

## 4. Regulatory matters

### 4.1. Standards/tools

#### *(b) Methodological standards for large scale CDM project activities*

Quito, Ecuador, 25. September 2011



**Wojtek Galinski, Programme Officer**  
UNFCCC secretariat, SDM programme

## Agenda item 4.1 (b)

Paragraph 55 (a) (i) of the annotated agenda, Annex 1 of MP51

NM0292: Highly efficient power plant fuelled with blast furnace gas at TKCSA, in Rio de Janeiro, Brazil

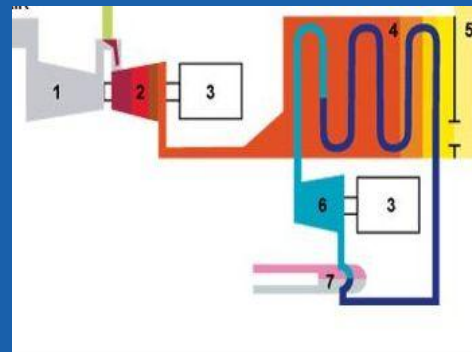
# NM0292: “Waste gas based combined cycle power plant in a Greenfield iron & steel plant”

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**Greenfield iron & steel plant**



**Project  
combined cycle**



## NM0292: “Waste gas based combined cycle power plant in a Greenfield iron & steel plant”

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### EB62 request to Meth Panel based on version forwarded by MP51 :

**Provide additional information on the rationale for the threshold of 20% for iron and steel plants in the host country which have combined or open-cycle gas based power generation using waste gas, as described in the common practice analysis of the PNM.**

### To recall:

**Methodology NM0292 provides an elaborate, specific guidance for the determination of the baseline scenario and demonstration of additionality.**

**The methodology is only applicable to waste energy recovery projects in Greenfield iron and steel plants;**



## NM0292: “Waste gas based combined cycle power plant in a Greenfield iron & steel plant”

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### Response to the EB request on numerical values of thresholds:

**Many methodologies use threshold for common practice or market penetration form 1% (AM0086) to 50% (ACM0012, ACM0016 and others).**

### Recommendation:

**In the case of NM0292 no specific guidance is required to be established for the common practice analysis. The approach contained in the additionality shall be followed. Therefore, the Meth Panel has forwarded a revised version of NM0292 to the Board, which does not refer to this threshold**



## Agenda item 4.1 (b)

Paragraph 55 (a) (ii) of the annotated agenda, Annex 2 of MP51

NM0332: PFCs emission reduction from installation of an abatement device in a semiconductor manufacturing facility

## Applicability

Applicable to project activities that installs a catalytic oxidation unit (abatement system) in existing semiconductor manufacturing facility for the abatement of  $\text{CF}_4$ .

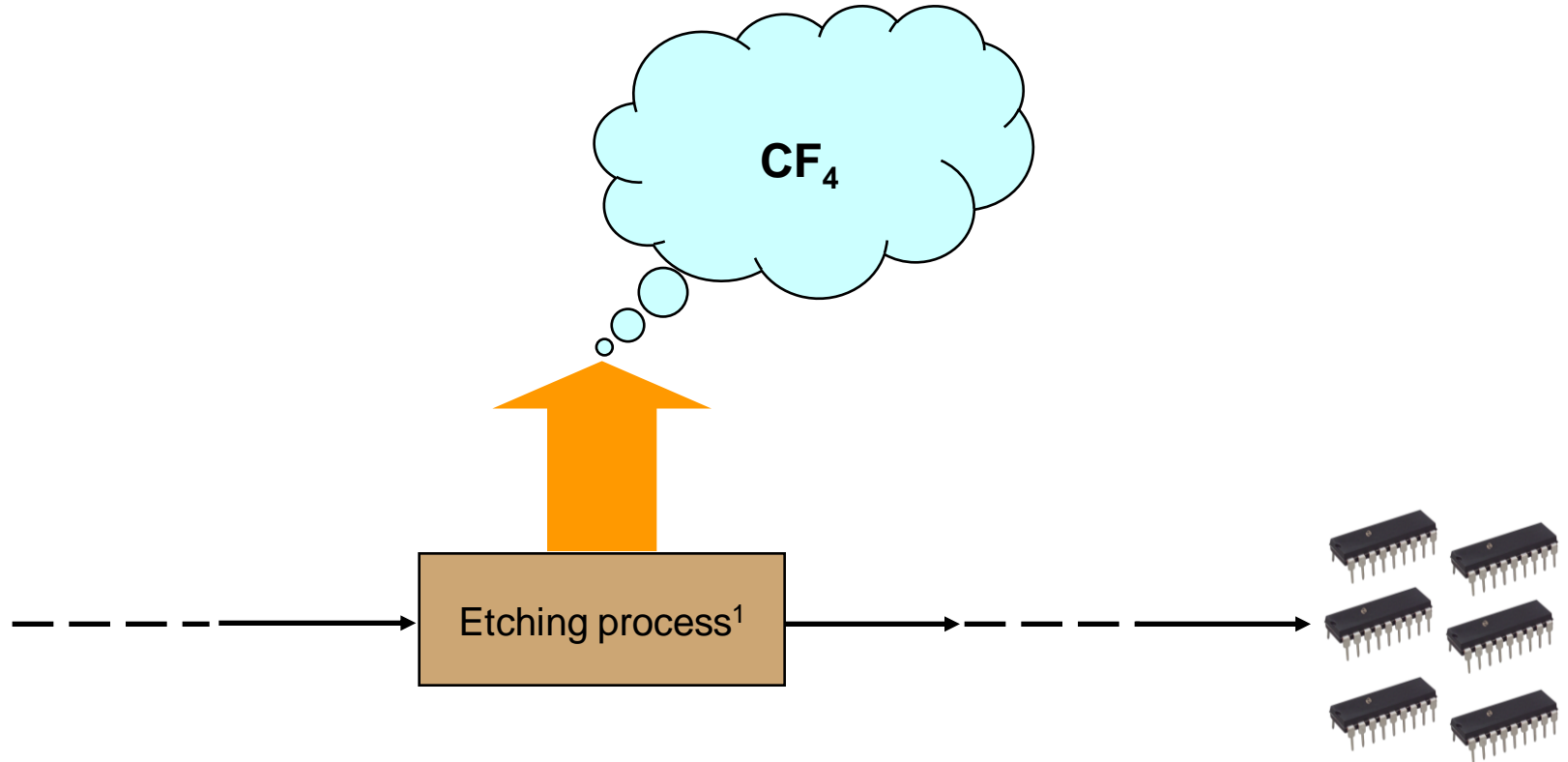
- Existing production lines without  $\text{CF}_4$  abatement device installed and  $\text{CF}_4$  being vented in the last three years;
- $\text{CF}_4$  is not temporarily stored or consumed for subsequent abatement;
- $\text{CF}_4$  abatement at the same industrial site where the  $\text{CF}_4$  is used; and  $\text{CF}_4$  to be abated is not imported from other facilities;



# NM0332: PFCs emission reduction from installation of an abatement device in a semiconductor manufacturing facility

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## BASELINE

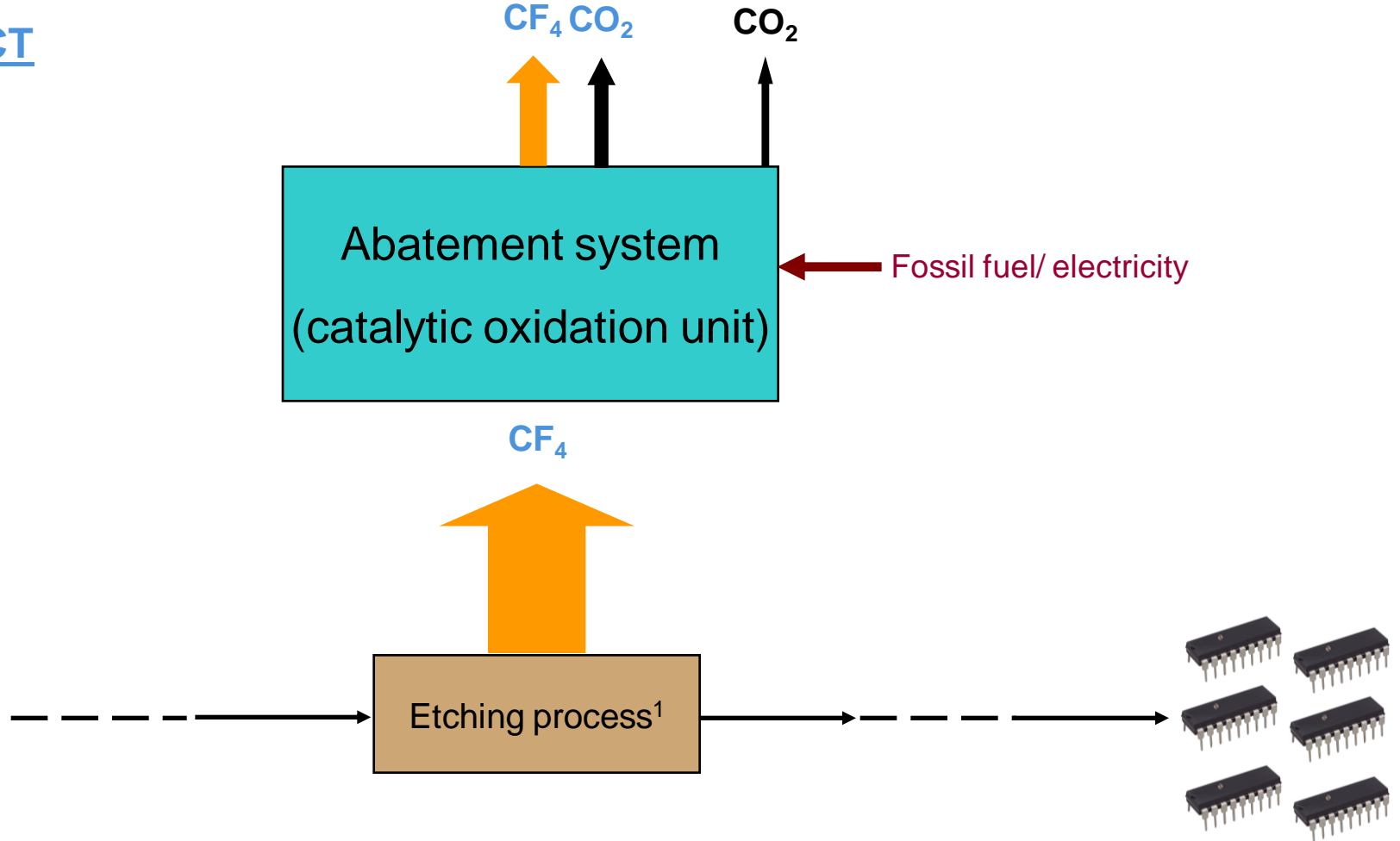


<sup>1</sup>A process where thin film on wafers are removed. In semiconductor manufacturing, dry etching using fluorinated gases is common.



# NM0332: PFCs emission reduction from installation of an abatement device in a semiconductor manufacturing facility

## PROJECT



# Baseline emissions

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$$BE_y = E_{CF_4,y} \times k \times GWP_{CF_4}$$

## Two levels of cap:

- **$E_{CF_4,y}$  (amount of eligible  $CF_4$  emitted in the baseline) is capped as minimum among:**
  - a) Consumption of  $CF_4$  measured at the entrance of the abatement device in **year y**
  - b) Consumption of  $CF_4$  estimated based on purchases of  $CF_4$  and change in  $CF_4$  inventory in **year y**
  - c) **Historical  $CF_4$  consumption** (max of last three years) based on total  $CF_4$  purchased in a year, taking into account the change in inventory
- **k (discount factor to prevent any intentional increase of  $CF_4$  entering into the etching process) is either:**
  - a) The ratio of historical consumption of  $CF_4$  per unit of the surface area of semiconductor substrate processed (min of last three years) to the same consumption in the project situation in year y (if the ratio is not greater than 1); or
  - b) 1 (if the ratio is greater than 1)



## **Project emissions include:**

- **Not abated CF<sub>4</sub> emitted from the abatement system,**
- **CO<sub>2</sub> emissions from the fossil fuel or electricity by the project activity including operation of the abatement system, and**
- **CO<sub>2</sub> emitted as by-product from abatement system (by conversion of CF<sub>4</sub> to CO<sub>2</sub> during the abatement process).**



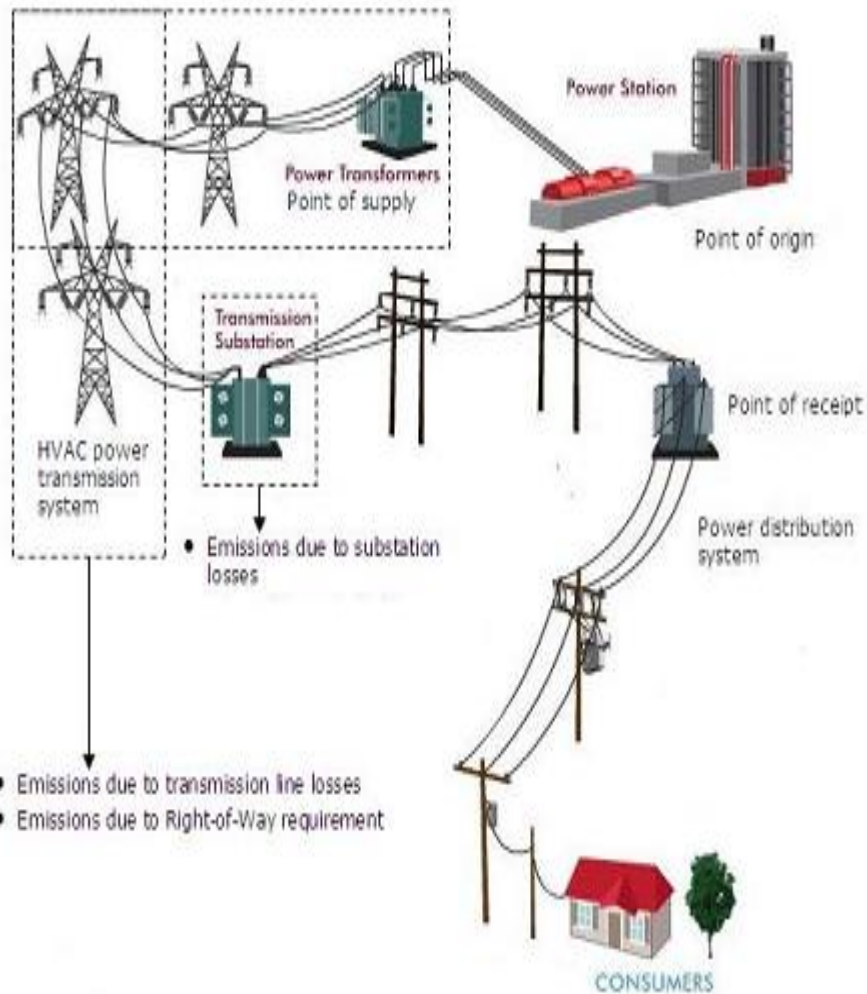
## Agenda item 4.1 (b)

Paragraph 55 (a) (iii) of the annotated agenda, Annex 3 of MP51

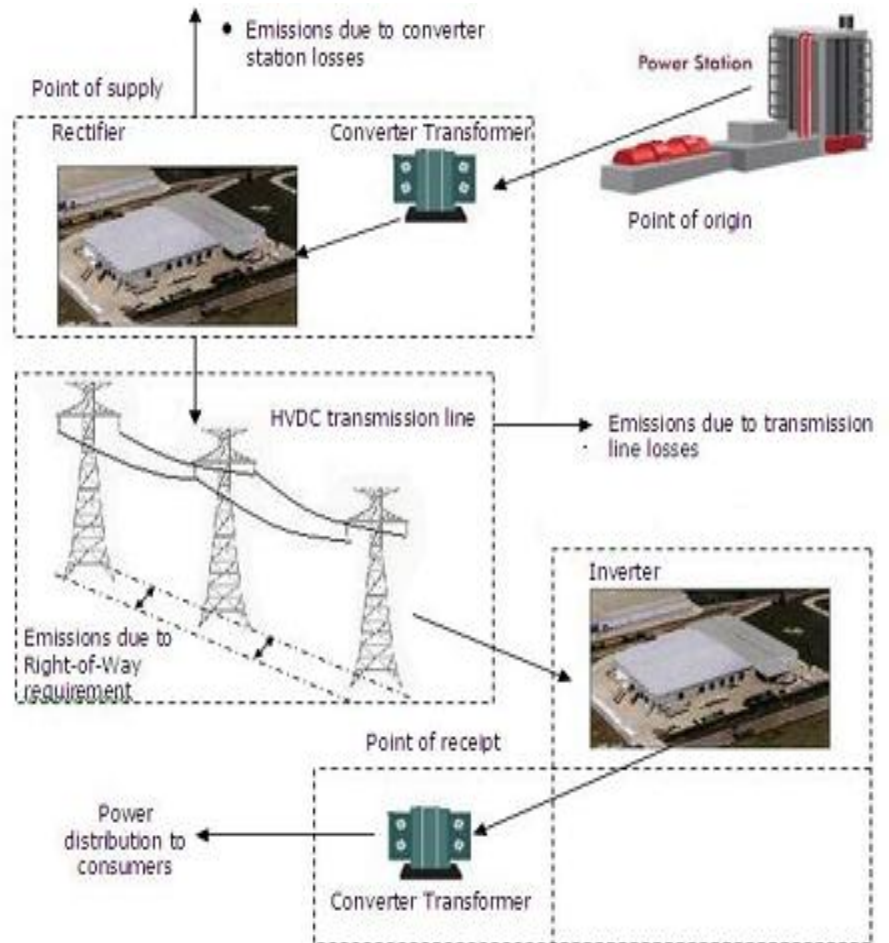
NM0334: Installation of high efficient technology  
for power transmission

# NM0334 "Installation of high voltage direct current power transmission line"

## Baseline Boundary



## Project boundary



### Applicability

The proposed methodology covers following two project activities:

1. Installation of Greenfield HVDC power transmission line/s for transmission of power from point of origin/supply to the point of receipt; or
2. Replacement of existing alternating current power transmission line by a new HVDC power transmission line;
3. The electricity is transferred using a HVDC transmission line from a specific power plant to a specific captive user; or
4. The electricity is transferred using a HVDC transmission line from a specific power plant to an interconnection point in an existing grid.



# NM0334 “Installation of high voltage direct current power transmission line”

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## Baseline emissions

Line losses and station losses for transmission line in project and baseline to be calculated based on actual load profile of project line using simulation software. Specifications of such software is provided.

## Project emissions

Actual power plant emissions in generating the energy that is lost between supply and receipt point due to transmission losses (line and station losses).

## Monitoring

Data required for calculation of emission factors (power plant, grid, user-end) and losses of transmission in project and baseline using simulation software.

## Special feature of methodology

**Equations related to simulation software are not given in methodology, only parameters required by the software are listed. All specifications and standards for simulation software are provided.**



## Agenda item 4.1 (b)

Paragraph 55 (a) (iv) of the annotated agenda, Annex 4 of MP51

NM0346: Utilization of ammonia-plant off gas for heat generation

### Applicability

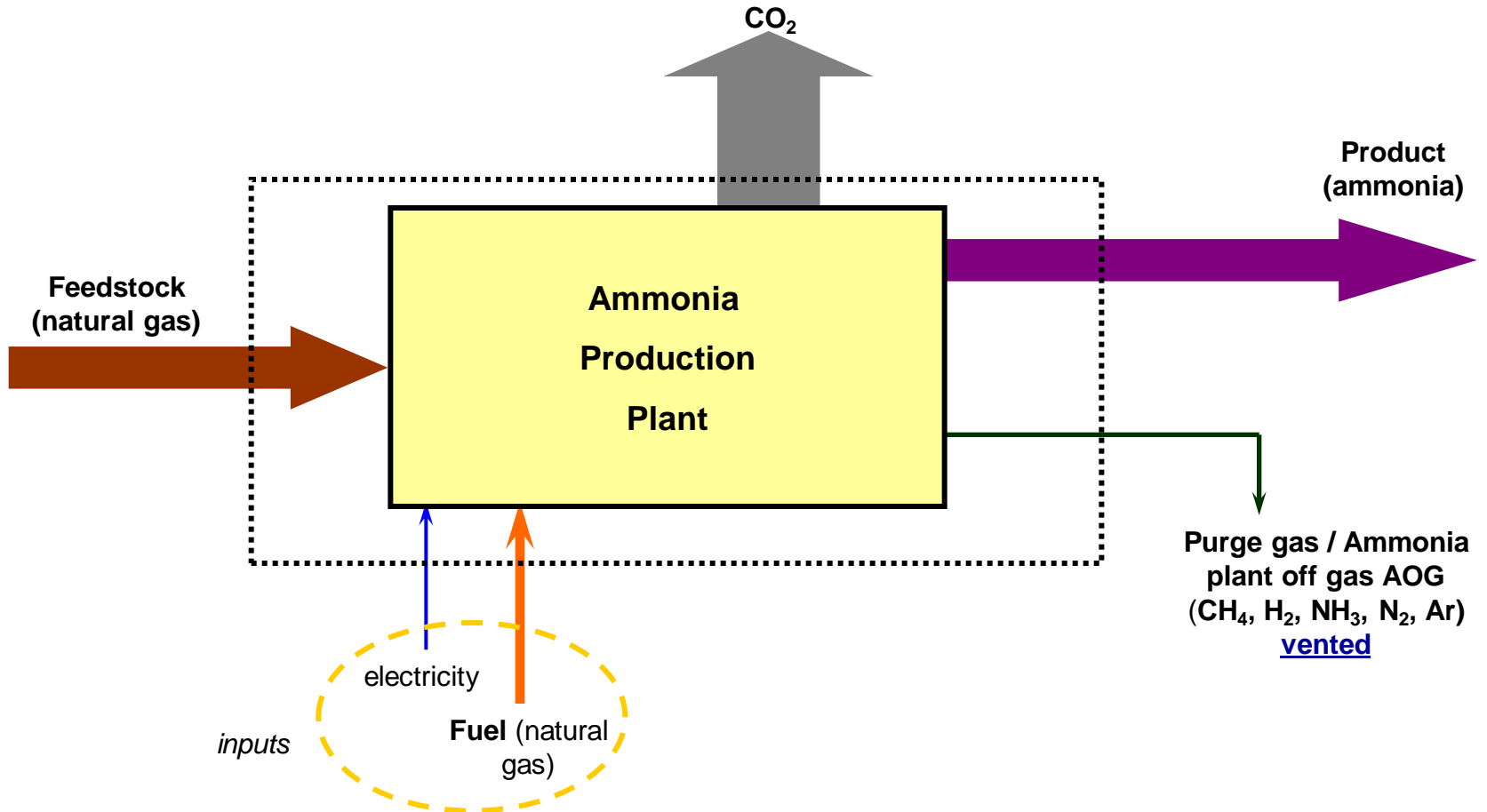
Project activities that collect and utilize ammonia-plant off gas (AOG) for heat generation at an existing ammonia production plant, which would have been otherwise vented.

- AOG is only used to generate steam to meet heat demands in the existing ammonia production plant and/or nearby facilities in the same project site;
- Amount of AOG vented from the start of operations using current feedstock at the existing ammonia production plant before implementation of the project activity shall be demonstrated by:
  - Design specifications and layout diagrams; and
  - On-site check by DOE (to confirm that no equipment for AOG recovery and utilisation was installed)
- Regulations of the host country do not prohibit venting of gases with the physical and chemical characteristics of the AOG;



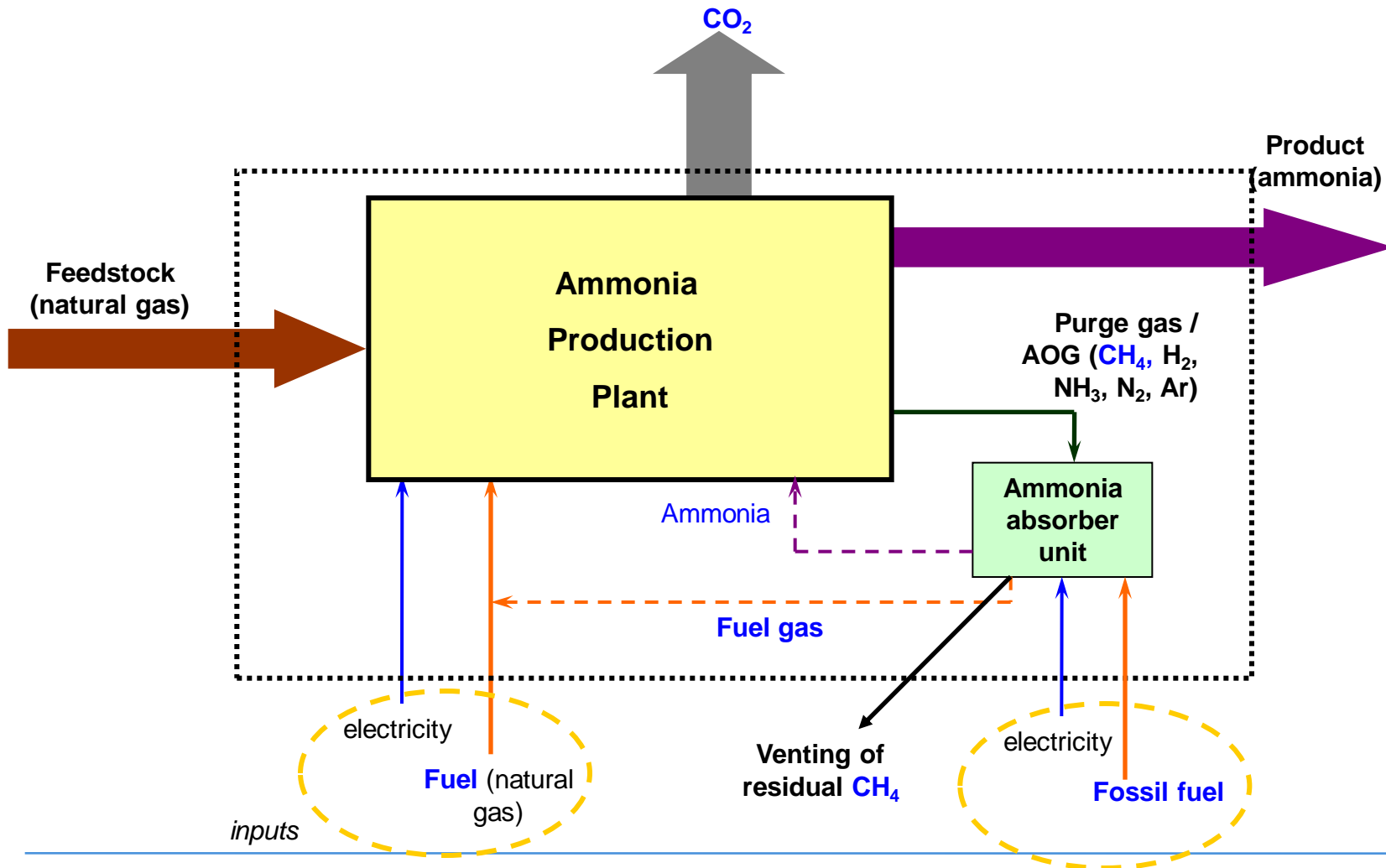
# NM0346: Utilization of ammonia-plant off gas for heat generation

## BASELINE



# NM0346: Utilization of ammonia-plant off gas for heat generation

## PROJECT



## Agenda item 4.1 (b)

Paragraph 55 (a) (v) of the annotated agenda, Annex 5 of MP51

Draft consolidated methodology based on NM0347 and AM0085: Co-firing of biomass residues for heat generation and/or electricity generation in grid connected power plants

## APPLICABILITY

- Operation of a single piece of biomass-residue co-fired heat generation equipment. The heat output of the heat generators may be used onsite to produce electric power in power-only plants, or cogenerate electric power in cogeneration plants.
- The amount of biomass residues co-fired in the project heat generation equipment shall not exceed 50% of the total fuel fired on an energy basis.
- The baseline heat generation equipment and electricity generation equipment are the same as the project equipment.
- Typical requirements for biomass residues.
- Significant capital investment.



## **BASELINE EMISSIONS**

- Baseline emissions from process heat generation by biomass, if applicable
- Baseline emissions from electricity generation by biomass, if applicable (capped with the grid emission factor)

## **PROJECT EMISSIONS**

- Fossil fuels not co-fired, e.g. onsite transport, treatment of biomass residues
- Offsite transport

## **LEAKAGE**

- Biomass baseline and leakage emissions: same approach as in ACM0006



## Agenda item 4.1 (b)

### Paragraph 56 of the annotated agenda

Withdrawal of the approved methodology  
AM0085 Co-firing of biomass residues for  
electricity generation in grid connected power  
plants

**The Meth Panel recommended the withdrawal of the methodology AM0085 as it is fully incorporated in the proposed new consolidated methodology based on NM0347 and AM0085: Co-firing of biomass residues for heat generation and/or electricity generation in grid connected power plants based on NM0347**



## Agenda item 4.1 (b)

Paragraph 57 of the annotated agenda, Annex 14 of MP51

Consideration of the draft methodological tool:

Project and leakage emissions from road transportation of freight

### Objectives

- Simplify emission calculations by providing an option to use simple **default values**
- Flexibility for project participants by offering **two options** to calculate emissions
- Improve consistency among methodologies

### Scope & applicability

- Emissions from goods vehicles used for road transportation of freight
- Transportation is **NOT** the main project activity
- Project & leakage emissions (**not baseline emissions**)

## **Project & leakage emission calculations**

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### **Option 1. Monitoring fuel consumption**

Data required:

- Origins and destinations of freight
- Number of trips
- Amount of fuel consumed

=> Project emissions are calculated using the 'Tool to calculate project or leakage CO2 emissions from fossil fuel combustion'

### **Option 2. Using conservative default values**

Two vehicle classes:

- Light (below 26 ton GVM)
- Heavy (above 26 ton GVM)

Data required:

- Origins and destinations of freight
- Number of trips
- Mass of freight transported
- Vehicle class used

## Agenda item 4.1 (b)

### Paragraph 58 (b) of the annotated agenda

Consideration of the draft revised methodology:

AM0001: Incineration of HFC 23 waste streams

## Agenda item 4.1 (b)

Paragraph 60 (a) of the annotated agenda, Annex 7 of MP51

Draft revision of AM0023:

Leak reduction from natural gas pipeline compressor  
or gate stations

## **CALL FOR PUBLIC INPUTS**

- Resulted in **three** submissions
- The draft revised methodology has been updated by the panel based on inputs received

## **KEY AREAS OF REVISION**

### **Applicability conditions**

- Applicability is expanded to refinery gas and to natural gas production and processing => new title of the methodology
- The applicability section was redrafted in order to clarify that the methodology is only applicable to leakages and not to vents

### **Baseline scenario identification and additionality demonstration**

- The combined tool is used instead of the additionality tool



## **KEY AREAS OF REVISION (cntd.)**

### **Default emission factors**

- A simple and conservative option is provided for the emissions calculation: default emission factors for different types of equipment are derived from American Petroleum Institute Compendium

### **Baseline emissions calculation**

- As a conservative approach, baseline emissions are capped at the level of the first year of the crediting period

### **Monitoring procedures**

- It was further clarified which information should be included in the database to manage all information related to the project activity



## Agenda item 4.1 (b)

### Paragraph 60 (b) of the annotated agenda, Annex 8 of MP51

Draft editorial amendment of AM0034:  
Catalytic reduction of N<sub>2</sub>O inside the ammonia  
burner of nitric acid plants

## **Background**

- Proposed amendment based on request for clarification CLA0211

## **Monitoring system**

- The editorial amendment provides more clarity on how data obtained from monitoring system should be used in the calculations of baseline and project emissions



## Agenda item 4.1 (b)

Paragraph 60 (c) of the annotated agenda , Annex 9 of MP51

Draft amendment of ACM0006: Consolidated methodology for electricity and heat generation from biomass residues

# Draft amendment of ACM0006: Consolidated methodology for electricity and heat generation from biomass residues

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## EXPANDED APPLICABILITY

- Allows mechanical power which is produced from process heat.
  - a) Background
    - AM0015 (replaced by ACM0006) did not explicitly exclude mechanical power.
    - ACM0006 explicitly excludes mechanical power.
  - b) Applicability condition
    - Requires steam turbine in the baseline scenario



# Draft amendment of ACM0006: Consolidated methodology for electricity and heat generation from biomass residues

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## EXPANDED APPLICABILITY (cntd.)

- Increase in the maximal share of the co-fired fossil fuels, in the total fuel fired, from 50% to 80% on an energy basis.
  - a) Version 11.1 (EB58) expanded the spatial extent of the project boundary
    - from biomass-only and biomass-co-fired power and heat plants
    - to all on-site power and heat plants, whether fired with biomass residues, fossil fuels or a combination of both.
  - b) Version 11.1 reduced the applicability and increased the risk that project proponents who could use the previous versions of ACM0006 will not meet the 50% threshold of biomass residue



## Agenda item 4.1 (b)

Paragraph 60 (d) of the annotated agenda, Annex 11 of MP51

Draft amendment of ACM0017:  
Production of biodiesel for use as fuel

# Amendment of ACM0017

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## ACM0017: Production of biodiesel for use as fuel

**The methodology is applicable to project activities that reduce emissions through the production, sale and consumption of blended biodiesel that is used as fuel, where the biodiesel is produced from:**

**(a) Waste oil/fat; and/or**

**(b) Vegetable oil that is produced from oil seeds that are cultivated on dedicated plantations established on lands that are degraded or degrading at the start of the project activity.**

# Amendment of ACM0017

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## DRAFT AMENDMENT:

- **Simplifies the determination of BD<sub>y</sub> (Quantity of biodiesel eligible for crediting in year y);**
- **Editorially improves the methodology by including missing parameters in the monitoring table, removing not required parameters from the monitoring table, correcting errors in the equations in the nomenclature of parameters and other editorial improvements.**

# Amendment of ACM0017

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**PREVIOUS REVISIONS:** initial adoption in October 2009, 1 editorial revision, 1 revision

**USAGE:** 0 registered project

**IMPACT OF THE REVISION:** Simplification and improvement

## Agenda item 4.1 (b)

### Paragraph 60 (e) of the annotated agenda, Annex 12 to MP51

Draft amendment of ACM0018: Consolidated methodology for electricity generation from biomass residues in power-only plants

## EXPANDED APPLICABILITY

- Increase the maximal share of the co-fired fossil fuels, in the total fuel fired, from 50% to 80% on an energy basis.

The same rationale as in the amendment for ACM0006



## Agenda item 4.1 (b)

### Paragraph 60 (f) of the annotated agenda, Annex 16 to MP51

Draft editorial amendment of:  
Tool to calculate the emission factor for an  
electricity system

## **Draft editorial amendment of: Tool to calculate the emission factor for an electricity system**

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**The draft amendment:**

- (i) Corrects equations (4) and (6) in the tool; and**
- (ii) Provides other minor editorial improvements.**



## Agenda item 4.1 (b)

### Paragraph 60 (g) of the annotated agenda, Annex 17 to MP51

Draft editorial amendment of:

Tool to assess the validity of the original/current baseline and to update the baseline at the renewal of a crediting period

**Draft editorial amendment of:  
Tool to assess the validity of the original/current baseline and to  
update the baseline at the renewal of a crediting period**

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**The draft editorial amendment, prepared in response  
to the requests contained in:**

**paragraph 30 of the EB 56 report, and**

**paragraph 43 of the EB 60 report**

**addresses cases when the end of the technical  
lifetime of the baseline equipment occurs before the  
end of the crediting period.**



**Draft editorial amendment of:  
Tool to assess the validity of the original/current baseline and to update the  
baseline at the renewal of a crediting period**

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**Text add the step 1.3 (Tool for renewal of crediting period)**

***Step 1.3: Assess whether the continuation of the use of current baseline equipment(s) is technically possible***

If the ~~remaining~~ end of technical lifetime of the baseline equipment occurs ~~is less~~ earlier than the end of the crediting period mentioned in the request, then:

- a) the current baseline needs to be updated for this crediting period; or
- b) the crediting of emission reductions should be limited to the end of the technical lifetime of the baseline equipment.



## Agenda item 4.1 (b)

Paragraph 61 of the annotated agenda, Annex 21 of MP51

Consideration of views from MP on:  
Tool to assess the validity of the original/current  
baseline and to update the baseline at the  
renewal of a crediting period

# Mandate

### EB 56

- Requested **the panel** to adjust all methodologies which are identified as not complying with the Board ruling on the reassessment of baseline emission by removing reference to the reassessment of the baseline scenario.

### MP 48

- One issue was identified by the panel while working on the EB56 request regarding the possible lack of guidance on the assessment of the impact of circumstances at the renewal of the crediting period.

## Renewal of crediting period

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### Request to the MP: remove reference to the reassessment of the baseline scenario

The panel agreed to address this request by initiating the revision of methodologies and prioritize those methodologies that are used by CDM project activities currently requesting the renewal of the crediting period.

## Renewal of crediting period

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### Issue identified by the panel while working on the EB56 request

Update baseline emissions in case the baseline scenario is the continuation of current practice

- One view in the Meth Panel is that the tool does not provide enough guidance on the assessment of the impact of circumstances at the renewal of the crediting period on the baseline emissions in the next crediting period.  
The impact of the following circumstances should be assessed: economical, technological and market conditions.
- Another view in the Meth Panel is that such a guidance is not required, and that the request by the Board at its 56 meeting is limited to the revision of methodologies wherever appropriate.



## Agenda item 4.1 (b)

Paragraph 64 (b) of the annotated agenda, Annex 19 of MP51

Consideration of:

Request for clarification AM\_CLA\_0216 -  
Application of ACM0012 to Programme of  
Activities

## Request

- The request for clarification is related to PoA which reduces GHG emissions by recovering the waste heat of one plant and supplying it to other plant. **The first component project activity (CPA) of this PoA is to supply waste heat to a recipient by recycling dyeing waste water, but the project participants plan to use several types of waste energy sources (waste heat, gas and/or pressure) in each CPA.**
- DOE seeks clarification on
  - ✓ **whether the waste energy source in POA-DD shall be limited to waste heat only, or**
  - ✓ **whether a PoA can be applied to a variety of waste energy sources such as waste gas or pressure as allowed by ACM0012.**

**In such a situation individual CPAs may differ depending on the type of waste energy involved in the project activity.**

## Board may wish to clarify:

- Whether in a case where CDM PoA is associated with multiple types of CPAs (each representing a homogeneous type of project activity) at least one of each type of CPA should be validated before registration of the POA;
- Whether a coordinating/managing entity aiming to include different types of project activities in a PoA, the PoA-DD (and generic CPA-DD) shall:
  - ✓ list all the technologies/measures and combinations of them that would be covered by the PoA
  - ✓ provide the eligibility criteria for inclusion of all of these combinations in the CPA.
- Under which circumstances sampling is allowed in each type of CPA;

## Important observation by Meth Panel the consideration of the Board

The Meth Panel is aware that projects delivering large amounts of emission reductions are eligible under PoAs, these projects are not subject to an elaborate review procedures during registration under CDM. In contrast, individual project activities are subject to such review procedures.

The Meth Panel would like to bring to the Board's attention that projects under ACM0012 may deliver large volumes of emission reductions.



## Agenda item 4.1 (b)

Paragraph 82 of the annotated agenda, annexes 14 and 15

Consideration of:

**(a) The summary note of the public inputs received from the call for inputs on first-of-its-kind and common practice;**

**(b) A draft proposal on the use of the first-of-its-kind barrier and the assessment of common practice.**

## Consideration of: first-of-its-kind and common practice

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### **MANDATE:**

**Paragraph 34 of the EB 62 report:**

**The Board requested the secretariat to prepare:**

- (a) A note that summarizes the inputs that will be received from the call for public inputs, taking feedback from the small group of Board members working on the issue; and**
  - (b) A new proposal on the use of first-of-its-kind barrier and the assessment of common practice, taking into account the inputs received from the call.**
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**Consideration of:  
first-of-its-kind and common practice**

**“Prevailing practice” is not a barrier *per se***

**“Folk” does not always face barriers due to “prevailing practice”**

**Objective demonstration of barriers (Annex 13, EB 50)**

**There is a need for “Folk” concept in AT and CT**

**A simple test for additionality (to be developed?)**

**Standardized baselines (Guidelines approved EB 62)**

**CDM projects shall be included in the “Folk” test and no negative list of technologies is needed**

**Not resolved:**

**Technologies that are automatically deemed “Folk”??**

**Demonstrate how CDM overcomes “Folk”??**



**Taking into account a general agreement that:**

- **“Prevailing practice” is not a barrier *per se***
  - **“Folk” does not always face barriers due to “prevailing practice”**
- . The Board may wish to consider a revision of the “Tool for the demonstration and assessment of additionality” and “Combined tool to identify the baseline scenario and demonstrate additionality” in order to remove reference to:**
- barriers due to prevailing practice, inter alia: the project activity is the “first of its kind”.**



## Consideration of: first-of-its-kind and common practice

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- **There is a need for a CP concept**
- **The current approach to determine the CP is acceptable**
- **A need to better define what constitutes a "similar activity"**
- **CDM projects should be excluded from the CP test**
- **No activities shall be exempt from the CP test**

5. The proposed CDM project is a “common practice” within a sector in the **applicable geographical area** if the project technology and other **similar technologies** generate more than [20%] of the total output in that area;
6. Registered CDM project activities shall be excluded from assessment of common practice.



## **1. Applicable geographical area –**

**covers the entire host country as a default;**

**however, if the technology applied in the project is internationally homogeneous, then the applicable geographical area should be extended to other countries or cover the global level.**

**Project participants may provide justification that the applicable geographical area is smaller than the host country for technologies that vary considerably from location to location depending on local conditions.**



- 4. Similar technologies - technologies able to deliver the same output shall be considered similar if they do not differ by any of the following (as appropriate in the context of the measure applied in the proposed CDM project):**
- (i) Energy source/fuel;**
  - (ii) Feed stock;**
  - (iii) Size of installation (power capacity):**
    - o Micro (as defined in paragraph 24 of Decision 2/CMP.5 and paragraph 39 of Decision 3/CMP.6);**
    - o Small (as defined in paragraph 28 of Decision 1/CMP.2);**
    - o Large;**



**(iv) Investment climate in the date of the investment decision, inter alia:**

- o Access to technology;**
- o Subsidies or other financial flows;**
- o Promotional policies;**
- o Legal regulations;**



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**Thank you for your attention**

