* transportation (tonnes/truck)
DAF_{comp} $DAF_{treatment,i}$	Average distance for final residual waste/products/compost/slurry product *i* transportation (km/truck)

22. For the calculation of projectCO_2 emissions on account of from electricity and/or fossil fuel based energy consumption used by the project activity facilities ($PE_{y,power}$) all the energy consumption of all equipment/devices installed by the project activity shall be included which shall include but not limited to e.g. energy used for aeration and/or turning of compost piles/heaps,and chopping of biomass for size reduction, screening, and where relevant drying of the final compost product and for the runoff wastewater treatment. Emission factors for grid electricity or diesel fuel used as the case may be shall be calculated as described in category AMS I.D. For project activity emissions from fossil fuel consumption the emission factor for the fossil fuel shall be used (tCO_2/tonne). Local values are to be used, if local values are difficult to obtain, IPCC default values may be used. If recovered biogas is used to power auxiliary equipment of the project it should be taken into account accordingly, using zero as its emission factor.

23. In case of the controlled anaerobic digestion of biomass methane emissions due to physical leakages from the digester and recovery system ($PE_{y,phy\ leakage}$) shall be considered in the calculation of project emissions. The physical leakage emissions are estimated as follows:

$$PE_{y,phy\ leakage} = Q_y * EF_{anaerobic} * GWP\_CH_4 \quad (5)$$

Where:

$EF_{anaerobic}$	Emission factor for anaerobic digestion of organic waste (t CH_4/ton waste treated). Emission factors can be based on facility/site-specific measurements, country specific values or IPCC default values (table 4.1, chapter 4, Volume 5, 2006 IPCC Guidelines for National Greenhouse Gas Inventories). IPCC default values are 2 g CH_4/kg waste treated on a dry weight basis and 1 g CH_4/kg waste treated on a wet weight basis.

24. Methane emissions during composting ($PE_{y,comp}$) shall be calculated as follows:

$$PE_{y,comp} = Q_y * EF_{composting} * GWP\_CH_4 \quad (6)$$

Where:

$EF_{composting}$	Emission factor for composting of organic waste (t CH_4/ton waste treated). Emission factors can be based on facility/site-specific measurements, country specific values or IPCC default values (table 4.1, chapter 4, Volume 5, 2006 IPCC Guidelines for National Greenhouse Gas Inventories). IPCC default values are 10 g CH_4/kg waste treated on a dry weight basis and 4 g CH_4/kg waste treated on a wet weight basis.

25. Project emissions from runoff water from the composting facility ($PE_{y,runoff}$) are calculated as follows:

$$PE_{y,runoff} = Q_{y,ww,runoff} * COD_{y,ww,runoff} * B_{o,ww} * MCF_{ww,treatment} * UF_b * GWP\_CH_4 \quad (7)$$

Where:

$Q_{y,ww,runoff}$	Volume of runoff water in the year y (m^3)
$COD_{y,ww,runoff}$	Chemical oxygen demand of the runoff water leaving the composting facility in the year y (tonnes/m^3)
$B_{o,ww}$	Methane producing capacity of the wastewater (IPCC default value for domestic wastewater of 0.21 kg CH_4/kg.COD)[4]
$MCF_{ww,\ treatment}$	Methane correction factor for the wastewater treatment system where the runoff water is treated (MCF value as per table III.F.1)
UF_b	Model correction factor to account for model uncertainties (1.06)[5]

26. Methane emissions from anaerobic storage and/or disposal in a landfill of the residual waste/products/compost from the biological treatment ($PE_{y,res\ waste}$) are calculated as per the "Tool to determine methane emissions avoided from dumping waste at a solid waste disposal site".

Leakage

27. If the ~~composting~~ project technology is the equipment transferred from another activity or if the existing equipment is transferred to another activity, leakage effects are to be considered (LE_y).

[4] The IPCC default value of 0.25 kg CH_4/kg COD was corrected to take into account the uncertainties. For domestic waste water, a COD based value of $B_{o,ww}$ can be converted to BOD_5 based value by dividing it by 2.4, i.e. a default value of 0.504 kg CH_4/kg BOD can be used.

[5] Reference: FCCC/SBSTA/2003/10/Add.2, page 25.

Monitoring

28. In the case of construction of new composting facilities or expansion of capacity of existing composting facilities, Tthe emission reduction achieved by the project activity (~~in the case of construction of new facilities or expansion of capacity of existing facilities)~~ will be measured as the difference between the baseline emission and the sum of the project emission and leakage.

$$ER_y = BE_y - (PE_y + LE_y) \quad \textbf{(8)}$$

Where:

ER_y	Emission reduction in the year *y* (tCO_2e)
LE_y	Leakage emissions in year *y* (tCO_2e)

In the case of increase of capacity utilization of existing composting facilities, tThe emission reduction achieved by the project activity ~~involving composting (in the case of increase of capacity utilization of existing facilities)~~ will be measured as the difference between the baseline emission and the sum of the project emission and leakage, multiplied by the factor "r" as follows:

$$ER_y = (BE_y - PE_y - LE_y) * (r - 1) \quad \textbf{(9)}$$

~~Where:~~
~~ER_y Emission reduction in the year "y" (tCO_2e)~~

The value for "r" is defined as

$$r = \sout{WCOM_{BAU}/}TWCOM_y/WCOM_{BAU} \quad \textbf{(10)}$$

Where:

$TWCOM_y$	Total quantity of waste composted in year of (tonnes) at the facility
$WCOM_{BAU}$	Registered annual amount of waste composted (tonnes) at the facility on a ~~BAU~~ business as usual basis calculated as the highest amount of annual compost production in the last five years prior to the project implementation

29. In case of controlled anaerobic digestion and biogas production the emission reductions will be calculated as follows and the following monitoring requirements apply:

(a) The emission reductions achieved by the project activity will be determined ex-post through direct measurement of the amount of biogas fuelled, flared or gainfully used. It is possible that the project activity involves biomass treatment with higher methane conversion factor (MCF) than the MCF for the biomass which otherwise would have been left to decay in the baseline situation. Therefore the emission reductions achieved by the project activity is limited to the *ex post* calculated baseline emissions minus project and leakage emissions using the actual monitored data for the project activity (e.g. Q_y and fossil fuels/electricity used). The emission reductions achieved in any year are the lowest value of the following:

$$ER_{y,ex\ post} = min\left((BE_{y,ex\ post} - PE_{y,ex\ post} - LE_{y,ex\ post}),(MD_y - PE_{y,power,ex\ post} - PE_{y,transp,ex\ post} - PE_{y,res\ waste,ex\ post} - LE_{y,ex\ post})\right) \quad \textbf{(11)}$$

Where:

$ER_{y,ex\ post}$	Emission reductions achieved by the project activity based on monitored values for year *y* (tCO_2 e)
$BE_{y,ex\ post}$	Baseline emissions calculated using formula 1) using ex-post monitored values (e.g. Q_y) (tCO_2 e)
$PE_{y,ex\ post}$	Project emissions calculated using formula 3) using ex-post monitored values (e.g. Q_y, transport distances, the amount of electricity/fossil fuels used, emissions from anaerobic storage). This calculation shall include project emissions from physical leakage (tCO_2 e)
$LE_{y,ex\ post}$	Leakage emissions calculated using ex-post monitored values (tCO_2 e)
MD_y	Methane captured and destroyed or used gainfully by the project activity in year *y* (tCO_2e)
$PE_{y,transp,ex\ post}$	Emissions from incremental transportation based on monitored values in the year *y* (tCO_2e)
$PE_{y,power,ex\ post}$	Emissions from the use of fossil fuel or electricity for the operation of the installed facilities based on monitored values in the year *y* (tCO_2e)
$PE_{y,res\ waste,ex\ post}$	Methane emissions from the anaerobic decay of the residual waste/products based on monitored values in the year *y* (tCO_2e)

(b) In case of flaring/combustion MD_y will be measured using the conditions of the flaring process:

$$MD_y = BG_{burnt,y} * w_{CH4,y} * D_{CH4} * FE * GWP\_CH_4 \qquad (11)$$

Where:

$BG_{burnt,y}$	Biogas[6] flared/combusted in year y (m^3)
$w_{CH4,y}$	Methane content[7] in the biogas in the year y (mass fraction)
D_{CH4}	Density of methane at the temperature and pressure of the biogas in the year y ($tonnes/m^3$)
FE	Flare efficiency in the year y (fraction)

(c) The method for integration of the terms to calculate MD_y to obtain the results for one year of measurements within the confidence level, as well as the methods and instruments used for metering, recording and processing the data obtained, shall be described in the project design document and monitored during the crediting period;

(d) The amount of biogas recovered and fuelled/flared or gainfully used shall be monitored *ex post*, using flow meters. The fraction of methane in the biogas should be measured with a continuous analyzer or, alternatively, with periodical measurements at a 95% confidence level. Temperature and pressure of the biogas are required to determine the density of methane combusted;

(e) Regular maintenance should ensure optimal operation of flares. The flare efficiency, defined as the fraction of time in which the gas is combusted in the flare, multiplied by the efficiency of the flaring process, shall be monitored and calculated as per the provision in the "Tool to determine project emissions from flaring gases containing methane";

(f) Project activities where a portion of the biogas is destroyed through flaring and the other portion is used for energy may consider to apply the flare efficiency to the portion of the biogas used for energy, if separate measurements are not performed;

(g) Flow meters, sampling devices and gas analysers shall be subject to regular maintenance, testing and calibration to ensure accuracy;

(h) The monitoring plan should include on site inspections for each individual digester included in the project boundary where the project activity is implemented for each verification period.

[6] Biogas and methane content measurements shall be on the same basis (wet or dry).

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*III.F. **Avoidance of methane emissions through controlled biological treatment of biomass**(cont)*

~~11.~~ 30. For all cases, ~~T~~the following parameters shall be monitored and recorded annually during the crediting period:

- Quantity of waste biologically ~~composted~~ treated ($Q_{y\text{comp}}$) and its composition through representative sampling. Monitoring of waste and its composition shall take place in accordance with the requirements in the 'Tool to determine methane emissions avoided from dumping waste at a solid waste disposal site';
- Quantity of methane that would have to be captured and combusted to comply with the prevailing regulations ($MD_{y,reg}$);
- When project activity includes co-~~composting~~ treating of wastewater, the volume of co-~~composted~~ treated wastewater ($Q_{y,ww,in}$) and its COD content through representative sampling;
- When project activity consists of composting, the volume of runoff water[7] ($Q_{y,ww,runoff}$) and its COD content ($COD_{y,ww,runoff}$) through representative sampling. ~~includes co-composting of wastewater, from the composting site ($Q_{ww,runoff}$). The methane emission potential of the run-off water is calculated as described in paragraph 6 above and will be subtracted from baseline methane emissions from the wastewater co-composted by the project activity.~~ In case relevant: $TWCOM_y$ and $WCOM_{BAU}$;
- Parameters related to project emissions (PE_y) described above such as: CT_y, DAF_w, $CT_{y,treatment\text{comp}}$, $Q_{y,treatment}$, $CT_{y,treatment}$, $DAF_{treatment}$ and parameters for determining $PE_{y,res\ waste}$;
- The annual amount of fossil fuel or electricity used to operate the facilities or power auxiliary equipment shall be monitored, e.g. energy/fossil fuels used for aeration, turning of compost piles, pre-processing of the biomass (e.g. size reduction, screening) and where relevant drying of the final compost product. Alternatively it shall be assumed that all relevant electrical equipment operate at full rated capacity, plus 10% to account for distribution losses, for 8760 hours per annum.

~~12.~~ 31. The historical records of annual amount of waste ~~composted~~treated at the facility in the last five years prior to the project implementation and additional information to cross check the historical records (e.g. invoices of compost sales) shall be provided for project activity validation, in case of projects involving increase of capacity utilization of existing composting facilities.

~~13.~~ 32. In case of composting facilities, ~~T~~its ~~he~~ operation ~~of the composting facilities~~ will be documented in a quality control program, monitoring the conditions and procedures that ensure the aerobic condition of the waste during the composting process.

[7] Consisting of the wastewater applied in excess (i.e. moisture over and above the field capacity of the biomass being composted) and rainwater in the case of unroofed sites.

~~14.~~ 33. Soil application of the compost or slurry in agriculture or related activities will be monitored. This includes documenting the sales or delivery of the compost final product/slurry. It shall also include an in situ verification of the proper soil application of the compost/slurry to ensure aerobic conditions for further decay. Such verification shall be done at representative sample of user sites.

~~15.~~ 34. The project participants shall demonstrate annually, through the assessment of common practices at proximate waste disposal sites, that the amount of waste ~~composted/~~treated in the project activity facilities would have been disposed in a solid waste disposal site ~~without methane recovery~~ in the absence of the project activity. When project activity includes co-~~composting~~ treatment of wastewater demonstrate that wastewater would have been treated in an anaerobic system without methane recovery in the absence of the project activity.

Project activity under a programme of activities

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

~~16.~~ 35. In case the project activity involves the replacement of equipment, and the leakage effect of 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.