

Measurement, Reporting and Verification (MRV) of the JCM

Kentaro Takahashi

Programme Manager

Climate and Energy Area

Institute for Global Environmental Strategies (IGES)

Overview of JCM MRV Support



**Support
by IGES**

Methodology development:

- Developing draft methodology
- Coordination with governments of both sides to submit necessary documents
- Explanation to the JCM partner countries for further understandings on the proposed methodologies

PDD Development:

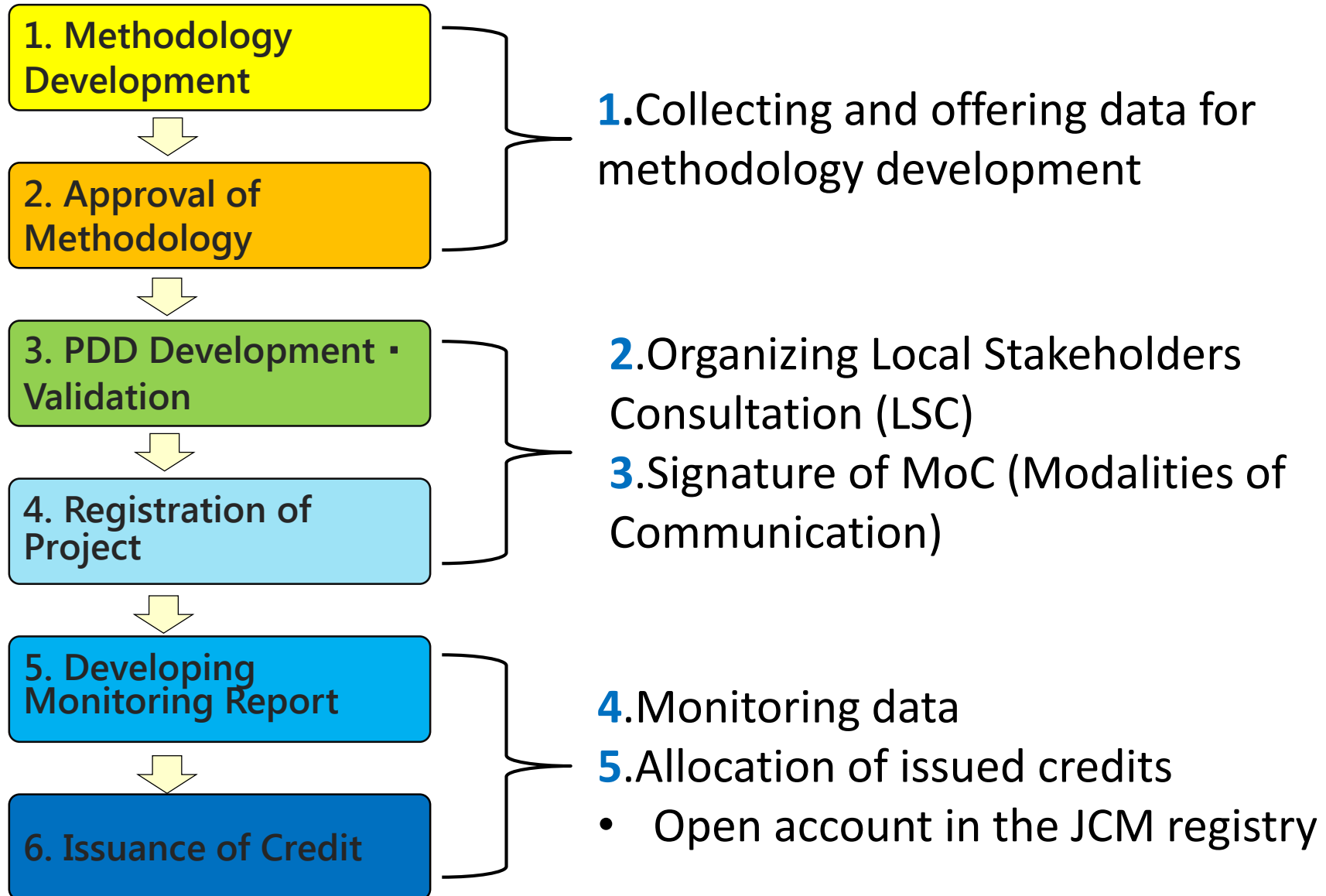
- Developing draft Project design document (PDD)
- Coordination with project participants, Third Party Entities (TPEs) and governments of both sides to submit necessary documents for each procedural step

Monitoring report:

- Developing draft monitoring report
- Coordination with project participants, TPEs and governments of both sides to submit necessary documents for each procedural step

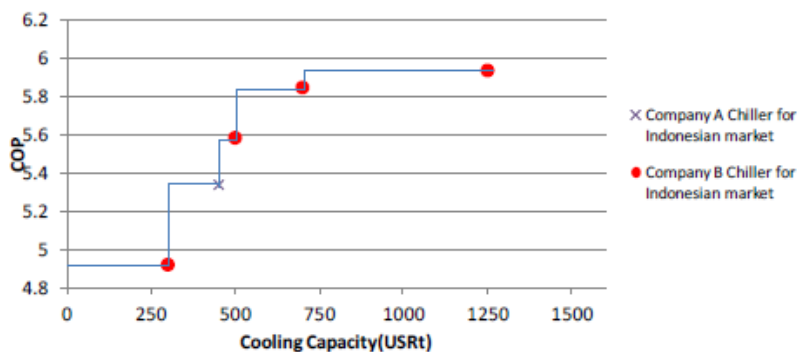
**Support
by GEC**

Responsibility of project participants in each step



1. Collecting data for methodology development

- Setting default value is a key point in the development of JCM methodology. It is also important to reduce monitoring burdens for project participants.
- For example, it is helpful to collect information and catalogue related to technology which will be similar to a proposed project.
- It is essential to develop JCM methodology by using only monitoring parameters which do not require extra monitoring.



Source : Based on the manufacturer's information, Indonesian power specification etc., the above figure was prepared.

Figure 1 : COP Values of Candidate Reference Chillers

- COP values by cooling capacity were collected through investigation. The maximum value of collected COP values was adopted for reference COP. (Indonesia : Chiller Project)

Project Design Document (PDD) Development

- Emission reductions are calculated by spreadsheet automatically.
- Main point in PDD development is explanation of result of LSC.
 - ✓ The objective of LSC is to explain about project to relevant local stakeholders.
 - ✓ The scheme of the JCM is not necessarily explained in LSC.
- Since PDD form is simple, PDD can be developed in a short term except for the information related to LSC.

Necessary information for PDD

- 1) Overview of project & technology
- 2) Location of project
- 3) Starting date of project operation
- 4) Amount of emission reduction
- 5) Monitoring point and structure
- 6) Result of LSC
- 7) EIA (if applicable)

JCM_ID_P_PDD_ver1.0

JCM Project Design Document Form

A. Project description

A.1. Title of the JCM project

A.2. Overall description of project and applied technologies and/or measures

A.3. Location of project, including coordinates

Country	
Region/State/Province etc.	
City/Town/Community etc.	
Latitude, longitude	

A.4. Name of project participants

The Republic of	
Indonesia	
Japan	

A.5. Duration

Starting date of project operation	
Expected operational lifetime of project	

A.6. Contribution from developed countries

Monitoring Plan Sheet (Input Sheet) Attachment to Project Design Document

Table 1. Parameters to be monitored or meter

(1) Monitoring point No.	(2) Parameters	(3) Description of data	(4) Estimated values	(5) Units	(6) Monitoring frequency	(7) Source of data	(8) Measurement methods and procedures	(9) Monitoring frequency	(10) Other comments
(1)	EE3.a	Total quantity of the electricity generated in the project during the period p	0.00	MWh/yr	Option C	Measured data	The AC output of the inverter is measured to determine the amount of net electricity generation by the solar PV system. The reading is taken from an electricity meter on the inverter. The meter is taken monthly or semi-monthly, using a data logger. The electricity meter is certified by a certified electrical under the manufacturer's recommendation. The electricity meter is installed or tested for accuracy at an interval following the regulations in the country in which the electricity meter is commonly used or according to the manufacturer's recommendation. The electricity meter is calibrated or replaced once it fails to pass the test.	Monthly	N/A

Table 2. Project specific parameters to be fixed or give

(1) Parameters	(2) Description of data	(3) Estimated values	(4) Units	(5) Source of data	(6) Other comments
EE4	Reference CO ₂ emission factor of grid and/or captive electricity	0.219	CO ₂ /kWh		The default emission factor is derived from the result of the survey on the generation efficiency of major thermal gas-fired power plants in Thailand. The default value should be revised if necessary from survey result which is conducted by the JCM or project participants.

Table 3. In-scope addition of CO₂ emission reductions

CO ₂ emission reductions	0.00	Units
CO ₂ emission reductions	0.00	Units

Monitoring option

Option 1: Based on public data which is measured by entities other than the project participants (Data used: public, measured data such as statistical data and specifications).

Option 2: Based on the project of monitoring data in real-time monitoring systems (Data used: real-time monitoring data such as SCADA).

Option 3: Based on the project of monitoring data in real-time monitoring systems (Data used: real-time monitoring data such as SCADA).

PDD Form and Spreadsheet

2. Local Stakeholders Consultation (LSC)

Necessary actions for LSC by Project Participants

1. Selection of potential participants
2. Coordination to decide date and venue
3. Preparation of materials for explanation of project

- It is important to communicate and coordinate early with project participants and governments.



Photo: LSC in the JCM project (ID005)

The following record will be required at validation process.

- Material used for explanation of project at LSC
- Minutes of LSC in English

Note: In particular, comments from participants

- List of participants with signature (not mandatory)
- Photos of LSC (not mandatory)

Example of participants for LSC

- Project Participants
- Local Government Officials
- Regional chamber of commerce
- JCM secretariat

3. Signature of Modalities of Communication (MoC)

- MoC is a form to designate a focal point of each project participant for communication with the JCM secretariat and Joint Committee (JC).
- Signatures of primary and alternative persons are necessary in the form.
- Signature of a project participant in host country is also needed.

JCM_MN_F_MoC_ver02.0

Section 5: Contact information (Project participant(s) other than focal point entity)		
Project Participant (1)		
Name of entity:		
Address (incl. postcode):		
Telephone:	Fax:	
E-mail:	Website:	
Primary authorised signatory: Mr. <input type="checkbox"/> Ms. <input type="checkbox"/>		
Last name:	First name:	
Specimen signature: Date: dd/mm/yyyy		
Alternate authorised signatory: Mr. <input type="checkbox"/> Ms. <input type="checkbox"/>		
Last name:	First name:	
Title:		
Specimen signature: Date: dd/mm/yyyy		
Contact person: Mr. <input type="checkbox"/> Ms. <input type="checkbox"/>		
Last name:	First name:	
Title:		
Department:		
Mobile:	Direct tel:	
E-mail:	Direct fax:	
USE THIS SECTION FOR POST-REGISTRATION SUBMISSIONS ONLY	Is this entity changing its name?	Yes <input type="checkbox"/> (Former entity name:) No <input type="checkbox"/>

*Tables may be added, as needed

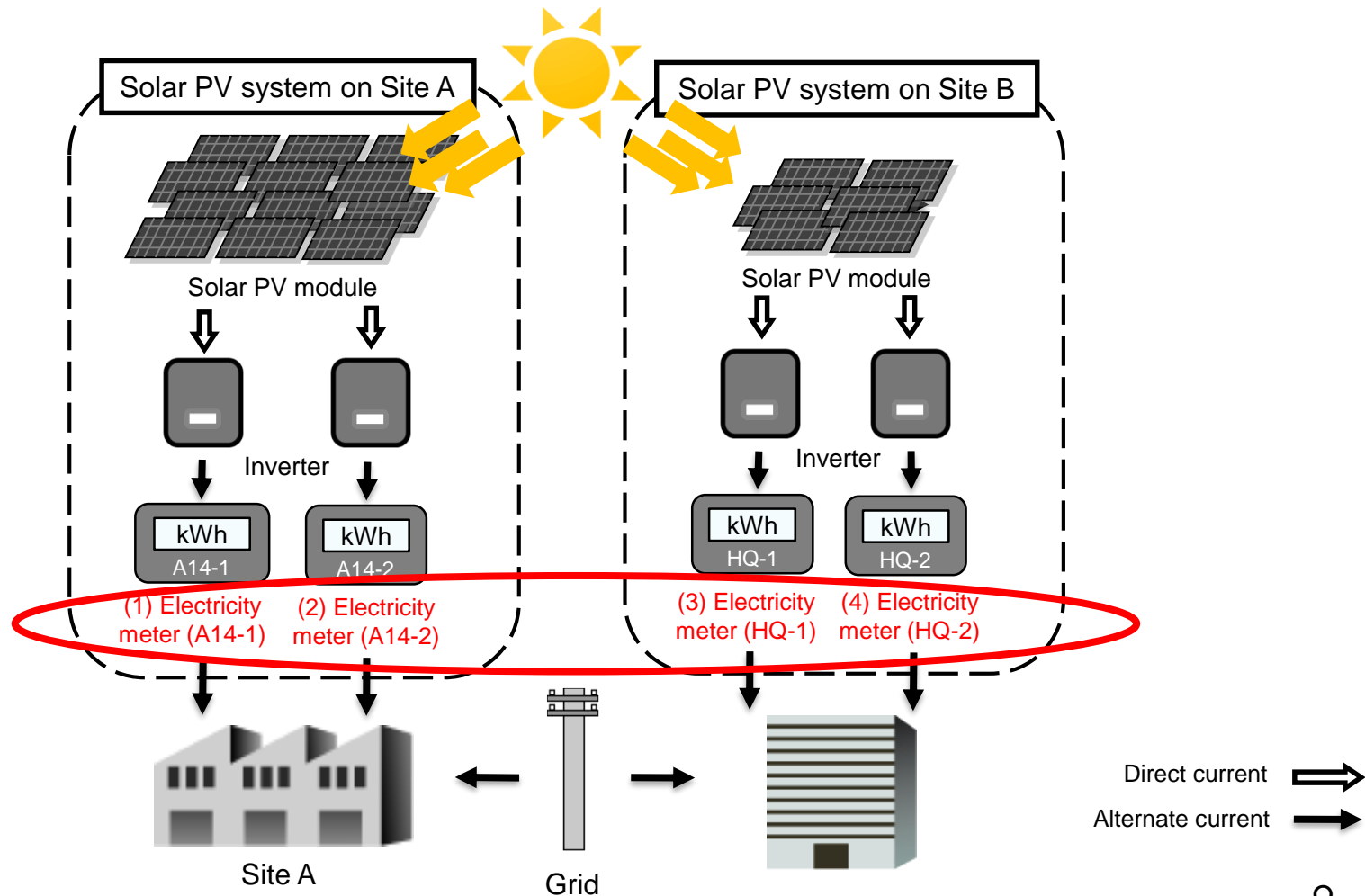
3

4. Monitoring data Case Study: Monitoring of Solar PV Project



Monitoring Parameter: MN_AM003

Monitoring parameter : quantity of electricity generated by the project solar PV system(s)



5. Allocation of issued credits

JCM_VN_F_Iss_Req_ver02.0

- Projects supported by the JCM financial programme are required to provide more than 50% of issued credits to Japanese government.
- Allocation of remaining credits is decided between Mongolian government, project participants from Japan and Mongolia.
- Since Mongolian government will also acquire credits, close coordination with both governments is helpful for project participants.
- Project participants are required to open an account in JCM registry in advance. The account numbers of project participants are necessary for completing the JCM credit issuance form.

Total verified emission reductions and allocation of credits (tCO₂e) among project participants and/or both sides

	Total verified emission reductions (tCO ₂ equivalent)	Name and account number of project participants				Both sides	
		Name: Account number:	Name: Account number:	Name: Account number:	Name: Account number:	Vietnamese side	Japanese side
Registry		<input type="checkbox"/> Vietnamese side <input type="checkbox"/> Japanese side	<input type="checkbox"/> Vietnamese side <input type="checkbox"/> Japanese side	<input type="checkbox"/> Vietnamese side <input type="checkbox"/> Japanese side	<input type="checkbox"/> Vietnamese side <input type="checkbox"/> Japanese side		
2013							
2014							
2015							
2016							
2017							
2018							
2019							
2020							
Total							

Account Number

Amount of allocation credit for government

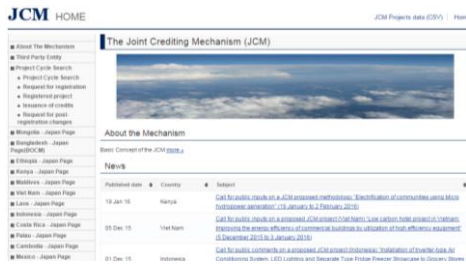
Source : JCM Credit Issuance Request Form ver04.0 (Japan- Mongolia)

For further information

Official JCM Webpage

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

Content: rules and guidelines, JCM methodology, projects



GEC website

<http://gec.jp/jcm/>

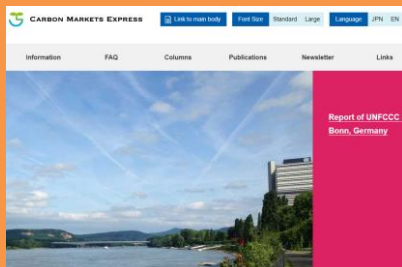
Content: call for proposals, financial and project development, feasibility study, JCM booklet



Carbon Markets Express

<https://www.carbon-markets.go.jp/eng/>

Content: recent development of the JCM



IGES JCM Database

<https://pub.iges.or.jp/pub/iges-joint-crediting-mechanism-jcm-database>

Content: details of methodologies, projects, feasibility studies

Project Reference Number	Status	Project Title	Region	Host Country	Project Participant (Lead Country)	Project Participant (Unit)	Type of Project	Applicable Mechanism
0201	NC	Energy Saving for Air Conditioning and Process Cooling by Introducing High-Efficiency Chiller/Cooling	Asia	Indonesia	PT. Prambono Industri	Higashi-Akita Co., Ltd. (JCM-Partners, Core Participant) Equilibrium Systems Co., Ltd.	Energy efficiency	Factory
0202	NC	Project of introducing high efficiency fans/blowers in air conditioning unit in various buildings	Asia	Indonesia	PT. Adhi-Graha Food Industries PT. Mekarjaya Indonesia	SAKUMI MFG. CO., LTD.	Energy efficiency	Factory
0203	NC	Project of introducing high efficiency fans/blowers for air conditioning plant in various buildings	Asia	Indonesia	PT. Adhi-Graha Food Industries PT. Mekarjaya Indonesia	SAKUMI MFG. CO., LTD.	Energy efficiency	Factory
0301	NC	Installation of high efficiency Heat Recovery Ventilator (HRV) in Commercial Office Building	Asia	Singapore	HWL-REDAUCE CO., LTD.	SUKUMI (EDWARDS) CO., LTD.	Energy efficiency	Commercial & Residential
0302	NC	Installation of high efficiency Heat Recovery Ventilator (HRV) in Commercial Office Building	Asia	Singapore	HWL-REDAUCE CO., LTD.	SUKUMI (EDWARDS) CO., LTD.	Energy efficiency	Commercial & Residential

**Thank you for your kind
attention!**