

Methodology development for facilitating the implementation of the JCM

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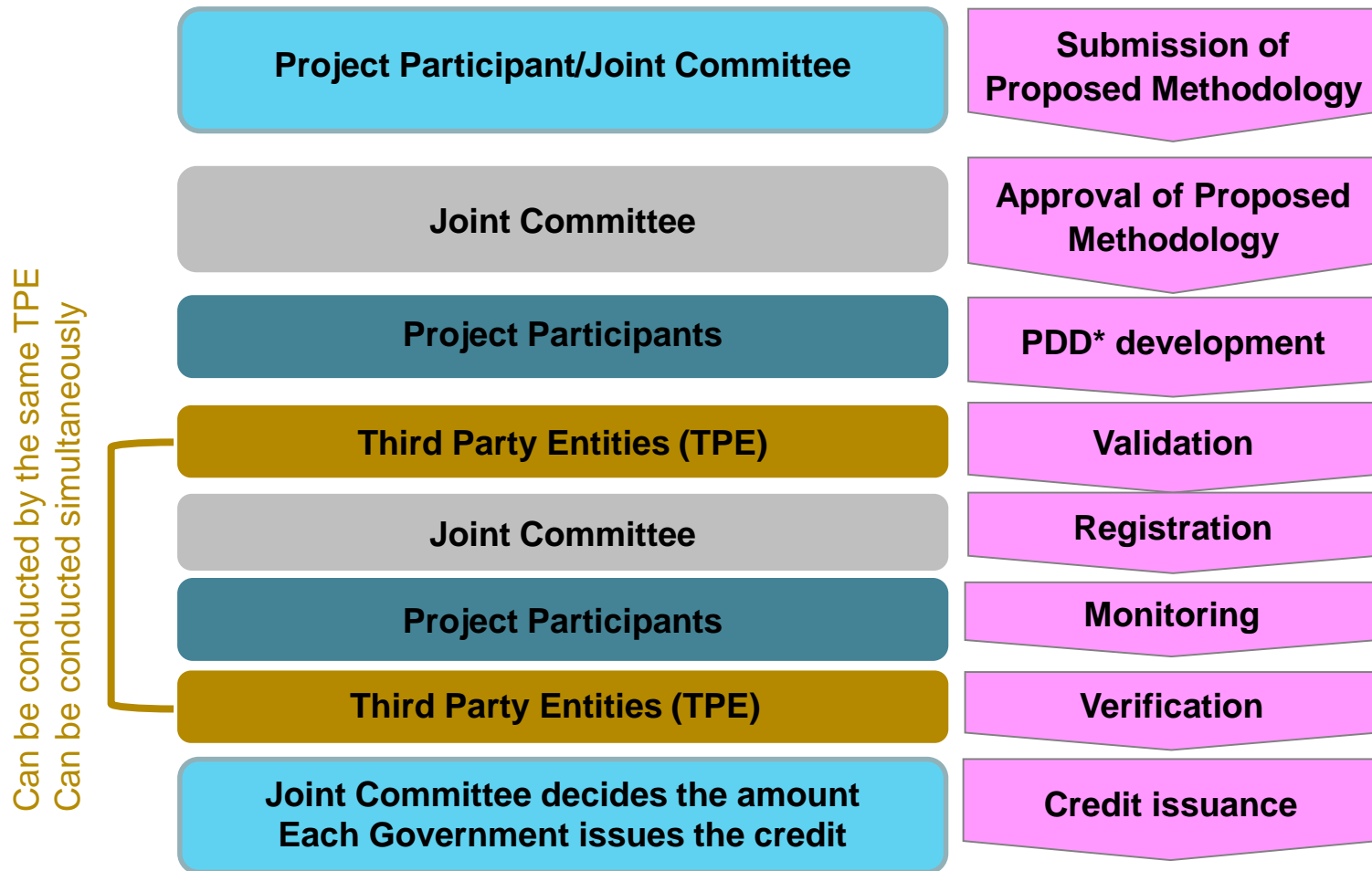
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Outline

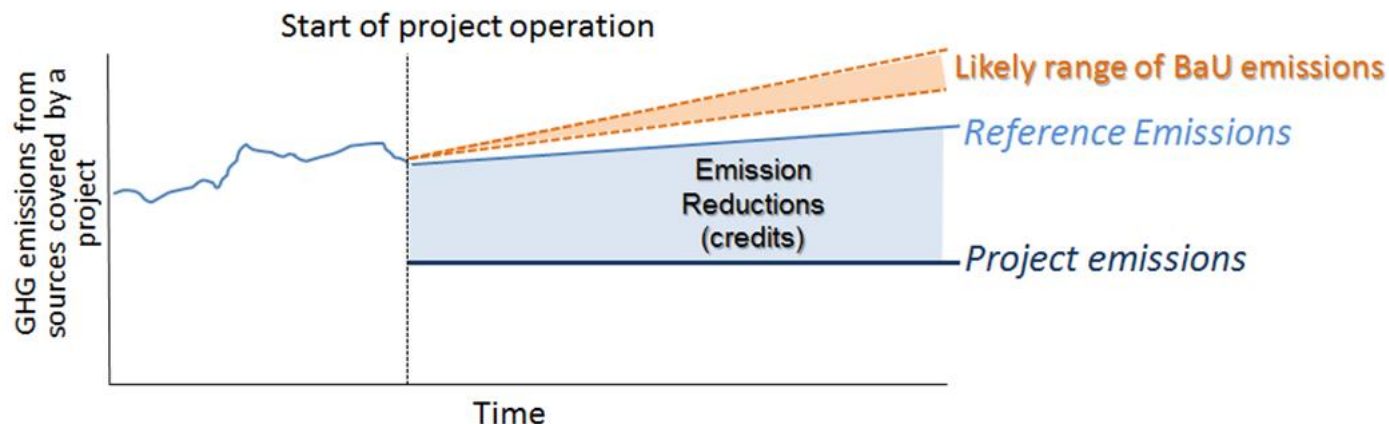
- Concept of JCM methodology
 - Ensuring a net decrease and/or avoidance of GHG emissions
- Eligibility criteria
- Reference emissions
- Simplified monitoring method
- Summary

Overall process for crediting under the JCM



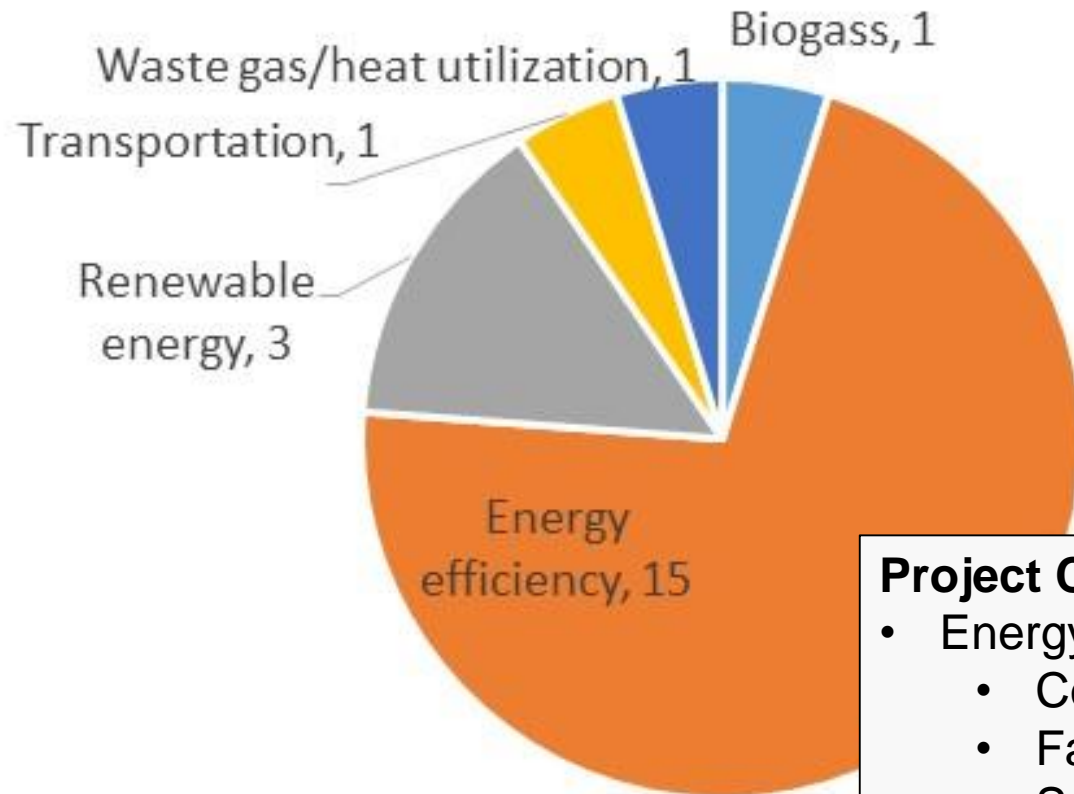
Concept for crediting under the JCM

- Emission reductions to be credited are defined as the difference between “**reference emissions**” and “project emissions.”
- The reference emissions are calculated **below business-as-usual (BaU) emissions** which represent plausible emissions in providing the same outputs or service level of the proposed JCM project in the partner country.
- This approach will ensure a **net decrease and/or avoidance** of GHG emissions.



Source: Government of Japan (2016) Recent Development of the Joint Crediting Mechanism (JCM). February 2016.

Summary of 21 approved JCM methodologies



Project Category:

- Energy efficiency: 15
 - Commercial and household: 6
 - Factory: 7
 - Supply side: 2
- Renewable energies: 2
 - Solar PV: 2
 - Micro Hydro: 1

Source: IGES JCM Database (April, 2016)

Eligibility criteria

- ◆ Eligibility criteria are requirements for the JCM project defined in the JCM methodology and contain the followings:
 - (a) Requirements for the project in order to be registered as a JCM project.
 - (b) Requirements for the project to be able to apply the approved methodology.

Category
Type of technology/device installed in the project
Positive list (detail technical requirement)
New installation/replacement, status before project implementation
Scale/capacity
Benchmark (Performance level)
Treatment to avoid leakage emissions

On average, 4 eligibility criteria were used for each methodology

Example of Reference Emission Determination

Reference emission determination method

- The current situation and performance (13)
- Best available technology of country (1)
- Average historical performance (3)
- Performance of similar products and technologies which compete with the project technology (2)
- Standards and targets (2)

Sources used for calculating reference parameters

- Survey (14)
- National standard (4)
- International standard (1)
- Own records (2)

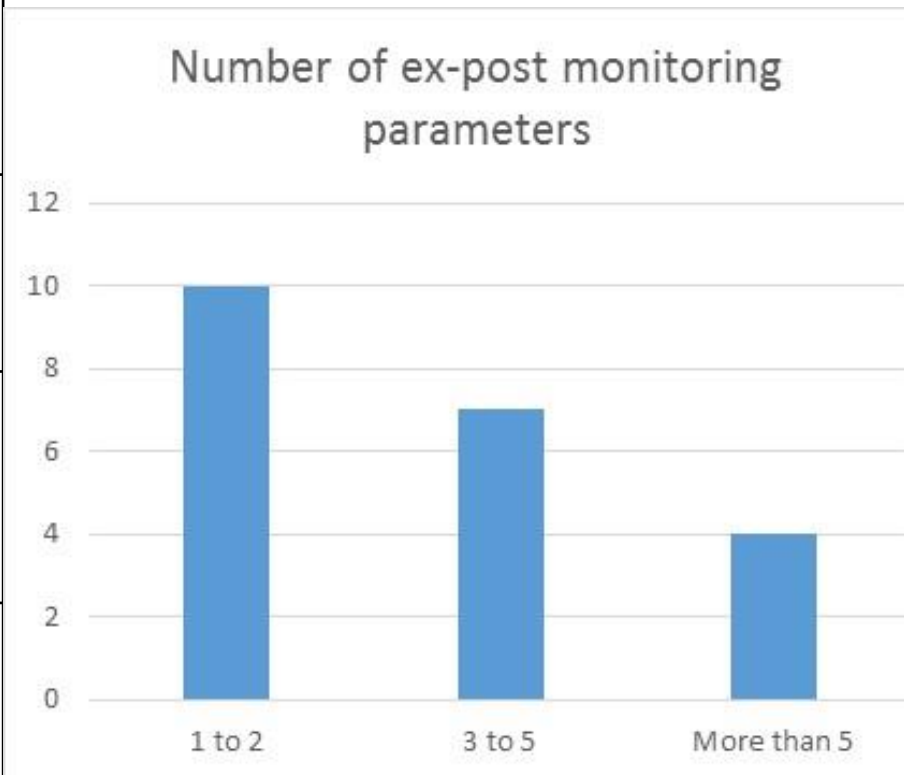
Source: IGES JCM Database (April, 2016)

Example of Reference Emissions

Title	Reference emission determination method	Sources used for cal ref. parameters	Reference emissions
MN_AM001 Installation of energy-saving transmission lines in the Mongolian Grid	The current situation and performance	National standard (Mongolia), International standard	GHG emission due to transmission loss, based on the parameters derived from Mongolian Standard MNS5870: 2008.
ID_AM005 Installation of LED Lighting for Grocery Store	Best available technology of country	Survey	Emissions from using reference lighting, calculated with total power consumption of project lighting, ratio of luminous efficiency of project/reference lighting, and CO ₂ emission factor for consumed electricity.
VN_AM005 Installation of energy efficient transformers in a power distribution grid, Version 1.0	Standards and targets	Survey	Calculated by no-load losses of the reference transformer, blackout rate and CO ₂ emission factor of the grid.

Most of the Monitoring Parameters are 1 to 2

Type of Project	Ex-post monitoring parameters	Methodology
Energy Efficiency - Commercial & household	Total power consumption of project lighting	ID_AM005
Other renewable energies – PV	The quantity of the electricity generated by the project solar PV system	PW_AM001
Waste gas/heat utilization - Cement production line	<ol style="list-style-type: none"> 1. The quantity of the electricity supplied from the WHR system to the cement production facility 2. The number of days 	ID_AM001
Biogas - Others	<ol style="list-style-type: none"> 1. Amount of organic waste prevented from disposal in the SWDS excluding sludge, 2. Amount of processed biogas supplied to heat generation equipments 3. Amount of electricity consumption by the waste management facility 	VN_AM004



Source: IGES JCM Database (April, 2016)

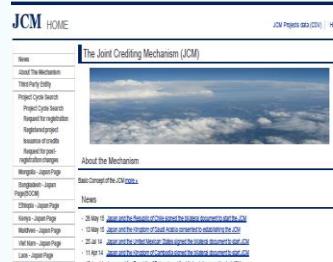
Summary: Facilitating JCM Project Development

- Determination of reference emissions (its methods and sources used) could provide the basis to which methodology could be further developed. Conducting survey to identify current situation and performance is most popular approach.
- Eligibility criteria provides technical specificity with capacity, scope and bench mark value. Normally the criteria is around 4.
- Monitoring parameters been limited to 1-2. There has been increase of default values.
- Replication of methodology will be efficient to develop methodology.

Websites for further information

Official JCM Webpage:

Rules and guidelines for each country, JCM methodology, public inputs announcement, JCM projects



<https://www.jcm.go.jp/>

IGES JCM Database:

Details of methodology project cycle, feasibility studies, duration, statistics, etc.

Project reference number	Project title	Region	Host Country	Project Participant (Host Country)	Project Participant (Japan)	Type of Project	Implementation status
0001	Energy Savings by Air Conditioning and Process Cooling to Enhance High Efficiency Landfill Gas Plant	Asia	Indonesia	PT Pertamina Indonesia	Japan International Cooperation Agency (JICA)	Energy efficiency	Under construction
0002	Project introducing high efficiency cogeneration in a Food Industry Cold Storage in Indonesia	Asia	Indonesia	PT Indo Global Food Systems PT Nusantara Indonesia	Japan International Cooperation Agency (JICA)	Energy efficiency	Under construction
0003	Project introducing high efficiency cogeneration in a Food Processing Plant in Indonesia	Asia	Indonesia	PT Indo Global Food Systems PT Nusantara Indonesia	Japan International Cooperation Agency (JICA)	Energy efficiency	Under construction
0004	Installation of high efficiency heat exchangers in a Cold Storage of a Food Processing Plant in Indonesia	Asia	Indonesia	PT Indo Global Food Systems PT Nusantara Indonesia	Japan International Cooperation Agency (JICA)	Energy efficiency	Under construction
0005	Installation of high efficiency heat exchangers in a Cold Storage of a Food Processing Plant in Indonesia	Asia	Indonesia	PT Indo Global Food Systems PT Nusantara Indonesia	Japan International Cooperation Agency (JICA)	Energy efficiency	Under construction

<http://bit.ly/igesjcmdbase>



Online version of a print guidebook titled “One Hundred Questions and Answers about MRV in Developing Countries.” for better understanding the existing Measuring, Reporting, and Verification (MRV) schemes for greenhouse gases in developing countries.

<http://www.iges.or.jp/en/climate/mrv100/index.html>

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