

## Agenda item 3 b

Paragraphs 11-14 and 17-25 of the annotated agenda

# Methodologies for baselines and monitoring plans

**CDM EB 60**

Bangkok, Thailand, 11-15 April 2011



**UNFCCC secretariat**

SDM programme

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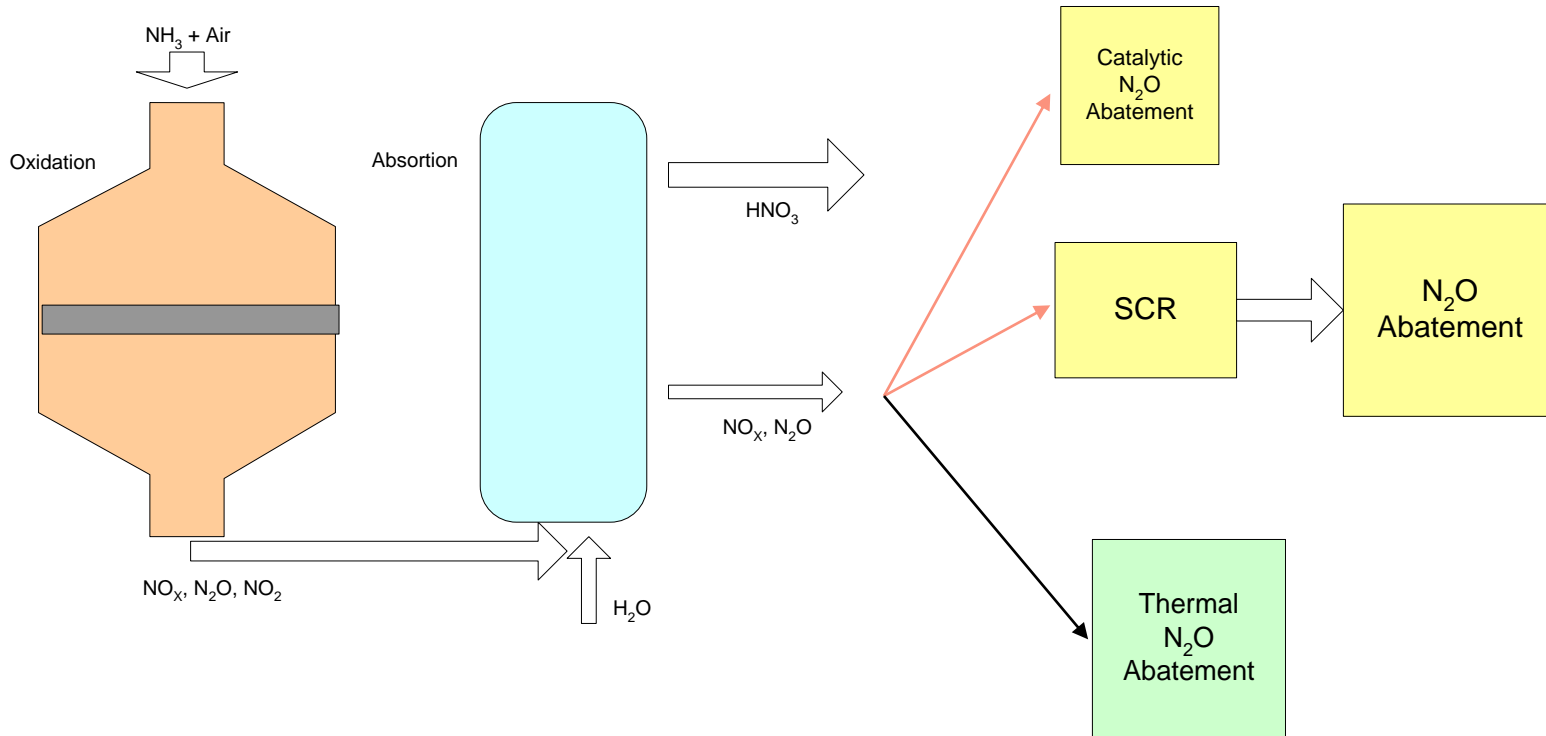
## **EB 60 – Annotated agenda paragraph 18(a)**

### **Revision of approved methodology**

**“AM0028: Catalytic N<sub>2</sub>O destruction in the tail gas of Nitric Acid or Caprolactam Production Plants”**



# Revision to AM0028: Catalytic N<sub>2</sub>O destruction in the tail gas of Nitric Acid or Caprolactam Production Plants



- **The revision expands the applicability to thermal abatement of N<sub>2</sub>O**

### **Last revision:**

- **2010**

### **Use of the meth:**

- **15 registered projects**

### **Implications of revision:**

- **Expansion of applicability**
- **No new requirements for existing projects**

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## **EB 60 – Annotated agenda paragraph 18(b)**

### **Revision of approved methodology**

**“ACM0003: “Emissions reduction through partial substitution of fossil fuels with alternative fuels or less carbon intensive fuels in cement manufacture”**

**AM\_REV\_0206: Use of the methodology ACM0003 for project activities involving partial substitution of fossil fuels with alternative fuels or less carbon intensive fuels in lime manufacture**



**The current version of the methodology is applicable to project activities in **the cement industry** where fossil fuel(s) used in an existing clinker production facility are partially replaced by less carbon intensive fossil fuel(s) and/or alternative fuel(s).**

**The amended version of the methodology is applicable to project activities in **the cement industry and quicklime manufacturing plants**.**

**Due to the similarities between the processes of clinker and quicklime manufacturing (both based on calcination of limestone) the amendment does not change ACM0003 significantly.**



### **Last revision:**

- **EB 50, 16 October 2009.**

### **Use of the meth:**

- **36 projects (20 at validation, 15 registered, 1 review requested).**

### **Implications of revision:**

- **The amendment expands the applicability of the methodology without prejudice to projects using the previous version.**

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## **EB 60 – Annotated agenda paragraph 18(c)**

### **Revision of approved methodology**

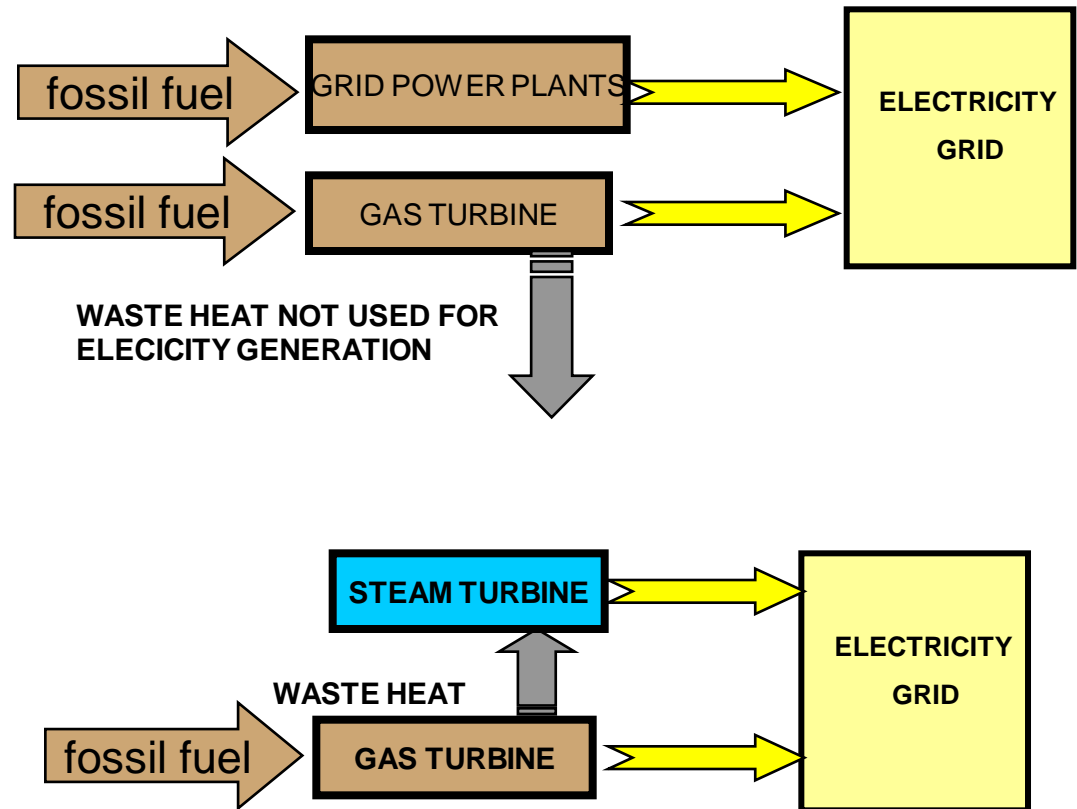
**“ACM0007: Consolidated methodology for conversion from single cycle to combined cycle power generation”**



# ACM0007: Consolidated methodology for conversion from single cycle to combined cycle power generation

**BASELINE:** A power plant produces electricity in single cycle mode. Waste heat is not used to generate electricity.

**PROJECT:** The power plant is upgraded to operate in combined cycle mode, meaning that the waste heat is utilized to increase efficiency of the plant (steam generation).



# ACM0007: Improvements made in revised draft

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## Simplification

- **Limits the baseline scenario selection to only three alternatives.**

## Clarity and readability

- **Includes a definitions section;**
- **Clarifies applicability conditions; and**
- **Removes repetition and overlap with tools.**

## Consistency

- **Baseline emissions calculation made consistent with other fossil fuel power generation methodologies (AM0061, AM0062, ACM0013).**

## Expand applicability

- **Requires operational history data to be available for one year instead of three years, as long as one unit at the project site has an operating history of three years;**
- **Allows a limited amount (3%) of an alternative fuel type for auxiliary requirements (AM0087, ACM0013); and**
- **Allows the use of exhaust heat in the operational history (potential leakage emissions are addressed).**

## ACM0007: Revision Summary

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### **Last revision:**

- **July 2010.**

### **Use of the meth:**

- **Four projects registered.**

### **Implications of revision:**

- **Applicability expanded;**
  - **Changing the baseline emissions calculation approach will not have a significant impact on baseline emissions calculated (within 3% according to data from two projects that have submitted monitoring reports).**
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## **EB 60 – Annotated agenda paragraph 18(d)**

### **Revision of approved methodology**

**“ACM0012: Consolidated baseline methodology for GHG emission reductions from waste energy recovery projects”**

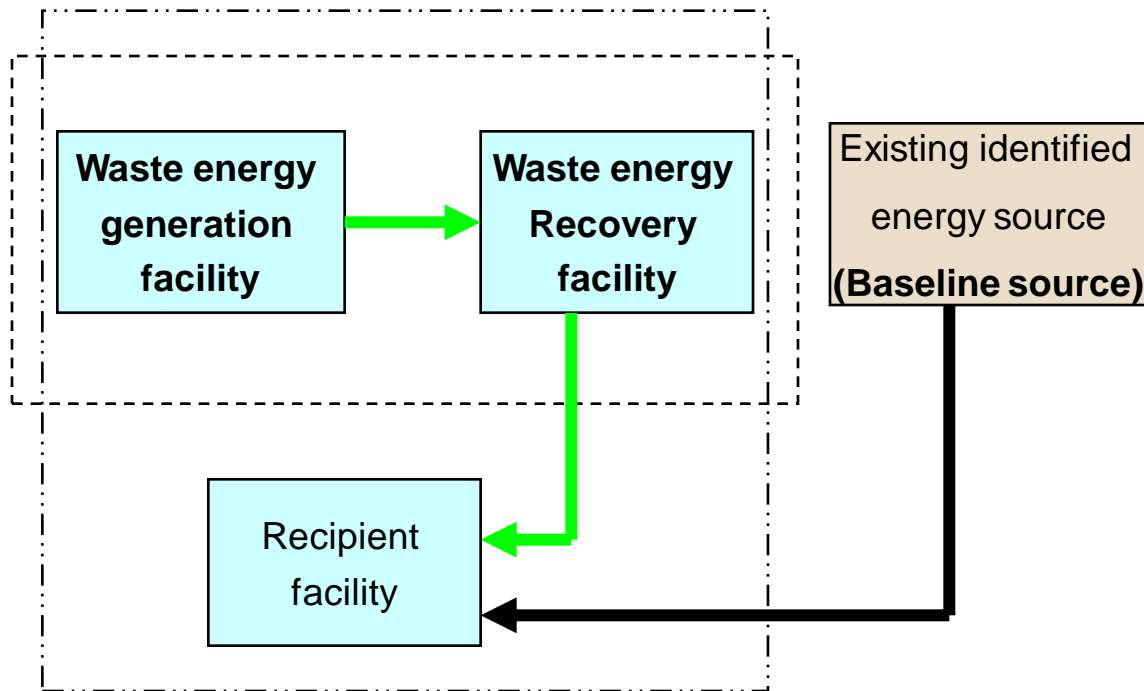


### **This revision is based on:**

- **Discussions in the Board on some of the projects requesting registration;**
- **Several requests for revision and clarification (AM\_CLA\_0163, AM\_CLA\_0168, AM\_REV\_0157, AM\_REV\_0187 and AM\_REV\_0141 on AM0024);**
- **Several unsolicited submissions to the Board.**

# Revision of ACM0012

## Existing methodology ACM0012



**Waste energy is the source for:**

- Cogeneration; or
- Generation of electricity; or
- Direct use as process heat source; or
- Generation of heat in element process (e.g. steam, hot water, hot oil, hot air); or
- Generation of mechanical energy.

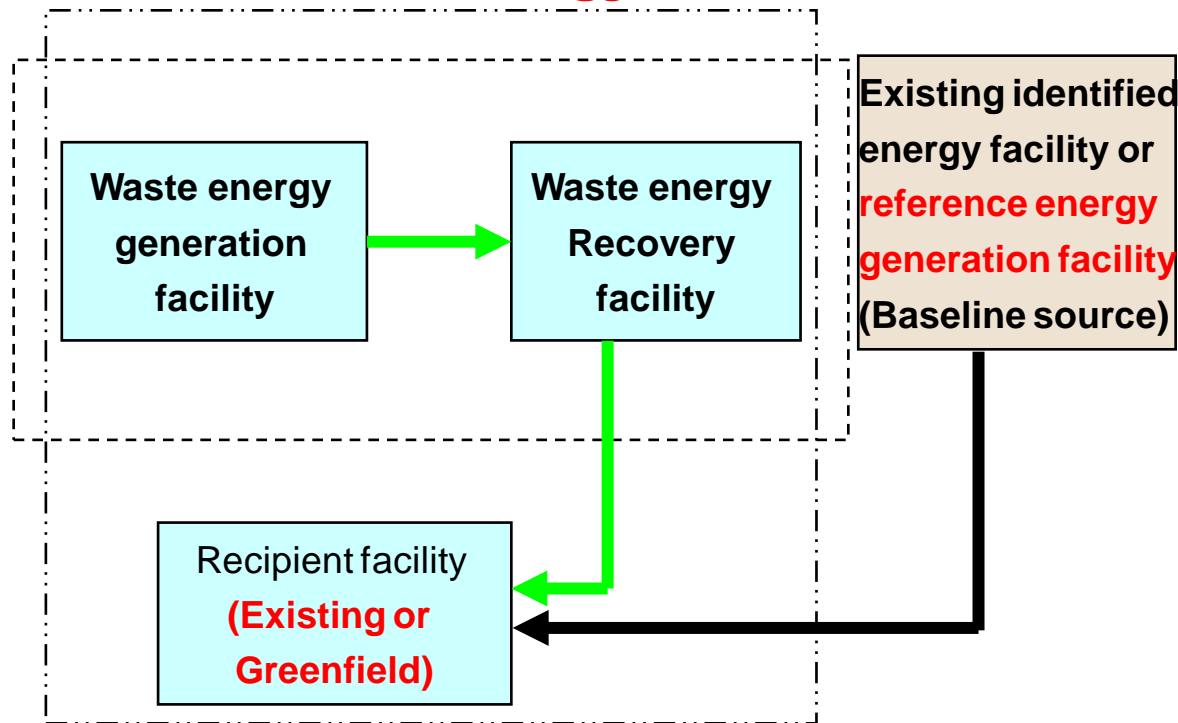
**P.A. type-1: No energy recovery of waste stream in absence of PA.**

**P.A type-2: Part of waste gas is recovered in the baseline, the remainder is wasted.**



## Revision of ACM0012

### Revised methodology ACM0012



Waste energy is the source for:

- Generation of electricity;
- Cogeneration;
- Direct use as process heat source;
- Generation of heat in element process ;
- Generation of mechanical energy;
- Supply of heat of reaction with or without process heating.

**Case 1: No energy recovery of waste stream in baseline.**

**Case 2: Waste stream is (or would have been) recovered in baseline.**



### **1. The revision broadens applicability by:**

- **Opening the project activities of “improvement in partial recovery” to all types of waste energy recovery (and not only waste gas);**
- **Allowing waste energy to be recovered to supply “heat of reaction”;**
- **Improving applicability to Greenfield facilities.**

### **2. The revision adds clarity and enhances consistency by:**

- **Linking “applicable baseline scenarios” to baseline calculations;**
- **Improving the section on “project emissions due to firing of auxiliary fuel”;**
- **Clearly defining the project boundary;**
- **Providing definitions of key terms, and clarifying some applicability conditions;**
- **Including some monitoring requirements to cover a typical extraction turbine case;**
- **Application of three methodological tools.**

## Revision of ACM0012

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### 3. The revision improves conservativeness by:

- **Mandatory requirement of “investment analysis” for:**
  - (i) Project activities improving the energy recovery;**
  - (ii) Greenfield project activities;**
  - (iii) Greenfield recipient facility, which would have received energy from “reference energy generation facility” in the absence of a CDM project activity.**
- **Providing guidance to address the gaming potential in complex industries.**

### 4. Other features:

- **The revision consolidates ACM0012 with AM0024 (Methodology for waste heat recovery in cement plants);**
  - **As a result of consolidation, the approved methodology AM0024 is recommended to be withdrawn.**
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### **Last revision:**

- **December 2009 (November 2008 for AM0024).**

### **Use of the meth:**

- **29 projects registered (additional 111 projects for ACM0004, 10 projects for AM0024).**

### **Implications of revision:**

- **Expanded applicability;**
- **Increased conservativeness in estimating baseline emissions from partial recovery and Greenfield projects.**

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## **EB 60 – Annotated agenda paragraph 19**

**Response of the meth panel to the Board's request**

**Requirement of monitoring the parameter “Waste heat use” in AM0024**

## **Meth Panel response to EB request on AM0024**

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**As per the Board's request the Meth Panel considered the validity of the monitoring parameter:**

**“Waste heat used within the cement works and normal uses of waste heat in cement production commonly practiced in the region or host country.”**

**In the methodology AM0024 “Baseline methodology for greenhouse gas reductions through waste heat recovery and utilization for power generation at cement plants”.**

**The panel agreed that the requirement to monitor this parameter is redundant, hence the parameter need not be monitored.**

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## **EB 60 – Annotated agenda paragraph 21**

**Update on progress made regarding the work on  
the “first-of-its-kind” and the “common practice”**



## **Decision 3/CMP.6 paragraph 37**

**The Board, as highest priority, to finalize guidance on the use of:**

- **First-of-its-kind barrier (FoiK); and**
- **Assessment of common practice (CP)**

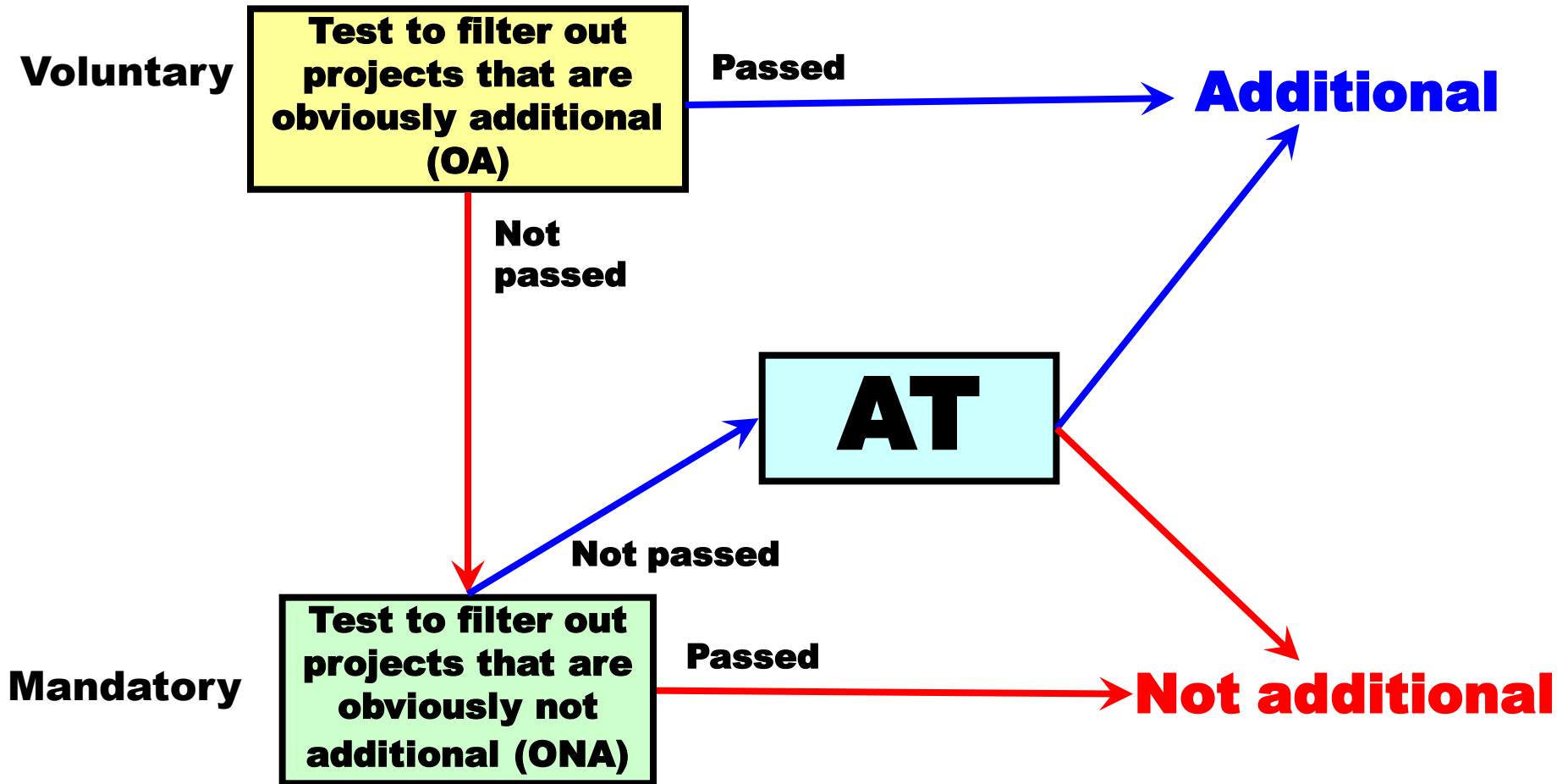
## GOAL

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**To develop screening instruments to streamline additionality demonstration:**

- **First-of-its-kind:** to identify projects that are **obviously additional** based on their performance against other activities providing the same output
  
- **Common practice:** to identify projects that are **obviously not additional** based on their performance against other activities providing the same output

# APPROACH



## OA and ONA for power generation from renewable sources

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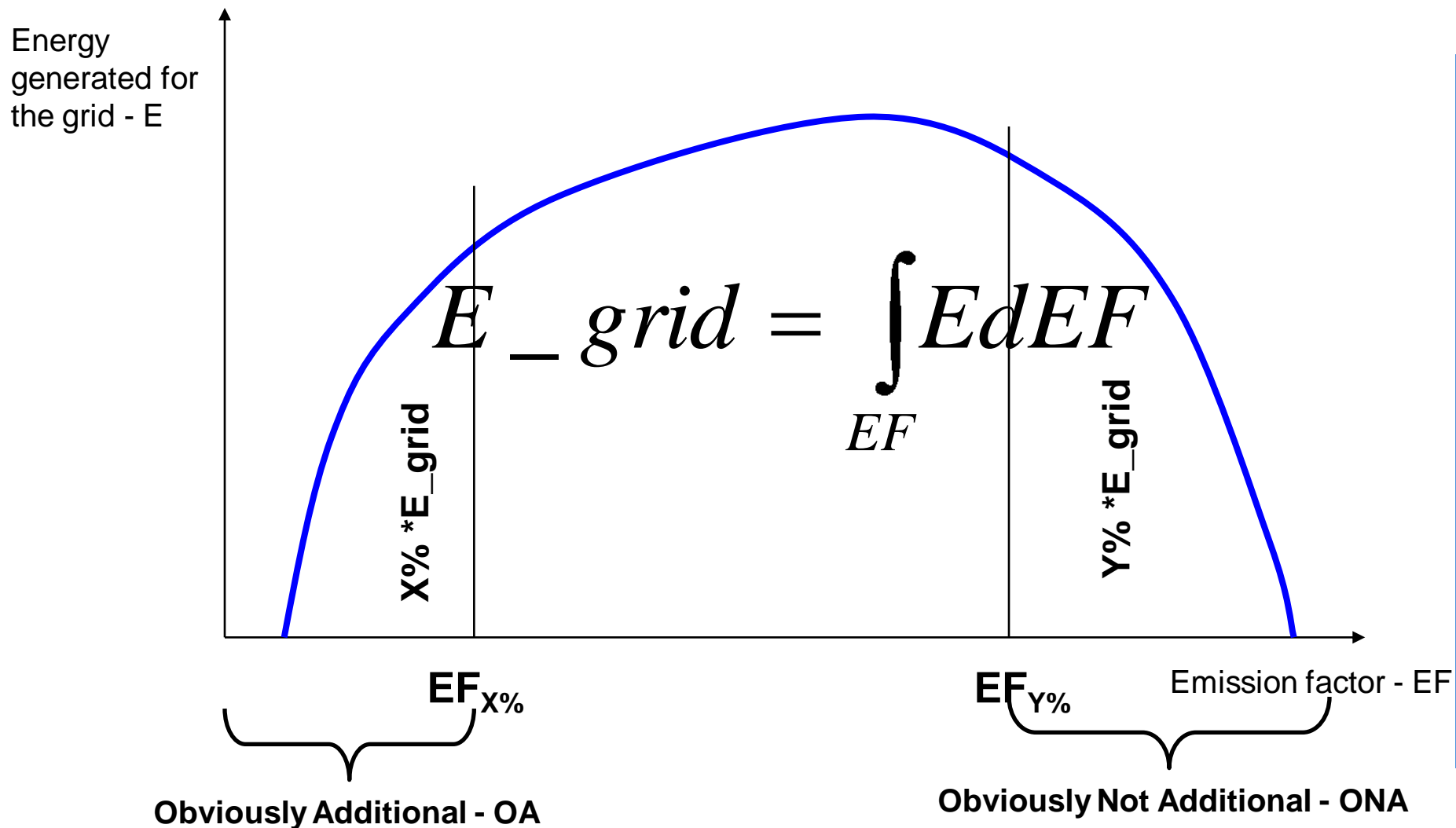
**A proposed project activity is obviously additional if it belongs to one of the categories defined in Annex I and:**

- i. There is no other project activity/activities belonging to the same category within the applicable region that is in commercial operation, or**
- ii. There is no PDD describing a project activity belonging to the same category within the applicable region that has been published by a DOE for public comments.**

**A proposed project activity shall not be assessed as obviously not additional if it belongs to one of the categories defined in Annex I.**



# OA and ONA for fuel switch project in electricity generation for a grid



**A proposed project activity is obviously additional if**

- **The facility to be involved in the project has at least T years of operation before the date of submitting the project for validation; and**
- **There has been no new fuel available for the sector of electricity generation for the grid since at least K years before the date of submitting the project for validation; and**
- **Emission factor for the project (EF\_proj) obeys the following inequality:**

$$\frac{\int_0^{EF\_proj} EdEF}{E\_grid} \leq X \%$$



## OA and ONA for fuel switch project in electricity generation for a grid

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A proposed project activity is **obviously not additional** if the emission factor for the project (EF<sub>proj</sub>) obeys the following inequality:

$$\frac{\int_0^{EF_{proj}} EdEF}{E_{grid}} \geq 100\% - Y\%$$



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## **EB 60 – Annotated agenda item 22**

### **Revision of approved tool**

**“Combined tool to identify the baseline scenario  
and demonstrate additionality”**



## **Combined tool to identify the baseline scenario and demonstrate additionality**

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### **The revision:**

- Broadens the applicability of the tool;**
- Removes some inconsistencies with the additionality tool.**

**EB 56 requested the Meth Panel to include a definition of potential alternative scenarios that can or cannot be implemented “in parallel”.**

**MP48 added examples to clarify when the tool is applicable.**

## **Combined tool to identify the baseline scenario and demonstrate additionality**

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### **Examples where the tool is **applicable**:**

- **An energy efficiency CDM project where the identified potential alternative scenarios are: (a) retrofit of an existing equipment, or (b) replacement of the existing equipment by new equipment, or (c) the continued use of the existing equipment without any retrofits;**
- **For a CDM project activity related to the destruction of a greenhouse gas in one site where the identified potential alternative scenarios are: (a) installation of a thermal destruction unit, or (b) installation of a catalytic destruction system, or (c) no abatement of the greenhouse gas.**



## **Combined tool to identify the baseline scenario and demonstrate additionality**

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**Example where the tool is **not applicable**:**

**The CDM project activity is the installation of a Greenfield facility that provides a product to a market (i.e. electricity, cement, etc.) where the output could be provided by other existing facilities or new facilities that could be implemented in parallel with the CDM project activity.**



## Combined tool - Revision summary

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### **Last revision:**

- **August 2008.**

### **Use of the tool:**

- **Referenced in the current version of 41 methodologies.**

### **Implications of revision:**

- **Applicability is broadened, the tool could be used in more methodologies.**

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## **EB 60 – Annotated agenda paragraph 23**

**Consideration of the information on standardized  
baselines as contained in  
annex 3 to the EB 60 annotations**



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## **EB 60 – Annotated agenda paragraph 24**

### **Revision of approved tool**

**“REV\_TOOL\_0001: Revision of the “Tool to calculate the emission factor for an electricity system” to account for cases where the majority of electricity is imported from foreign countries into a host country”**



## **REV\_TOOL\_0001 - “Tool to calculate the emission factor for an electricity system”**

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**The tool is used to determine the grid emission factor.**

**In the current version of the tool, for the sake of simplicity, the emission factor is taken as zero for electricity imports from connected electricity systems located in other countries.**

**With that requirement, however, about 80% of the power sources that supply electricity to the project activity in the request for revision would not be included in the calculation of the grid emission factor.**

## **REV\_TOOL\_0001 - “Tool to calculate the emission factor for an electricity system”**

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**The amended version of the tool addresses the issue of electricity imports from connected electricity systems located in other countries.**

**An option is included to allow use of an **emission factor different from zero** for electricity imports from connected electricity systems located in other non-Annex I countries.**

## **REV\_TOOL\_0001 - “Tool to calculate the emission factor for an electricity system”**

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**The amended version of the tool addresses the issue of electricity imports from connected electricity systems located in other countries.**

**An option is included to allow use of an **emission factor different from zero** for electricity imports from connected electricity systems located in other non-Annex I countries.**

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## **EB 60 – Annotated agenda paragraph 25 (a)**

**Consideration of the summary of the public inputs on the call on the draft “Tool for baseline scenario identification and baseline emission calculations”, as contained in annex 4 to the EB 60 annotations**



## **PUBLIC COMMENTS I : Draft tool for baseline scenario**

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- 11 inputs received from different stakeholders;**
- A question raised in many comments is how the tools should be applied;**
- Tools should not be applied in their current form;**
- New terminology is introduced in the tools;**
- The tools could be unified in one single document;**
- The tools are perceived as complex and there is a fear this could lead to an increase in transaction costs.**

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## **EB 60 – Annotated agenda paragraph 25 (b)**

### **Presentation on the draft**

**“Tool for baseline scenario identification and  
baseline emission calculations”**



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## **EB 60 – Annotated agenda paragraph 25 (c)**

**Recommendations by the Meth Panel based on the practitioners workshop on the draft tool, as contained in annex 7 of the report of the forty-eighth meeting of the Meth Panel**



## **MP48 RECOMMENDATIONS: Draft tool for baseline scenario**

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- 1. To prepare a background document on the CDM baseline framework to reflect lessons learned in methodology development and highlight the overarching principles and approaches which have been applied behind CDM methodologies;**
- 2. To highlight standardized baselines activity as one of the priorities for the Meth Panel for this year, and propose an initial work plan, including review and analysis of literature and the availability of data; strategies to solve lack of data and work with DNAs.**
- 3. Continuous improvement of approved CDM methodologies.**

**The Meth Panel agreed that recommendations 2 and 3 are of higher priority than recommendation 1.**

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## **EB 60 – Annotated agenda paragraph 26**

### **Consideration of a proposal to incorporate:**

- **“Tool to determine the remaining lifetime of equipment”  
and**
- **“Tool to determine baseline efficiency of thermal or electric energy generation systems”**

**in the relevant methodologies when assessing requests for revision.**

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**thank you for your attention**

