

# Measurement, Reporting and Verification (MRV) of the JCM

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# 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:**

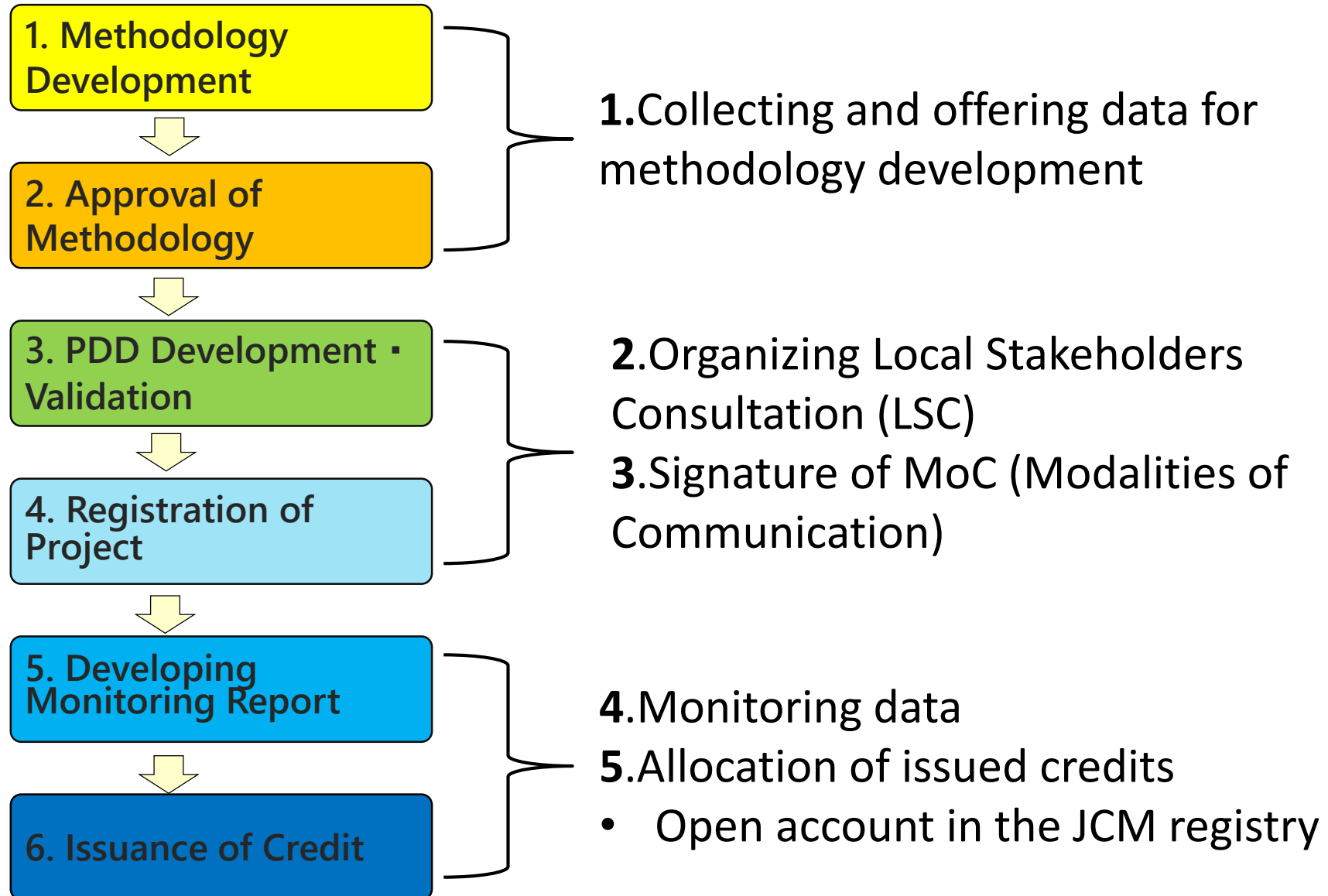
- Developing draft Project design document (PDD)
- Coordination with project participants, Third Party Entities (TPEs) and governments of both sides to submit necessary documents for each procedural step

## **Monitoring report:**

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

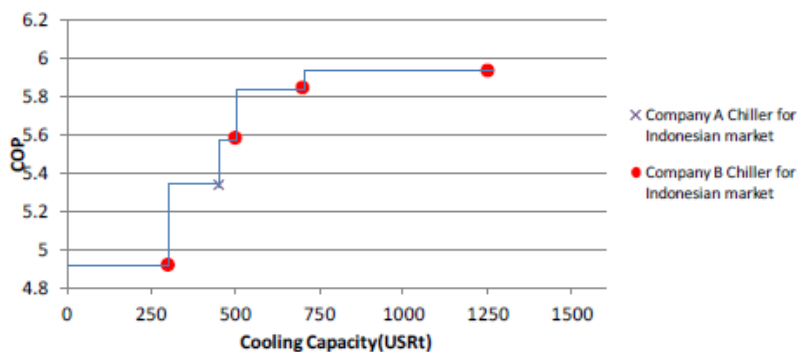
**Support  
by GEC**

# 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\_F\_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/Village 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

1

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

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Monitoring point No.	Parameters	Description of data	Estimated values	Units	Monitoring option	Source of data	Measurement methods and procedures	Monitoring frequency	Other comments
(1)	ESP-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 at the inverter. The meter is taken manually or electronically using a data logger. The electricity meter is certified by an entity accredited under international standard standards. The electricity meter is calibrated 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 a year to pass the test.	Monthly	N/A

Table 2: Project-specific parameters to be fixed as area

(1)	(2)	(3)	(4)	(5)	(6)
Parameters	Description of data	Estimated values	Units	Source of data	Other comments
SPa	Reference CO <sub>2</sub> emission factor of grid and/or average electricity	0.319	CO <sub>2</sub> /kWh	The default emission factor is derived from the result of the survey on the generation efficiency of major power plants in the country. The default value should be revised if necessary from survey result which is conducted by the JC or project participants.	N/A

Table 3: On-site verification of CO<sub>2</sub> emission reductions

CO <sub>2</sub> emission reductions	Units
CO <sub>2</sub> emission reductions	CO <sub>2</sub> e

Monitoring option

Option A: Based on public data which is measured by entities other than the project participants. Data used: publicly recorded data such as statistical data and specifications.

Option B: Based on the amount of electricity which is measured directly by electricity meters. Data used: government records and/or electricity bills.

Option C: Based on the electricity meter which is measured directly by the project participants. Data used: government records and/or electricity bills.

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)

JCM\_VN\_F\_MoC\_ver02.0

- 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 Modalities of Communication Statement Form**

Section 1: Project description	
Title of the project	
Country	
Date of Submission	dd/mm/yyyy

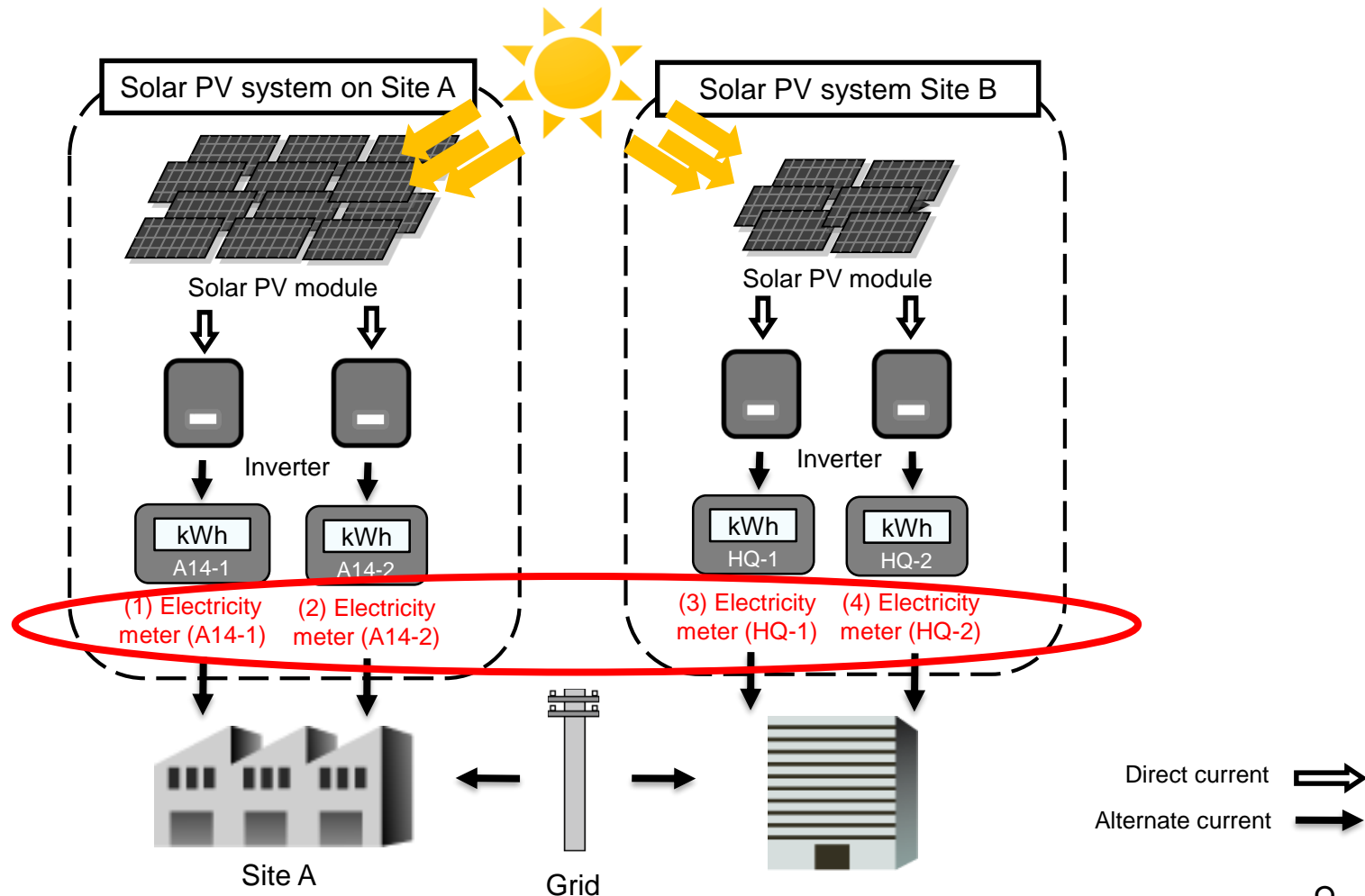
Section 2: Nomination of focal point entity		
Name of entity:		
Address (incl. postcode):		
Telephone:	Fax:	
E-mail:	Website:	
Primary authorised signatory:	Mr. <input type="checkbox"/> Ms. <input type="checkbox"/>	
Last name:	First name:	
Title:		
Specimen signature: _____ Date: dd/mm/yyyy		
Alternate 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"/>
	Is the entity also a project participant?	Yes <input type="checkbox"/> No <input type="checkbox"/>
	If the entity is also a project participant, do the same signatories represent it in its project participant role?	Yes <input type="checkbox"/> No <input type="checkbox"/>

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



# Monitoring Parameter: VN\_AM007

**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 Vietnamese government, project participants from Japan and Vietnam.
- Since Vietnamese 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 (tCO<sub>2</sub>e) among project participants and/or both sides

	Total verified emission reductions (tCO <sub>2</sub> 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**

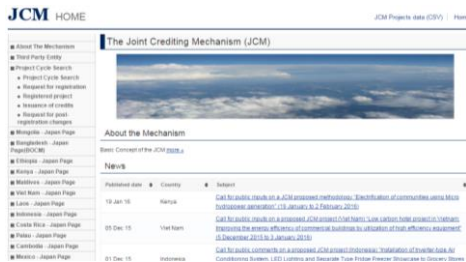
Source : JCM Credit Issuance Request Form ver02.0 (Japan- Vietnam)

## For further information

# Official JCM Webpage

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

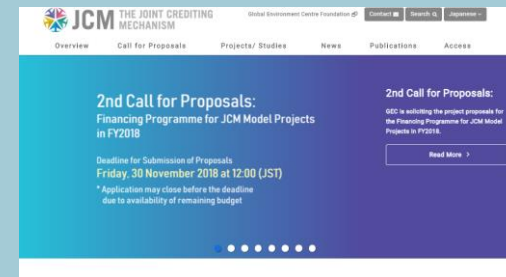
Content: rules and guidelines, JCM methodology, projects



## GEC website

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

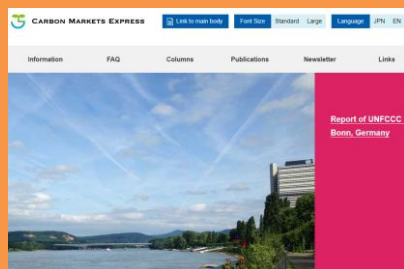
Content: call for proposals, financial and project development, feasibility study, JCM booklet



# 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

GES_CDS Database - Project Data									
Project Number	State	Project Title	Region	Lead Location	Project Participant (Lead Location)	Project Participant (Lead Location)	Type of Project	Implementation	
								Initiated	Completed
03001	NC	Design Study for the Development and Process Control to Enhance High Efficiency Catalytic Converter	North Carolina	Charlotte	PT. Amundsen	Wegman Inc. Ltd. (Charlotte, NC, USA)	Energy efficiency	Factory	
03002	NC	Project of Improving High Efficiency Refrigeration in Pharmaceuticals Cold Storage	North Carolina	Charlotte	PT. Amundsen Cold Storage, PT. Amundsen	BERNSTEIN MFC CO. LTD.	Energy efficiency	Factory	
03003	NC	Project of Improving High Efficiency Refrigeration in a Single Freezing/Storage Plant	North Carolina	Charlotte	PT. Amundsen Cold Storage, PT. Amundsen	BERNSTEIN MFC CO. LTD.	Energy efficiency	Factory	
04001	NC	Initiation of high-efficiency real-time System in Automobile Co. (Automotive Co.)	North Carolina	Charlotte	ARI-GE (CDS CO.) LTD.	ARI-GE (CDS) CO. LTD.	Energy efficiency	Commercial	
04002	NC	Construction of thermal system control for industrial of high-efficiency real-time System	North Carolina	Charlotte	ARI-GE (CDS CO.) LTD.	ARI-GE (CDS) CO. LTD.	Energy efficiency	Commercial	

**Thank you for your kind  
attention!**