Joint Seminar on Green Finance and GREEN/J-MRV

13 (Thu) January 2011 Time: 10:10 - 10:55

Alpha Room 2nd Floor, Pullman King Power Hotel

Introduction of "J-MRV" as an instrument for measuring CO_2 emission reductions

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Today's agenda

1. What is "CO_2 emission reduction"?
2. What is "MRV"?
3. Role of "J-MRV"
4. Introduction of J-MRV Guidelines
5. Typical CO_2 emission reduction projects
6. Introduction of J-MRV methodologies

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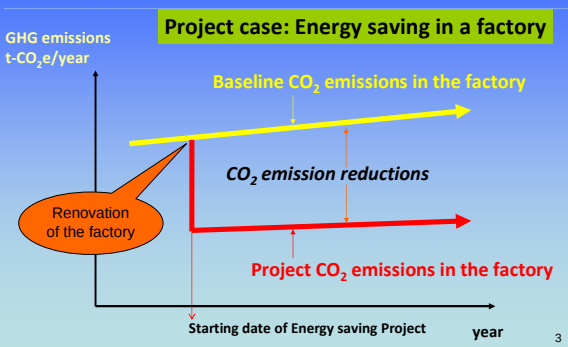
What is "CO_2 emission reduction"?



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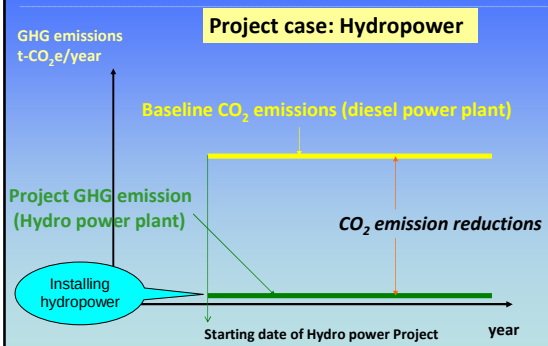
What is "CO_2 emission reduction"?



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What is "MRV"?

MRV means:

M: ***Measuring*** something related CO_2,

R: ***Reporting*** it in appropriate manner, and

V: ***Verifying*** CO_2 emission reductions.

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What is "MRV"?

For example, MRV of hydropower PJ means

M: ***Measuring*** electricity output (kWh/h, kWh/d, kWh/m, kWh/y);

R: ***Reporting*** it using a data recorder; and

V: ***Verifying*** CO_2 emission reductions by checking the appropriateness of the record.

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Role of "J-MRV"

- J-MRV is intended to be "*simple*, *practical* and *internationally acceptable*" process.
- In other words, J-MRV translates and elaborates present internationally accepted CO_2 emission reduction quantification methodologies such as CDM meth. in a simple and practical manner.

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Introduction of J-MRV Guidelines

Objectives

- JBIC aims to *support* the efforts of *developing countries* through *financing emission reduction projects* aiming to prevent global warming by using simple and practical quantification measures. JBIC shall *apply J-MRV* in its day-to-day operations to achieve expeditious emission reductions in such projects.
- Emission reduction projects need to be accelerated and scaled up globally. JBIC also intends that J-MRV would be used internationally to promote emission reduction projects (*internationally acceptable*).

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Introduction of J-MRV Guidelines

Principles

Project Boundary

- The project boundary is, in principle, that part of the *project financed by JBIC* as reasonably determined in accordance with JBIC's involvement in the project.

Baseline Emissions

- Baseline emissions are the emissions that *would occur in the absence of the project activity*.

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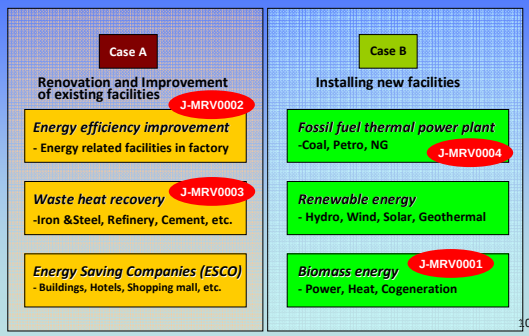
Typical CO_2 emission reduction projects



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Introduction of J-MRV methodologies

J-MRV0001: Electric power generation and/or thermal energy supply from biomass residue

Applicability:

- Fuels: biomass residue, which include by-products, residue or waste from agriculture and forestry or related industries but not include other industrial waste or municipal waste.

Baseline:

- Baseline emissions mean the emissions that would occur in the absence of the project activity, and may include two cases as follows:
  - Purchase of power from the grid with which the project plant is connected
  - Generation of power with fossil fuels at the project site (captive power plant)

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Introduction of J-MRV methodologies

J-MRV0002: Project which improves energy efficiency of equipment

Applicability:

- The project activities reduce energy consumption by replacing, modifying or retrofitting existing facilities, switching fuel or improving operation;
- The life period (replacement period) of facilities replaced, modified, or retrofitted by the project activities can be substantiated technically or through similar experience before the commencement of the project;
- The cause for the reduction of energy consumption by the project activities can be explained based on the comparison with the energy consumption before the implementation of the project activities or theoretically;
- In case of the project activity where new facilities are constructed or installed (green-field project), it is possible to explain the reason that the new facilities consume less energy than the technologies which are commonly used.

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Introduction of J-MRV methodologies

J-MRV0002: Project which improves energy efficiency of equipment (continue)

Baseline:

- In case of a replacement, modification or retrofit project, the baseline energy (power and heat) consumption is that of the existing plants, facilities and equipment which are replaced, modified or retrofitted.
- In case of a green-field project, the baseline energy consumption is that of plants, facilities and equipment which apply conventional technologies.
- In case of a project for expansion of production capacity, baseline energy consumption shall be that of the existing plant adjusted for the capacity increase.

Introduction of J-MRV methodologies

J-MRV0003: Waste heat recovery projects

Applicability:

- Project activities which reduce GHG emissions compared to that before the implementation by installing, replacing, modifying, retrofitting or operationally improving existing facilities which recover and utilize waste heat.

Baseline:

In case of a new facility:

- In case that an in-house power generation facility is installed: Higher emission factor of that of the in-house power generation facility previously used and that of the electric grid shall be used as the baseline emission factor, if not logically contradictory.
- In case that an in-house power generation facility is not installed: The emission factor of the grid from which electricity is supplied shall be used as the baseline emission factor.

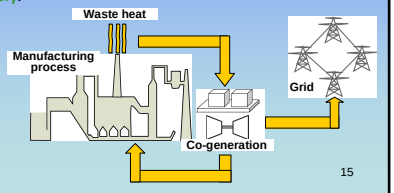
Introduction of J-MRV methodologies

J-MRV0003: Waste heat recovery projects

Baseline (continue):

In case of an existing facility:

- In case that there is an in-house generation facility: Higher emission factor of that equivalent in-house power generation facility widely used and that of the electric grid with which the plant is connected shall be used as the baseline emission factor, if not logically contradictory.
- In case that there is not an in-house power generation facility: The emission factor of the electric grid with which the plant is connected shall be used as the baseline emission factor.



Introduction of J-MRV methodologies

J-MRV0004: Project for new construction or retrofit of fossil fuel fired electricity generation plant introducing a less CO_2 intensive technology

Applicability:

- The project activity is the construction of a new fossil fuel fired electricity generation plant using a less CO_2 intensive technology than the power generation technology that would have been used in the absence of the project activity, or the project activity retrofits an existing fossil fuel fired electricity generation plant by introducing a less CO_2 intensive technology than the power generation technology that would have been used in the absence of the project activity.
- The project power plant supplies electricity to the electricity grid and is not a cogeneration power plant.
- As for retrofit of an existing power plant, in principle, the project power plant uses the same fossil fuel type as prior to the retrofit (i.e. it does not involve fuel switch).

Introduction of J-MRV methodologies

J-MRV0004: Project for new construction or retrofit of fossil fuel fired electricity generation plant introducing a less CO_2 intensive technology

Basic Concept of Carbon Emission Factor (CEF) of Baseline power plant:

- J-MRV evaluates emission reductions at the projects with the objective of promoting emission reductions in the project country. This Methodology, in principle, measures the improvement of CO_2 emission intensity of the project from the country's average CO_2 emission intensity of all power sources.
- If comparison with all power sources in the country is not appropriate, this Methodology measures the improvement of CO_2 emissions intensity under these constraints from other CO_2 intensity such as that of the power sources using the same fuel type.

Introduction of J-MRV methodologies

J-MRV0004: Project for new construction or retrofit of fossil fuel fired electricity generation plant introducing a less CO_2 intensive technology

Consideration of Baseline Carbon Emission Factor of Electricity Grid