

EB50 – Methodologies

EB50 – annotated agenda item 23

USE OF METHODOLOGIES AND TIMELINES FOR THE PROCESSES OF CONSIDERING SUBMISSIONS RELATED TO METHODOLOGY

**PRELIMINARY ASSESSMENT AND PROPOSALS FOR
IMPROVEMENT**



MANDATE

Time spent

Reasons for delay

Use of AM and impact on emission reductions

Key priority sectors with no or very few methodologies

Concrete actions for improvement

SYNTHESIS OF THE ANALYSIS

Timelines

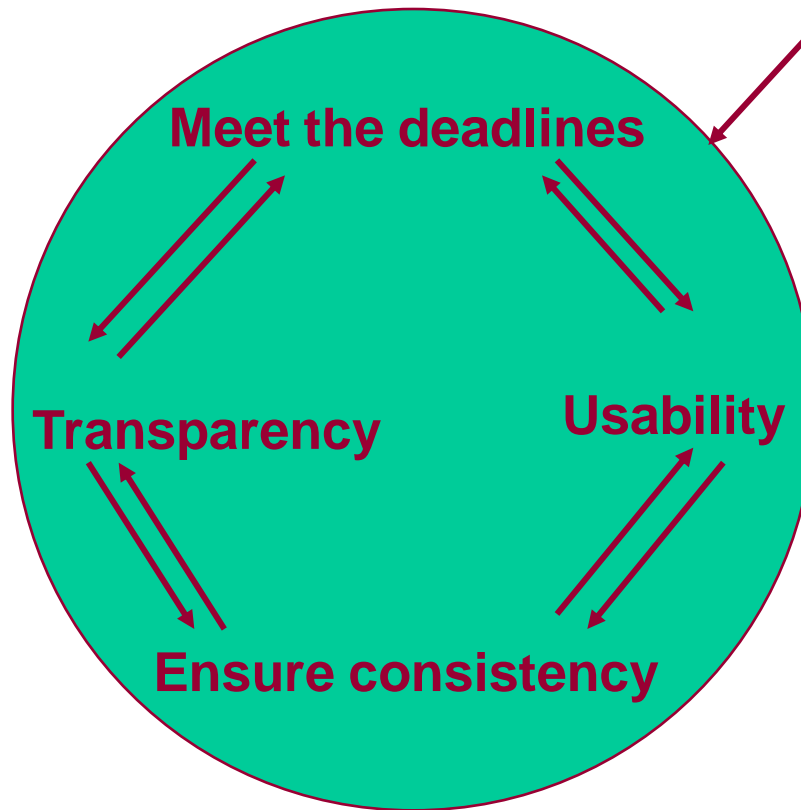
Deadlines generally not met

Increasing complexity

Proactive approach

Difficulties to find external consultants

Ensure environmental integrity



USE OF METHODOLOGIES

13 methodologies: 88% of the potential ER and

10 methodologies: 83% of the projects.

Grid connected electricity generation

Industrial gas destruction

Methane emission avoidance

Waste energy recovery

92% of all the potential ER.

USE OF METHODOLOGIES

Parameters Influencing the USE

Applicability

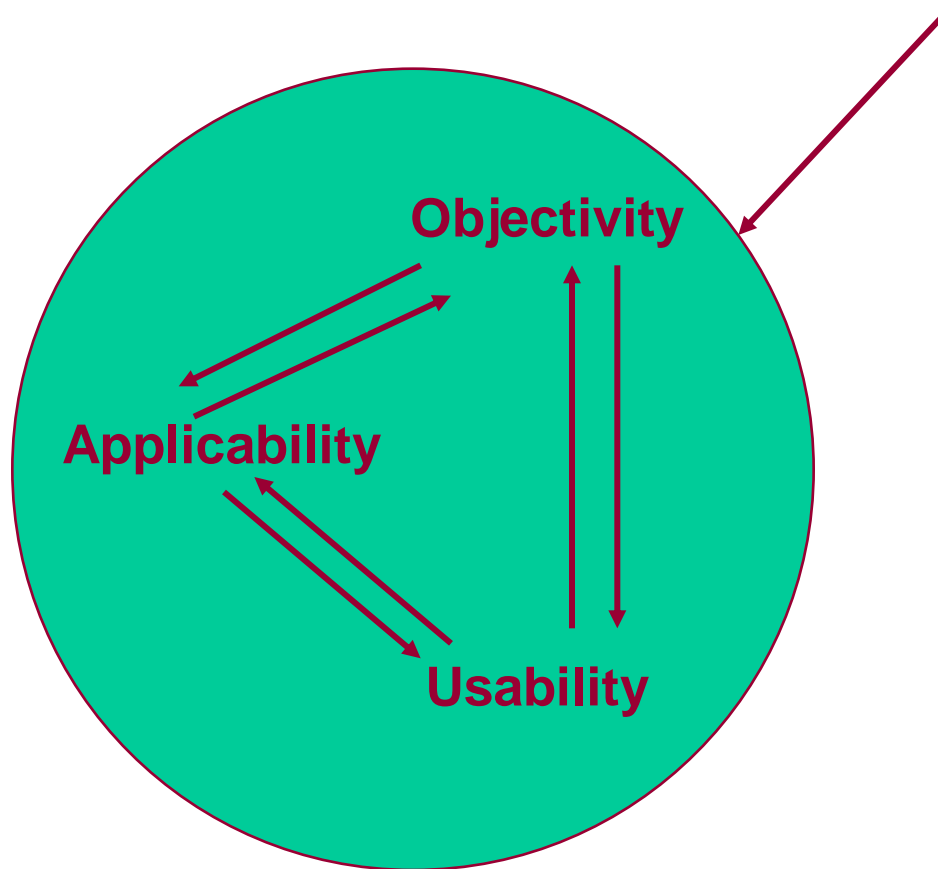
Potential in the sectors

Potential for emissions reduction

Abatement cost

Usability of the methodology

Environmental integrity



SYNTHESIS OF THE OUTCOME OF THE CALL FOR INPUTS

Main causes for the low/no use

1. Applicability constraints
2. Low usability
3. Issue related to the process
4. Low attractiveness

Key priority sectors

Transport sector

Energy for household.

EE improvement in construction

Agriculture sector

To streamline the process

Action 1: Set the timeline for considering new submissions to maximum **four** MP/WGs meetings (EB51);

Action 2: Use of simple and conservative options as alternative to more accurate but complex approaches (EB51);

Action 3: Strengthen the pre-assessment (EB51)

Action 4: Develop and maintain a catalogue of the potential threats against the environmental integrity (EB53)

To prioritize the work of the Panel/WGs

Action 5: define the following priority:

- (i) tools and cross-cutting issues;
- (ii) requests for clarification;
- (iii) requests for revision;
- (iv) new methodologies.

Action 6: consider the following sectors as priority:

- (i) energy for households;
- (ii) transport;
- (iii) energy efficiency in construction;
- (iv) agriculture.

Action 7: report to EB on the status of considerations that require more than four meetings (EB53).

To increase the usability of the methodologies

Action 8: More interaction with PPs during the process of considering their submissions (EB51);

Action 9: Permanent system for collecting comments on methodologies in the UNFCCC website (MP43);

Action 10: The Panel/WGs shall develop QA/ QC procedures for reformatting the methodology (EB52)

Action 11: Hiring a native English speaker (editor) with scientific background to improve the drafting of the methodologies.

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Revision to the “Tool to calculate the emission factor for an electricity system”

Project activities involving the displacement of off-grid power plants

The panel recommended a revision to the “Tool to calculate the emission factor for an electricity system” in order to incorporate methodological approaches to estimate emission reductions for project activities that affect the operation of off-grid generation capacity:

(1) The revised version of the tool provides project participants two options for the calculation of the emission factor of an electricity system:

Option I: Only grid power plants are included in the calculation and the tool is used as usually;

Option II: Both grid power plants and off-grid power plants are included in the calculation. In this case a number of conditions have to be met as described in Annex 2 of the tool.

Project activities involving the displacement of off-grid power plants

- (2) The basic structure of the existing grid tool is not altered due to the revision. If a project participant is not willing to include off-grid power plants in the calculations, results remain the same as before;
- (3) If project participants want to include off-grid power plants, the conditions stated in Annex 2 have to be fulfilled, in summary:
- Only plants that meet the definition of “off-grid power plant” can be included;
 - The total capacity or power generation of off-grid power plants (MW or MWh) should be at least 10% of the total capacity or power generation of grid plants; and,
 - Factors which negatively affect the reliability and stability of the grid are primarily due to constraints in generation and not to other aspects.

Project activities involving the displacement of off-grid power plants

(4) Annex 2 contains procedures for project participants:

- (a) To identify those off-grid power plants that are eligible for inclusion in the grid emission factor;
- (b) To collect the necessary data to include them in the calculations of the operating and build margin emission factors of the tool.

The annex defines the minimum set of data that need to be collected for off-grid plants. Once data is collected, those plants are classified in different classes, and each class is then considered as one power plant for the calculation of the operating and build margins.

EB50 – Annotated agenda item 13a

**Proposed new consolidated
methodology based on NM0258 &
NM0266**

Baseline Methodology for Mass Rapid Transit Projects

Based on the cases: “NM0258 - Metrobus Insurgentes, Mexico City” and “NM0266 - Mumbai Metro One, India”.

The new consolidated methodology applies to project activities that establish and operate a rail-based mass rapid transit system or segregated bus lanes (including bus rapid transit systems) for passenger transport in urban or suburban regions.

The project constructs a new rail-based infrastructure or segregated bus lanes and is not applicable for operational improvements (e.g. new or larger buses) of an already existing and operating bus lane or rail-based system.

Any fuels including (liquified) gaseous fuels or biofuel blends, as well as electricity can be used in the baseline or project case.



Baseline Methodology for Mass Rapid Transit Projects

The new methodology significantly expands the coverage of urban transport project activities by CDM methodologies, broadening the scope of AM0031. The main differences as compared to AM0031 are:

- AM0031 is only applicable to bus-based systems whereas this methodology covers both bus and rail-based systems;
- AM0031 is designed for bus-based systems with both feeder and trunk routes (in AM0031 passengers realize their entire trip in the project system). The new methodology covers the case of systems without feeder lines. The latter case cannot use AM0031, but can use the new methodology;
- AM0031 is limited to certain fuel types only, excluding the use of electricity and biofuel blends higher than 3% in the transport systems. The new methodology in turn is applicable to a broader class of fuel types, including electricity and higher biofuel blends.

Baseline Methodology for Mass Rapid Transit Projects

The statistical treatment in the new methodology is very detailed as compared to AM0031 and is described in “Annex 4 - Methodological design of survey MRTS”.

Mainly, the procedures contained therein are concerned with determining the procedures and conditions for the realization of the passengers survey that is used to determine the modes of transport, origin and destinations, fuel types and distances traveled that would have happened in the absence of the project activity.

The annex also explains how the results of the survey should be used to infer data about the whole population of passengers who use the project activity, by means of so-called expansion factors.

Baseline Methodology for Mass Rapid Transit Projects

No provisions to calculate upstream emissions from the production of the fuels are provided in the methodology in order to keep it simple.

Therefore, in order to ensure that the calculated emission reductions are conservative, the methodology includes an applicability condition that aims to limit the use of the methodology to cases where the upstream emissions under the project activity are likely to be equal or lower than in the baseline scenario.

Baseline Methodology for Mass Rapid Transit Projects

“Any fuels including (liquified) gaseous fuels or biofuel blends, as well as electricity can be used in the baseline or project case. The following conditions apply:

- In the case of gaseous fossil fuels, the methodology is applicable if equal or more gaseous fossil fuels are used in the baseline scenario than in the project activity. The methodology is not applicable in its current form if more gaseous fossil fuel is used in the project activity compared to the baseline scenario;
- In the case of biofuels, project buses must use the same biofuel blend (same percentage of biofuel) as commonly used by conventional comparable urban buses in the country i.e. the methodology is not applicable if project buses use higher or lower blends of biofuels than those used by conventional buses. In addition, the project busses shall not use a significantly higher biofuel blend than cars and taxis.”

Baseline Methodology for Mass Rapid Transit Projects

Project proponents wishing to consider a higher consumption of gaseous fuels in the project activity than in the baseline may propose a revision of this methodology by adding the relevant upstream emission terms that a fuel switch towards gaseous fuels entails, taken e.g. from ACM0009.

Similarly, project proponents wishing to consider project buses with a higher biofuel blend may propose a revision of this methodology based on future EB guidance on biofuels use.

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Revision of AM0031

Revision to AM0031, based on AM_REV_0160

AM0031 “Baseline Methodology for Bus Rapid Transit Projects” is applicable to project activities that reduce emissions through the construction and operation of a Bus Rapid Transit (BRT) system for urban road based transport. The methodology is also applicable for extensions or expansions of existing BRT systems (adding new routes and lines).

The revision:

- Expanded the applicability of the methodology to situations in which electricity is used in the transport systems, in the baseline scenario and/or in the project scenario; and,
- Removed the restriction from the applicability condition related to the use of biofuels that was limited to a blend of 3%.

Revision to AM0031, based on AM_REV_0160

The revision also changed the approach to the consideration of upstream emissions related to the production of fuels:

No provisions to calculate upstream emissions from the production of the fuels are now provided in the methodology in order to keep it simple.

Therefore, in order to ensure that the calculated emission reductions are conservative, the methodology includes an applicability condition that aims to limit the use of the methodology to cases where the upstream emissions under the project activity are likely to be equal or lower than in the baseline scenario.

Revision to AM0031, based on AM_REV_0160

“Any fuels including (liquified) gaseous fuels or biofuel blends, as well as electricity can be used in the baseline or project case. The following conditions apply:

- In the case of gaseous fossil fuels, the methodology is applicable if equal or more gaseous fossil fuels are used in the baseline scenario than in the project activity. The methodology is not applicable in its current form if more gaseous fossil fuel is used in the project activity compared to the baseline scenario;
- In the case of biofuels, project buses must use the same biofuel blend (same percentage of biofuel) as commonly used by conventional comparable urban buses in the country i.e. the methodology is not applicable if project buses use higher or lower blends of biofuels than those used by conventional buses. In addition, the project busses shall not use a significantly higher biofuel blend than cars and taxis.”

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Revision of ACM0005

Revision to ACM0005, in response to para 31, EB46

EB 46, paragraph 31: To prepare a revised version of this methodology addressing the difficulties encountered in demonstrating barriers to the implementation of project activities applying the methodology.

ACM0005 “Consolidated Baseline Methodology for Increasing the Blend in Cement Production” is applicable to projects that increase the share of additives (i.e. reduce the share of clinker) in the production of cement types beyond current practices in the country. Additives are defined as materials blended with clinker to produce blended cement types and include fly ash, gypsum, slag, etc..

Revision to ACM0005, in response to para 31, EB46

- The proposed revision restricts the procedure for the assessment and the demonstration of additionality only to (i) investment analysis and/or (ii) first-of-its-kind (FoiK) barrier, including guidance on how to apply these options.
- The proposed revision deletes the option of using technological barriers since the project activities applicable under ACM0005 are not likely to face such barriers;
- In principle, other types of barriers should not be allowed for demonstration of additionality. The revision, however, presents as an option for the Board to decide upon the possibility that two additional types of barriers be allowed: investment barriers and market acceptability barriers. The revision includes additional guidance on the specific barriers that can be included within these categories, and the type of documentation required for supporting such barriers.

Revision to ACM0005, in response to para 31, EB46

The criteria to define Foik are:

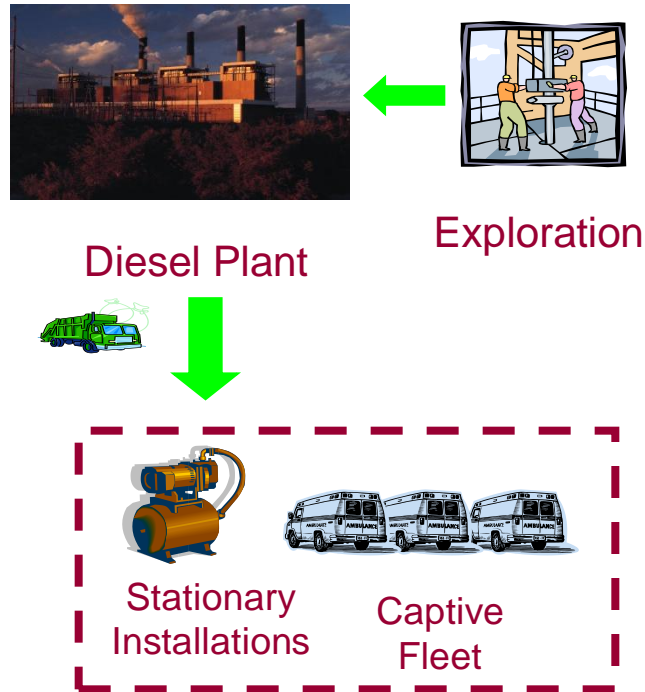
- Only projects implementing blended cement projects for the first time are allowed to claim this barrier (i.e. project proponents which are increasing the percentage of additives from a historical value to a higher value are not allowed to use this barrier).
- Also, the project participants should calculate the market share of the blended cement with respect to all cement types produced in the host country during the last three years prior to the implementation of the project activity, and verify that the market share for blended cement in the host country is below 5%.

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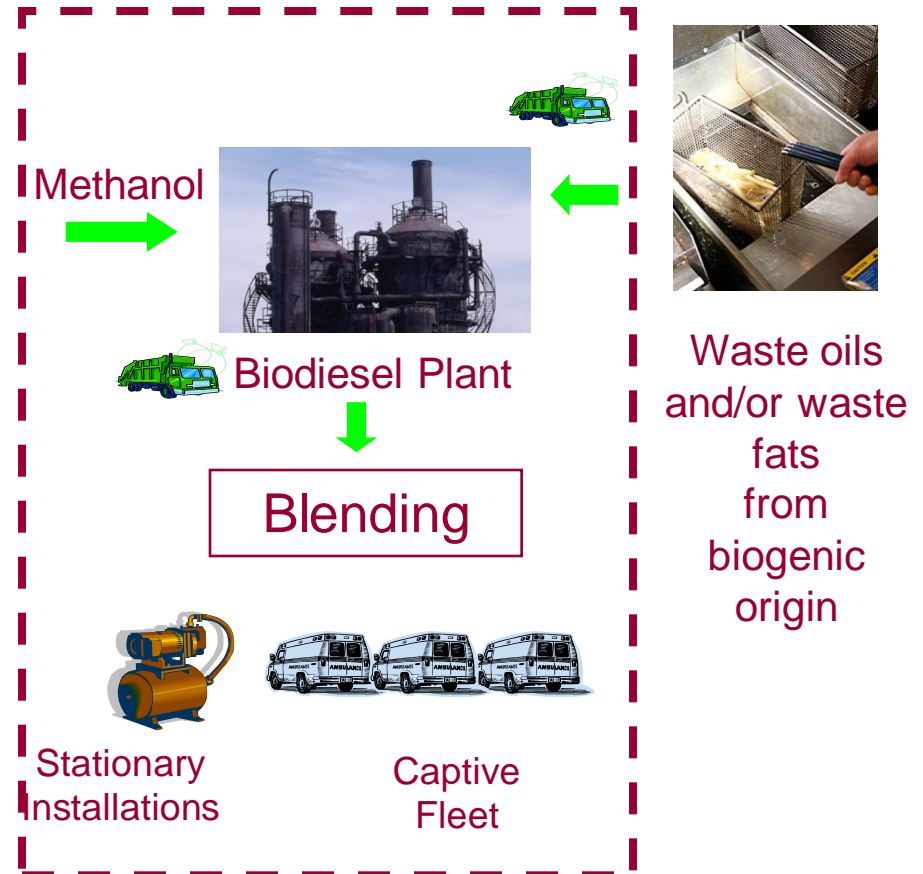
Revision of AM0047

AM0047: “Production of biodiesel based on waste oils and/or waste fats from biogenic origin for use as fuel”

Baseline scenario

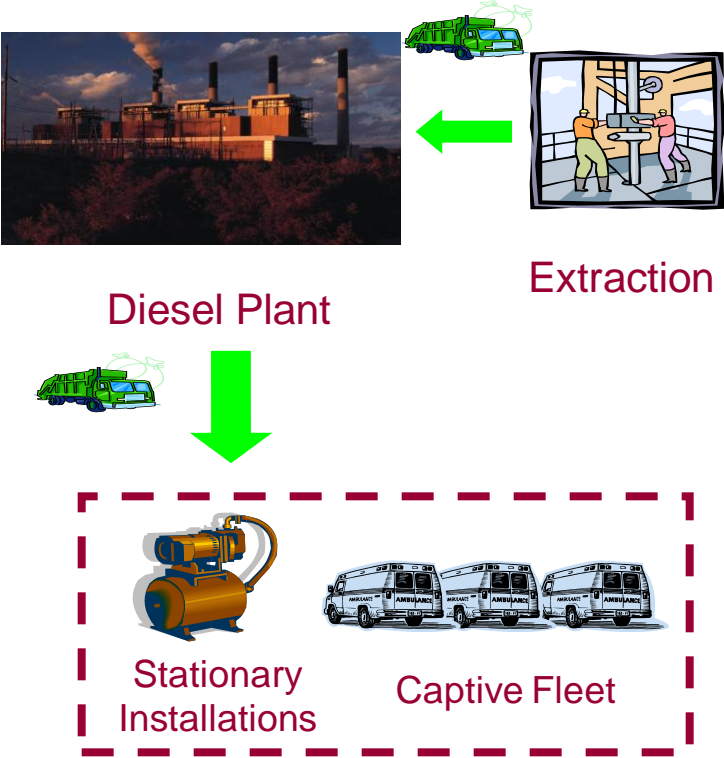


Project scenario

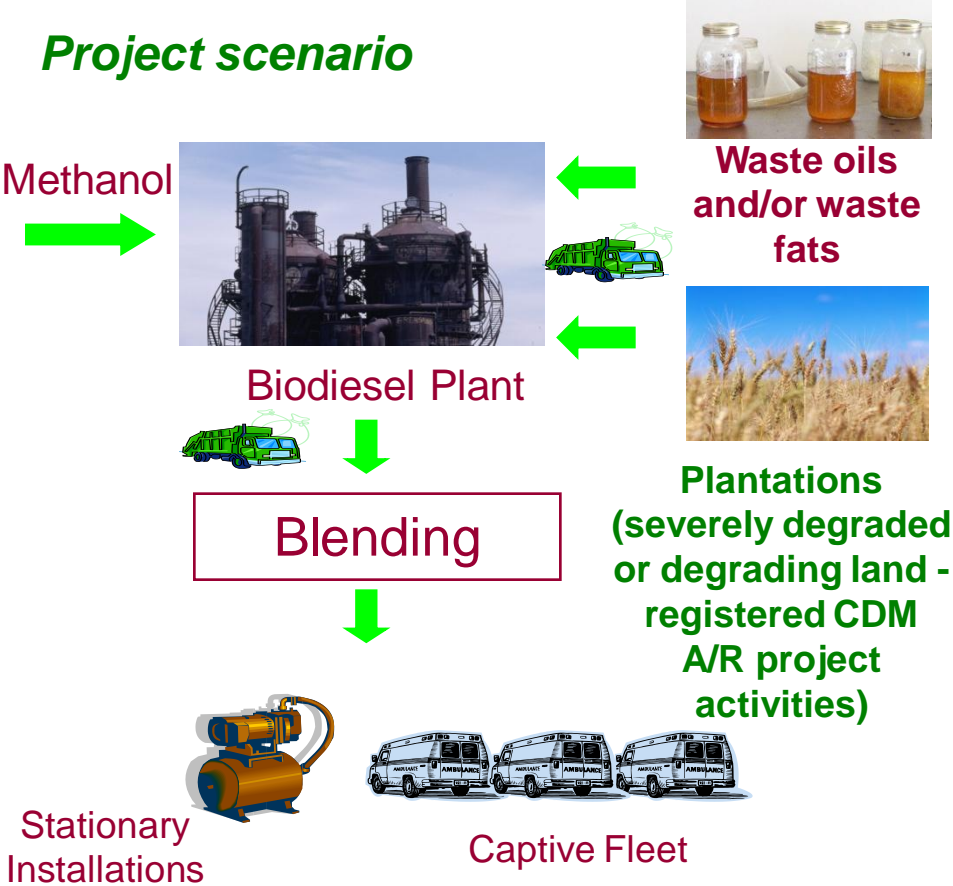


Revision to AM0047: "Production of biodiesel for use as fuel"

Baseline scenario



Project scenario



Leakage is accounted for the production and transportation of petrodiesel.

CONSULTANCIES

Oil Extraction



Different regions or countries show quite different greenhouse gas emissions. Most important are direct emissions due to venting and flaring of associated gases. Important issues are e.g. differences between onshore and offshore production, level of exploitation and possibilities to use associated natural gas.

Long Distance Transport



Long-distance transports are especially important for crude oils transported over long-distance and extracted with low greenhouse gas emissions.

Refining



Flaring and venting in the refinery can have some importance. The infrastructure of the refinery is not relevant. Energy efficient operation modes can be expected more in developed countries. But, on the other side higher demands for product quality (e.g. sulphur content) and emission abatement might lead to higher energy uses.

Distribution



Distribution of the fuel from the refinery to the final consumer is not very important.

CONSULTANCIES

Compilation of the emission factors for the production of biofuels from the seeds

Review of the compilation of the emission factors for the production of biofuels from the seeds

Emissions resulting from changes in soil carbon stocks following a land use change or a change in the land management

Palm



Indonesia



Cassava



Paraguay



Jatropha



Ghana



India



Soy



Corn



Sugarcane



Nigeria



Argentina



China



Egypt



Brazil



China



South Africa



Brazil



India



Revision to AM0047: Production of biodiesel for use as fuel” – Leakage related to avoided production of petrodiesel

Oil Extraction

Since the oil market is a global market, it is difficult to calculate the amount of GHG emission reductions from lowering the demand for crude oil as a result of a CDM project. A **global average** value was calculated not accounting for upstream emissions from crude oil production in Annex I countries since no CERs should be claimed for emission reductions in Annex I countries.

Long Distance Transport

Emissions from long distance transport (transport of crude oil to the refinery) will not be taken into account since the EB has clarified that CDM project activities can not claim emission reductions from reducing **international bunker fuel** consumption. If long distance transport occurs within the host country where the project activity takes place, these emissions will be accounted for.

Refining

If refining occurs in the host country, **reliable local emission factors** from an official information source may be used. Alternatively, a default emission factor can be used in the absence of a country-specific data. This default emission factor corresponds to the **global average** value.

Distribution

Emissions from the distribution to filling stations **will not be taken into account**, as it is assumed that these emissions are similar to emissions from transportation of the biodiesel to the blending facility.

Revision to AM0047: Production of biodiesel for use as fuel” – Project Emissions

Cultivation of Oil Seeds

- 1) A simple approach, using a conservative **default value** for the typical emissions intensity in different geographical regions. Default values are provided for **palm and jatropha**; and
- 2) The calculation of the emissions based on **actual data** from the cultivation process.

Transport of oil seeds or vegetable oil

Project emissions from transport of oil seeds or vegetable oil are only taken into account if feedstocks are transported over distances of **more than 50 km**.

Vegetable oil production and biodiesel production

No default emission factors are provided for this stage given that project participants have direct control on these emissions. Emissions associated with the production of the methanol used for esterification are estimated as leakage in the methodology.

Distribution

Emissions from the transport of the biodiesel to the blending facility or final users **will not be taken into account**, as it is assumed that these emissions are similar to the emissions from the distribution of petrodiesel to filling stations.

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Guidelines on apportioning emissions to co-product(s) and by-product (s)

Apportioning emissions from production processes between main product and co- and by-products

Market Prices



→ Palm Oil
(\$/tonne)

→ Palm Kernel
(\$/tonne)

Energy Content



→ Natural Gas
(Energy/m³)

→ LPG
(Energy/m³)

→ Gasoline
(Energy/m³)

Oil Mill Substitution



→ Steam

→ Electricity

Natural gas fired
combined heat and
power plant

Baseline



Boiler



Grid

Gas Treatment Plant

Main Product



→ Steam

→ Electricity

Natural gas fired
combined heat and
power plant