EB41 – Methodologies

EB41 – Annotated agenda item 10

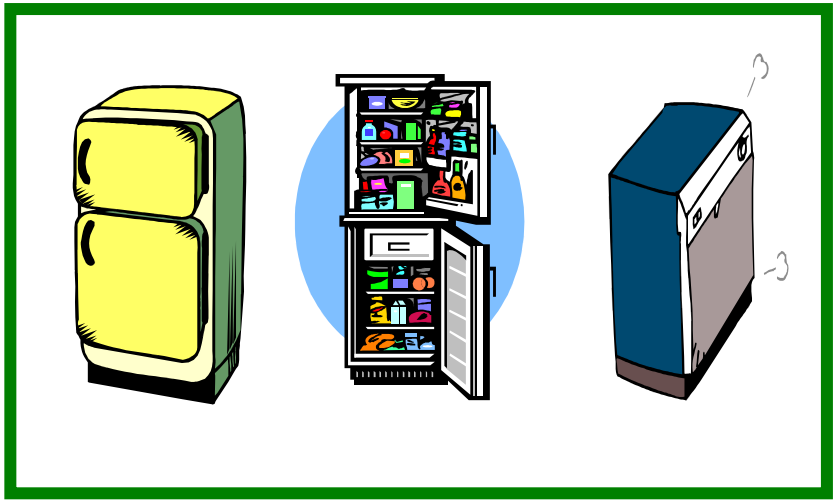
Report of MP33

EB41 – Annotated agenda item 11a

Cases NM0235 and NM0247

NM0235: Manufacturing of energy efficient domestic refrigerators
NM0247: Manufacturing and servicing of refrigerators using low GWP refrigerant by M/s Videocon Appliances Ltd

Baseline scenario



Project activity

NM0235: Manufacturing of energy efficient domestic refrigerators
NM0247: Manufacturing and servicing of refrigerators using low GWP refrigerant by M/s Videocon Appliances Ltd

EB39 request:

a) Potential double counting → ~~DNA~~

→ DOE

~~b) Upstream emissions from refrigerants production~~

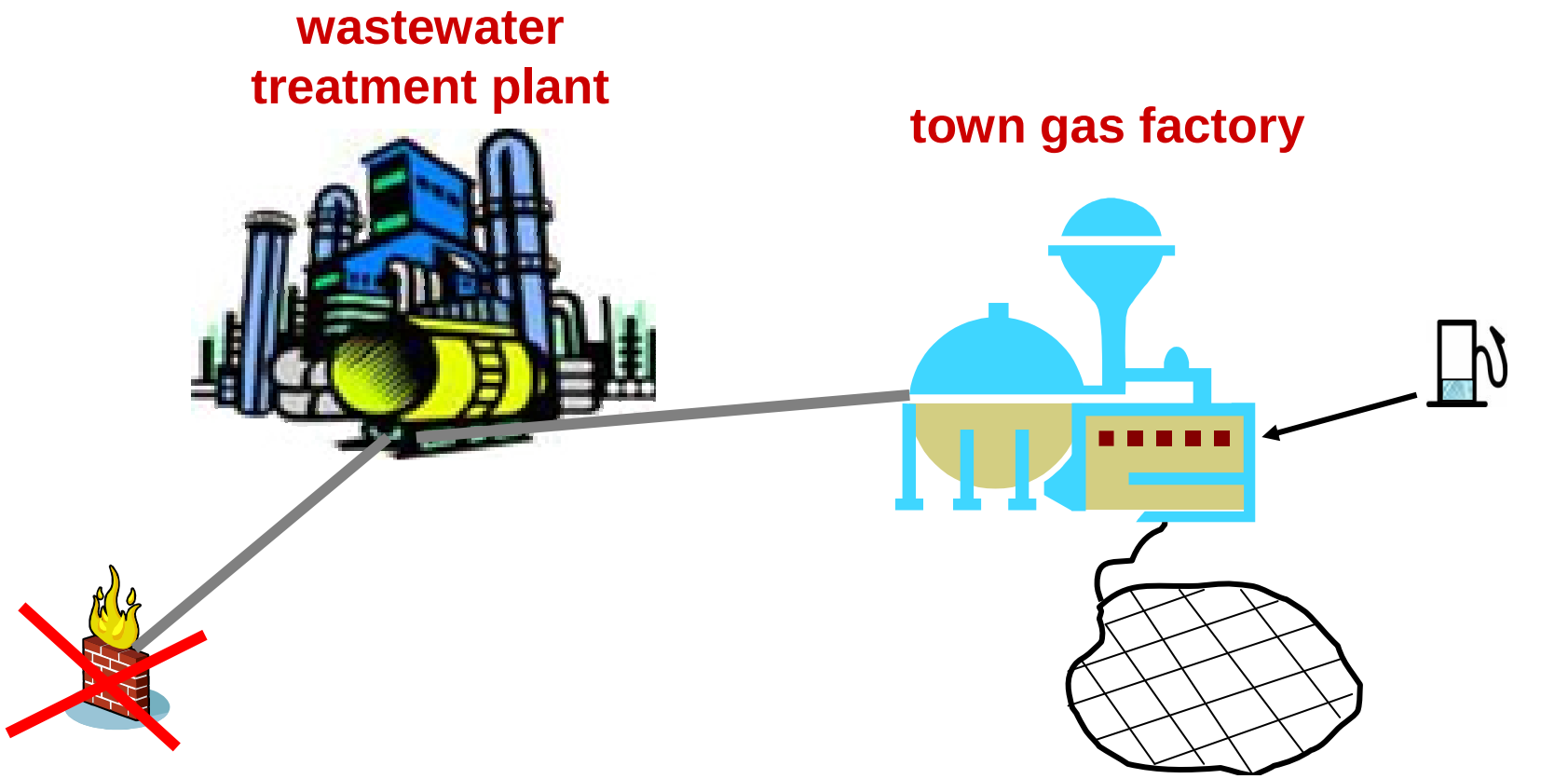
$BE_{\text{production HFC134a}} > PE_{\text{production HC}}$

EB41 – Annotated agenda item 11a

Case NM0262

NM0262: Biogenic methane use as feedstock and fuel for town gas production

project activity



EB41 – Annotated agenda item 11b

“C” cases

EB41 – Annotated agenda item 12

Requests for clarifications

EB41 – Annotated agenda item 13

Requests for revisions

EB41 – Annotated agenda item 14

Revisions to approved methodologies and methodological tools

EB41 – Annotated agenda item 14a

Revision to AM0065

Revision to AM0065

Based on AM_REV_0095.

1) Current version: Baseline SF6 emission factor =

$$\frac{\text{Actual SF6 consumption to the production of magnesium}}{\text{Minimum of magnesium production in three years previous to validation}}$$

Revised version: Baseline SF6 emission factor =

$$Min\left(\frac{\text{Actual SF6 consumption to the production of magnesium in year y}}{\text{Magnesium production in year y}}\right)$$

$$Y = 1,2,3 \text{ years previous to implementation of project activity.}$$

2) The requirements for experimental procedures to determine baseline SF6 emission factor, which may be proposed as a part of request for revision, are further clarified.

3) Other consistency related issue are incorporated.

EB41 – Annotated agenda item 14b

Revision to AM0067

Revision to AM0067: Methodology for installation of energy efficient transformers in a power distribution grid

Request by EB38: review the applicability condition "*The methodology is not applicable if the technology of the transformers installed in the project activity represents more than 20% of the total installed transformers in the geographic region during a period of 3years prior to the implementation of the project activity*."

Suggested change by panel: delete the applicability condition

Reasons for suggested deletion:

1. The condition exists with less stringent requirement in estimating baseline emission factor – based on 20% most efficient transformers installed in five years previous to project activity
2. CERs credited are 50% of actual emission reductions achieved by project activity as reduction in load losses are not accounted for.

Revision to AM0067: Methodology for installation of energy efficient transformers in a power distribution grid

	Year -5		Year -4		Year -3		Year -2		Year -1		Project Activity implementation
	HE trans	Conv trans	HE trans	Conv trans	HE trans	Conv trans	HE trans	Conv trans	HE trans	Conv trans	
Case 1	10	10	0	10	10	20	0	20	0	20	
Case 2	10	10	10	10	0	20	0	20	0	20	
Case 3	0	10	0	10	20	20	0	20	0	20	

Case 1 complies with applicability conditions

Case 2 complies with applicability conditions

Case 3 does not comply with applicability conditions

Cases 1,2,and 3:

High efficiency transformers are the top 20%

$\Rightarrow NLL_{PR,k,y} = NL_{BL,k,}$ No emissions reductions to claim

Revision to AM0067: Methodology for installation of energy efficient transformers in a power distribution grid

	No-Load Losses	Load losses
Conventional:	665 W	4400 W
Amorphous:	220 W	3500 W

Data is for 500 kVA transformer supplying to industrial area and assuming 40% load factor.

Total yearly losses

	No-Load Losses	Load losses
Conventional:	2330 kWh	15417 kWh
Amorphous:	770 kWh	12264 kWh
Difference	1600 kWh	3153 kWh

EB41 – Annotated agenda item 14c

Revision to ACM0001

Revision to ACM0001

AM_CLA_0092 and AM_CLA_0095

Landfill gas (LFG)

- **Flare**
- **Power Plant**
- **Pipeline**
- **Boiler**

Clarification provided on:

✓Methane fraction of LFG and LFG flow have to be measured on same basis (either wet or dry);

✓In case the Tool is used, standard approaches to convert the flow on wet basis to dry basis should be used.

✓ If the captured gas is **flared**, the fraction of methane should be measured with a **continuous analyzer**;

✓If the captured gas is used to **produce energy** or a default value for flare efficiency is adopted, the fraction of methane can either be measured with a **continuous analyzer** or **periodical measurements.**

EB41 – Annotated agenda item 14d

Revision to ACM0011

Revision to ACM0011

The panel recommends an editorial revision to ACM0011 to correct equations 8 and 9 for calculation of efficiency of the power plant.

The equations calculated efficiency as the ratio of fuel by electricity rather than the opposite.

EB41 – Annotated agenda item 14e

Revision to ACM0012

Revision to ACM0012

Revision of ACM0012 was prepared by MP32 based on AM_REV_0073, AM_REV_0075 and AM_CLA_0071.

It included:

1. **Extension of applicability of methodology for mechanical energy generation using waste heat.**
2. **Extension of applicability of methodology for the type-2 project cases where part of waste gas was used in baseline for electricity generation and project activity intends to improve the utilisation of waste gas.**

EB39 request:

1) **Whether the type-1 project activities cover the new facilities; and**

2) **Why the type-2 project activities are exclusively applicable for the cases where in the baseline only the electricity generation was allowed using portion of waste gases.**

Revision to ACM0012

Response of MP34 to EB39 request:

1. **Clarified that for type-1 project activities that methodology is applicable to new facilities;**
2. **For the type-2 project activities only the electricity generation was allowed using portion of waste gases.**
3. **Opened the methodology for cases with baseline of thermal energy generation using portion of waste gas, under condition that the quantity of thermal energy remains same in the project crediting period and baseline.**

Additional changes in ACM0012 based on MP34 assessment:

1. **The revised definitions of waste energy and cogeneration;**
2. **Changed text of applicability condition for waste pressure based energy recovery activities;**
3. **Inclusion of different approaches for the capping of waste energy quantity.**

EB41 – Annotated agenda item 14f

Revision to the tool to determine methane emissions avoided from dumping waste at a solid waste disposal site

Revision to the tool to determine methane emissions avoided from dumping waste at a solid waste disposal site

The revision clarifies that
(I) the tool is not applicable to stockpiles; and
(ii) the approach to determine emissions from stockpiles for small scale project activities cannot be used for large-scale projects.

Reason:
The nature of stockpiles differ from solid waste disposal sites since they have a large surface area to volume ratio and therefore anaerobic conditions are not ensured as in the case of other solid waste disposal sites.

Therefore stockpiles may not necessarily lead to methane emissions.

EB41 – Annotated agenda item 14g

Revision to the tool to calculate project and leakage CO2 emissions from fossil fuel combustion

Revision to the Tool to calculate project and leakage CO2 emissions from fossil fuels combustion

The revision clarifies that the use of fixed calibrated rulers is an acceptable measurement method for monitoring fuel consumption.

The Tool used to prescribe the use of continuous monitoring using flow meters, excluding the use of rulers.

EB41 – Annotated agenda item 15

Proposal for an enhanced barrier test

EB41 – Annotated agenda item 16

Revision to AM0034, AM0021 and AM0028

Revision to AM0034, AM0021 and AM0028

Revision of AM0034 is resulted from AM_CLA_0096. For consistency reasons extended to other N2O emission reduction methodologies AM0021 and AM0028.

The methodologies require that the flow of gas containing N2O and concentration of N2O are measured to estimate N2O emissions in the baseline and project case.

It is clarified in the revised versions that flow and concentration should be measured simultaneously on same basis (wet and dry) and expressed at normal conditions.

The actual pressure and temperature of gas should be recorded, irrespective of the type of measuring system used, either requiring manual conversion of flow to normalised flow or automatic conversion carried out by instrument based on algorithm.

In case the algorithm for automatic normalisation of flow is used, it should follow international standards (e.g. EN14181).

EB41 – Annotated agenda item 17

Guidance on common practice analysis

EB41 – Annotated agenda item 18

Proposal on possible tools and guidance related to energy efficiency

EB's work on energy efficiency

Background on EB's work on EE methodologies

Based on request from EB31 the secretariat prepared a note enlisting the options available to make enabling environment for EE methodologies

Two experts (M&V and CDM methodology) commissioned by EB to initiate work of further developing necessary tools and guidance for EE

Two option papers finalised;
1) International practices on M&V, related to EE programmes; and
2) Key methodological issues and possible solutions

<u>Now in EB41</u>

The list of tools and guidance ready for further development in consultation with MP and SSC WG

Further schedule of work to be finalized in consultation with MP and SSC WG

EB's work on energy efficiency

Short listed actionable items for the Board from the scoping papers

1. **Focus on simple EE areas rather than complex ones. SSC methodologies may better represent EE sector due to nature of EE projects.**
2. **Use the approach based on measurement of a representative sample of equipment, where it may not be feasible to continuously measure the energy consumption of all equipment.**
3. **Guidance on appropriate methods for sampling and conducting surveys for cases involving numerous small emission reduction actions in a defined geographic area.**
4. **Further guidance needed on key methodological issues such as signal-to-noise ratio, rebound effect and consideration of lifetime of equipment**

EB's work on energy efficiency

List of planned EE tools and guidance for EE methodologies:

1. **Best-practices guidance on sampling and surveys for energy efficiency project activities including**
   - **surveys for baseline determination,**
   - **surveys to determine equipment failures or operation during credit period,**
   - **surveys of manufacturers to account for autonomous EE improvement,**
   - **surveys to account for free-riders, leakages, spillovers etc. and;**
   - **regular monitoring surveys of sample groups**
2. **Tool on Baseline Load-Efficiency Function: Already under preparation**
3. **Tool on Energy Benchmarking: As per NM0235 approach**
4. **The guidance on determination of equipment lifetime: Based on existing approaches**

Other possible guidance for the future consideration of the Board

1. **Standardise and consistently use guidance on T&D losses across methodologies**
2. **Stand-alone or case-specific guidance on *signal-to-noise ratio* and *rebound effect***
3. ***Modelling approaches* to calculate the energy efficiency and their implications on the "real and measurable" emission reductions.**

EB41 – Annotated agenda item 19

Revision to the Guidelines to complete CDM-PDD and CDM-NM

Revision to the Guidelines to complete CDM-PDD and CDM-NM

- Update in accordance with the new NM form (Version 03);

- Provide additional guidance on how to describe the project activity;

- Reflect guidance on the starting date of the project activity;

- Reflect EB guidance from EB23 to EB36;

- Take into account public comments received.

Revision to the Guidelines to complete CDM-PDD and CDM-NM

Public comments incorporated:

- Detailed information on baseline and project scenarios should be required only for cases when the baseline scenario is existing. For cases where the baseline scenario is a counter-factual scenario a lower degree of detail should be required.

- Apart from using approved tools, project proponents should be encouraged to propose new ones in the areas where no tool exists or approved tools are not appropriate.

- When the Combined Tool is used, the same information need not be replicated in both the baseline selection and the additionality sections of the PDD.

Revision to the Guidelines to complete CDM-PDD and CDM-NM

Public comments which may be incorporated at a later stage:

- Guidance on how to demonstrate that CDM was seriously considered in the decision-making;

- Guidance on uncertainty analysis;

- Consistency with the VVM.

EB41 – Annotated agenda item 23

Off-grid Generation of Electricity under Suppressed Demand Conditions

Off-grid Generation of Electricity under Suppressed Demand Conditions

The Meth Panel has discussed the issue of suppressed demand in the context of projects involving electricity generation (e.g. NM0246 and NM0208).

Briefly, suppressed demand happens when there is a clear and significant shortage of electricity supply in the existing scenario.

Under circumstances, methodologies assume that the level of electricity generation used for the calculation of emission reductions should be defined at the project service level, rather than at the most likely service level that would have happened in the absence of the project activity.

Therefore, there has always to be a baseline, no matter what the project service level is.

Off-grid Generation of Electricity under Suppressed Demand Conditions

In NM0246 and NM0208, the Panel acknowledges that in many regions grid electricity is often insufficient to meet electricity demand, creating a situation of suppressed demand of electricity.

In such conditions, many consumers rely on off-grid electricity which creates an issue in the calculation of the emission factor for grid electricity in case new power plants are connected to those grids.

The Panel requests the Board to take note that further work on this issue will be undertaken to develop methodological approaches to calculate an emission factor in such cases.