JCM Project Design Document Form

A. Project description

A.1. Title of the JCM project

Introduction of 2.6MW Rooftop Solar Power System to Semiconductor 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 2.6MW rooftop solar power system to a semiconductor factory owned by Sony Device Technology (Thailand) Co., Ltd. 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 9,856tCO_2eq by the end of 2030. The actual emission reductions may vary depending on the actual operation of the factory and the sun radiation of the project location**.**

A.3. Location of project, including coordinates

Country	The Kingdom of Thailand
Region/State/Province etc.:	Pathum Thani
City/Town/Community etc:	140 Moo 5, Bangkadi Industrial Park, Tiwanon Road, Bangkadi, Muang Pathum Thani
Latitude, longitude	N 13° 58’ 50” and E 100° 33’ 21”

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	01/07/2022
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

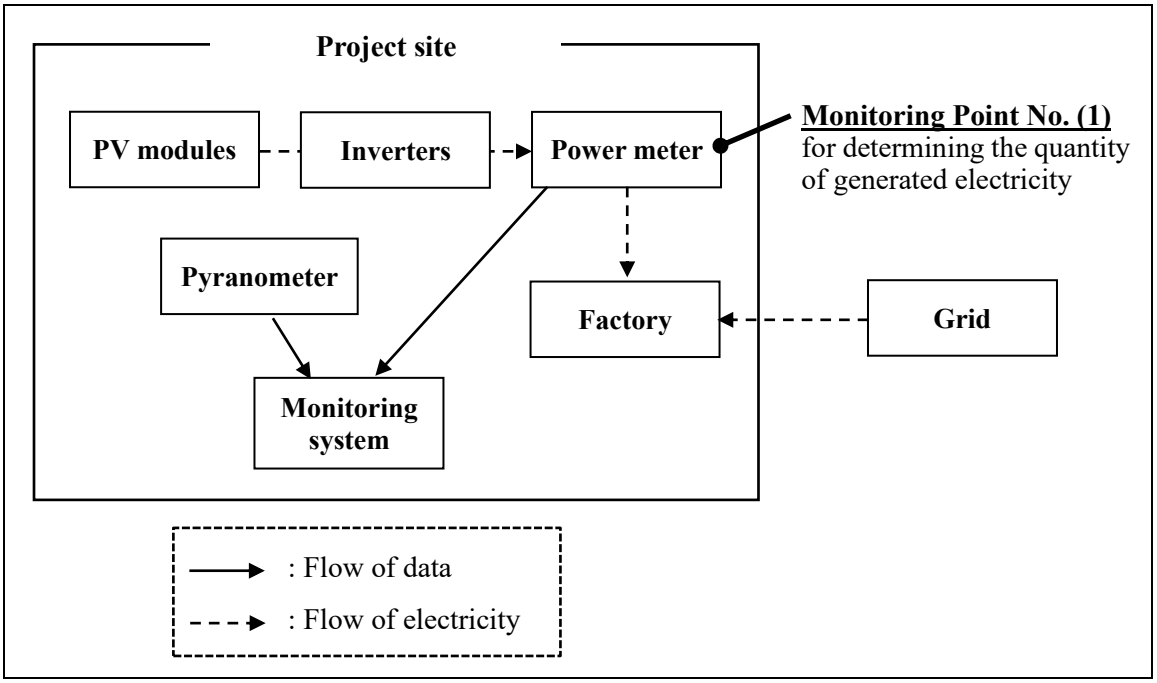
Eligibility criteria	Descriptions specified in the methodology	Project information
Criterion 1	The project installs solar PV system(s).	The proposed project installed a new solar PV system in the location stated in A.3.
Criterion 2	The solar PV system is connected to the internal power grid of the project site and/or to the grid for displacing grid electricity and/or captive electricity at the project site.	The solar PV system is connected to the internal power grid of the project site for displacing grid electricity at the project site.
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 site 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.	A power meter is installed at the project site to monitor output power of the solar PV system. A pyranometer is installed at the project site 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 system	N/A

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



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	584.3	0.0	584
2023	1,159.1	0.0	1,159
2024	1,159.1	0.0	1,159
2025	1,159.1	0.0	1,159
2026	1,159.1	0.0	1,159
2027	1,159.1	0.0	1,159
2028	1,159.1	0.0	1,159
2029	1,159.1	0.0	1,159
2030	1,159.1	0.0	1,159
Total (tCO_2eq)			9,856

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 a local stakeholder consultation meeting in order to take due steps to engage stakeholders and solicit comments for the proposed project. Details of the meeting is summarized as follows:

Date and Time: 21st February 2025, 11:00-11:30 (Thailand Time) / 13:00-13:30 (Japan Time)
Venue: Online by Teams
Agenda:

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

Invited stakeholders:

- Sony Device Technology (Thailand) Co., Ltd.
- 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
Sony Device Technology (Thailand) Co., Ltd.	Sony will continue to contribute where possible and work towards the success of the project. Are there any specific actions that Sony needs to take from now on?	It was explained that the project will primarily be carried out by the project participants. No further action is needed.
TGO	What is the frequency of electric meter calibration?	The planned frequency was 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