JCM Project Design Document Form

A. Project description

A.1. Title of the JCM project

Introduction of 8.1MW Rooftop Solar Power System in Motorcycle Factory and Fiber Factory

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

The proposed project aims to reduce greenhouse gas (GHG) emissions in Thailand by introducing a total of approximately 8.1MW rooftop solar power system to (i) a motorcycle factory owned by Kawasaki Motors Enterprise (Thailand) Co., Ltd. and (ii) a textile factory owned by Teijin Polyester (Thailand) Limited. The project is implemented by The Kansai Electric Power Company, Incorporated and Kansai Energy Solutions (Thailand) Co., Ltd. The electricity produced by the solar power system will replace part of the grid electricity which is generated by thermal power plants and will be utilized for self-consumption of all project locations during the project period. The proposed project is expected to reduce a total of 30,103tCO_2eq by the end of 2030. The actual emission reductions may vary depending on the actual operation of the factories and the sun radiation of the respective project locations**.**

A.3. Location of project, including coordinates

Country	The Kingdom of Thailand
Region/State/Province etc.:	(i) Rayong (ii) Pathumthani
City/Town/Community etc:	(i) 119/10 Moo 4, Tambon Pluak Daeng, Amphur Pluak Daeng (ii) 1/1 Moo 3, Tambon Klong Nueng, Amphur Klong Luang
Latitude, longitude	(i) N 12° 59’ 54” and E 101° 10’ 41” (ii) N 14° 01’ 19” and E 100° 36’ 54”

A.4. Name of project participants

The Kingdom of Thailand	Kansai Energy Solutions (Thailand) Co., Ltd.
Japan	The Kansai Electric Power Company, Incorporated

A.5. Duration

Starting date of project operation	01/10/2022
Expected operational lifetime of project	17 years
Type and duration of crediting period	Fixed crediting period (10 years)
Starting date of crediting period (input the information when requesting a renewal of crediting period)	N/A

A.6. Contribution from Japan

The proposed project was partially supported by the Ministry of the Environment, Japan (MOEJ) through the Financing Program for JCM Model Projects, which provided financial support of less than half of the initial investment for the project in order to acquire JCM credits. The technology of advanced and efficient solar power system is introduced in the proposed project by the Japanese project participant. Further, implementation of the proposed project promotes technology transfer of low carbon technologies in Thailand.

B. Application of an approved methodology(ies)

B.1. Selection of methodology(ies)

Selected approved methodology No.	JCM_TH_AM001
Version number	Ver. 03.0

B.2. Explanation of how the project meets eligibility criteria of the approved methodology

Eligibility criteria	Descriptions specified in the methodology	Project information
Criterion 1	The project installs solar PV system(s).	The proposed project installed new solar PV systems in the location stated in A.3.
Criterion 2	The solar PV system is connected to the internal power grid of the project site and/or to the grid for displacing grid electricity and/or captive electricity at the project site.	The solar PV systems are connected to the internal power grid of each of the project sites for displacing grid electricity at the project sites.
Criterion 3	The PV modules have obtained a certification of design qualifications (IEC 61215, IEC 61646 or IEC 62108) and safety qualification (IEC 61730-1 and IEC 61730-2).	The PV modules installed at the project sites are certified for design qualifications IEC 61215 and safety qualifications IEC 61730-1 and IEC 61730-2.
Criterion 4	The equipment to monitor output power of the solar PV system and irradiance is installed at the project site.	Power meters are installed at the project sites to monitor output power of the solar PV systems. Pyranometers are installed at the project sites to monitor irradiance.

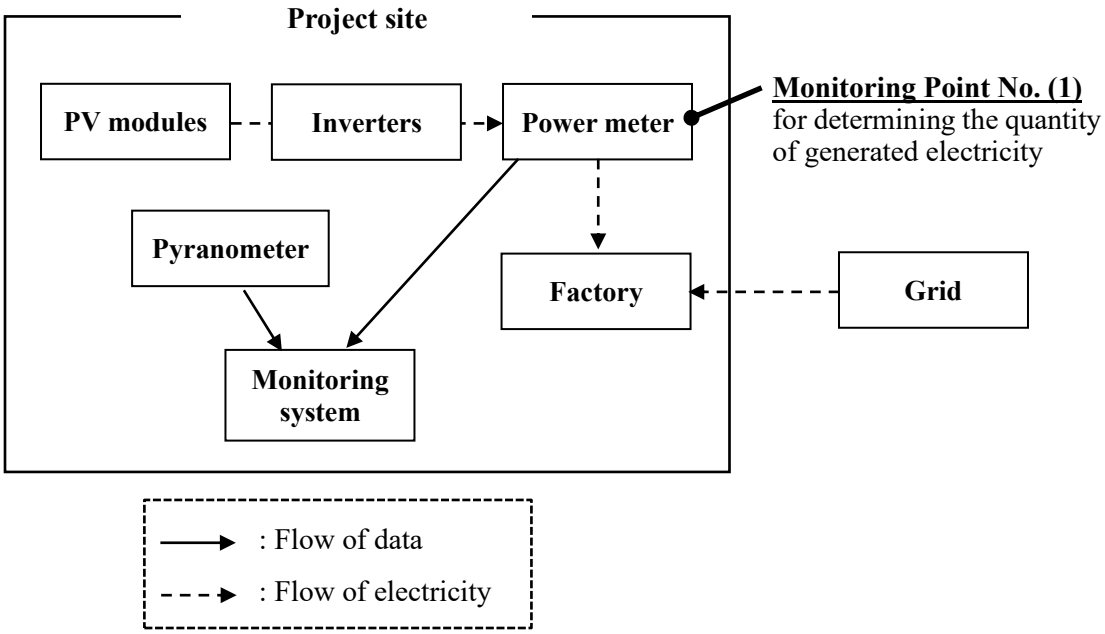
C. Calculation of emission reductions

C.1. All emission sources and their associated greenhouse gases relevant to the JCM project

Reference emissions	
Emission sources	GHG type
Consumption of grid electricity	CO_2
Project emissions	
Emission sources	GHG type
Generation of electricity from solar PV systems	N/A

C.2. Figure of all emission sources and monitoring points relevant to the JCM project

The same structure is applied to both of the project sites (i) and (ii), which is shown below.



C.3. Estimated emissions reductions in each year

Year	Estimated Reference emissions (tCO_2eq)	Estimated Project Emissions (tCO_2eq)	Estimated Emission Reductions (tCO_2eq)
2013	-	-	-
2014	-	-	-
2015	-	-	-
2016	-	-	-
2017	-	-	-

2018	-	-	-
2019	-	-	-
2020	-	-	-
2021	-	-	-
2022	919.5	0.0	919
2023	3,648.3	0.0	3,648
2024	3,648.3	0.0	3,648
2025	3,648.3	0.0	3,648
2026	3,648.3	0.0	3,648
2027	3,648.3	0.0	3,648
2028	3,648.3	0.0	3,648
2029	3,648.3	0.0	3,648
2030	3,648.3	0.0	3,648
Total (tCO_2eq)			30,103

D. Environmental impact assessment	
Legal requirement of environmental impact assessment for the proposed project	NO

E. Local stakeholder consultation

E.1. Solicitation of comments from local stakeholders

The project participants held two local stakeholder consultation meetings in order to take due steps to engage stakeholders and solicit comments for the proposed project. Details of the meetings is summarized as follows:

[Local stakeholder consultation for Site (i)]

Date and Time: 27th February 2025, 13:10-13:40 (Thailand Time) / 15:10-15:40 (Japan Time)

Venue: Online by Teams

Agenda:

1. Introduction of participants
2. Overview and objective of the project
3. Questions and answers

Invited stakeholders:

- Kawasaki Motors Enterprise (Thailand) Co., Ltd.
- Ministry of Natural Resources and Environment, Thailand Greenhouse Gas Management Organization (TGO)

* All the invitees attended the meeting.

[Local stakeholder consultation for Site (ii)]

Date and Time: 19th February 2025, 13:00-13:30 (Thailand Time) / 15:00-15:30 (Japan Time)

Venue: Online by Teams

Agenda:

1. Introduction of participants
2. Overview and objective of the project
3. Questions and answers

Invited stakeholders:

- TEIJIN POLYESTER (THAILAND) LIMITED
- Ministry of Natural Resources and Environment, Thailand Greenhouse Gas Management Organization (TGO)

* All the invitees attended the meeting.

E.2. Summary of comments received and their consideration

Stakeholders	Comments received	Consideration of comments received
Kawasaki Motors Enterprise (Thailand) Co., Ltd.	With your support, we could set up the panel and generate electricity and now we can contribute to reducing CO2 emissions. With support from the Japanese government, Kawasaki wants to reduce emissions furthermore in the future. Once again, we appreciate your support for our project.	The comment was duly noted. No further action is needed.
TGO	Last year, new rules and guidelines were adopted for JCM between Japan and Thailand, which require additional documents such as SDSAR for project registration. Please take note of this.	The comment was duly noted. No further action is needed.

TGO	Please tell us about the maintenance and management system of the equipment.	The maintenance and management system of the equipment was explained. No further action is needed.
TGO	Are the amount of electricity generation and related conditions confirmed through an electricity meter?	The applied monitoring method was explained. No further action is needed.
TGO	What percentage of the facility's total power consumption is covered by the electricity generated from the solar panels in this project?	The percentage was explained. No further action is needed.
TEIJIN POLYESTER (THAILAND) LIMITED	What are the next steps, and what actions do we need to take?	The next steps and actions that may be required of the stakeholder were explained. No further action is needed.

F. References
N/A

Reference lists to support descriptions in the PDD, if any.

Attachment
N/A

Revision history of PDD		
Version	Date	Contents revised
01.0	01/12/2025	First edition