JCM Project Design Document Form

A. Project description

A.1. Title of the JCM project

Introduction of 2MW Rooftop Solar Power System to University

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 2MW rooftop solar power system to Rajabhat Maha Sarakham University. The project is implemented by VNET Power Co., Ltd., VNET SG Power Co., Ltd., and SHIZUOKA GAS 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 6,147tCO_2eq by the end of 2030. The actual emission reductions may vary depending on the actual operation of the university and the sun radiation of the project location**.**

A.3. Location of project, including coordinates

Country	The Kingdom of Thailand
Region/State/Province etc.:	Maha Sarakham Province
City/Town/Community etc:	80 Nakhon Sawan Road, Talat, Mueang Maha Sarakham District
Latitude, longitude	N 16° 12' 01" and E 103° 16' 18"

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A.4. Name of project participants

The Kingdom of Thailand	VNET Power Co., Ltd. VNET SG Power Co., Ltd.
Japan	SHIZUOKA GAS CO., LTD.

A.5. Duration

Starting date of project operation	9/8/2023
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

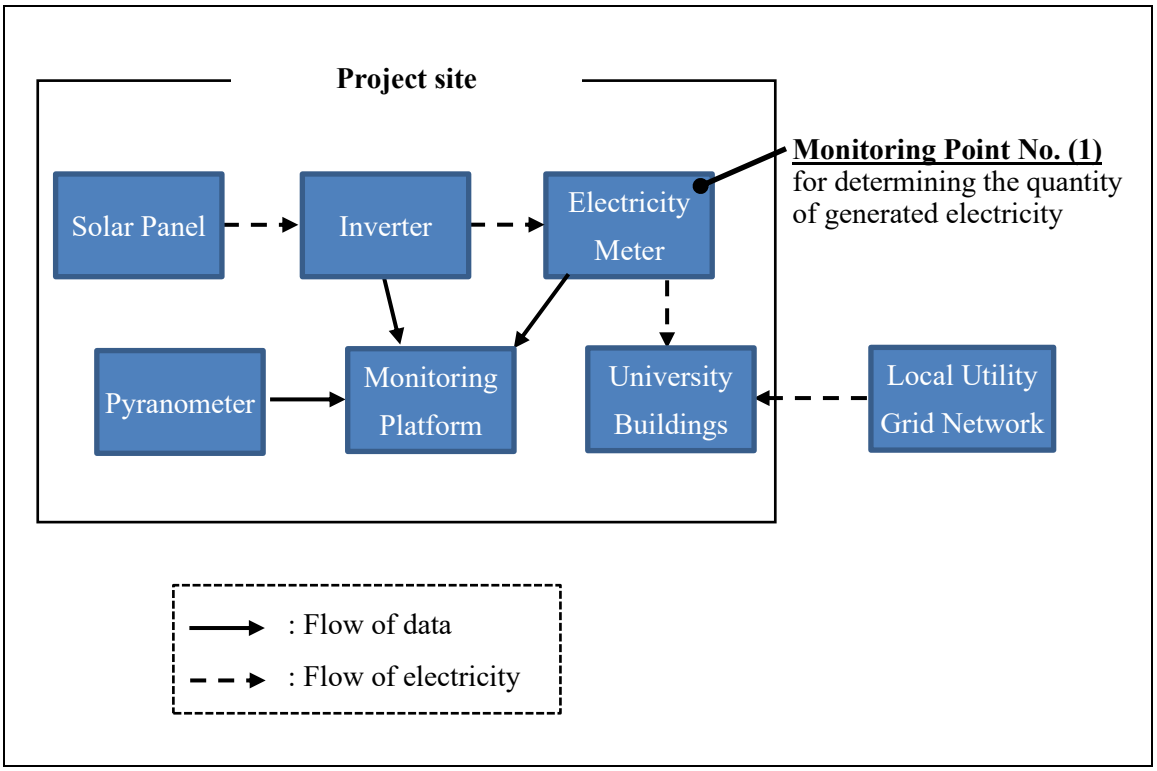
Eligibility criteria	Descriptions specified in the methodology	Project information
Criterion 1	The project installs solar PV system(s).	The proposed project installed a new solar PV system in the location stated in A.3.
Criterion 2	The solar PV system is connected to the internal power grid of the project 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.	Power meters are installed at the project site to monitor output power of the solar PV system. Pyranometers are 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	-	-	-
2023	330.4	0.0	330
2024	831.8	0.0	831
2025	831.8	0.0	831
2026	831.8	0.0	831
2027	831.8	0.0	831
2028	831.8	0.0	831
2029	831.8	0.0	831
2030	831.8	0.0	831
Total (tCO_2eq)			6,147

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, 10:00-11:00 (Thailand Time) / 12:00-13:00 (Japan Time)
Venue: Rajabhat Maha Sarakham University and Online by Teams
Agenda:

1. Opening remarks
2. Introduction of participants
3. Overview of the project and technology introduced
4. Questions and answers
5. Closing remarks

Invited stakeholders:

- Rajabhat Maha Sarakham University (RMU)
- 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
RMU	Why is the selling price to RMU lower than the purchase price from the local utility grid network?	It was explained that the JCM grant contributed to the discount of the selling price. No further action is needed.
RMU	How was the CO2 emission reduction calculated?	The calculation method was explained. No further action is needed.
TGO	According to the presentation, there are Meter 2, 3, and 4 in this project. Where is Meter 1 located, and what is its role in this project?	It was explained that Meter 1 is used by another company and is not involved in this project. No further action is needed.
TGO	How often will you clean the Solar PV modules?	The frequency of cleaning work was explained. No further action is needed.
TGO	How will you recycle the Solar PV system?	The recycling policy was explained. No further action is needed.
TGO	Which version of AM001 methodology is applied in this project? And is the electricity generated by the solar PV system measured by the electricity meter or the inverters, or only by the electricity meter?	The methodology version applied to the project was explained. In addition, the monitoring method adopted in the project 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	20/11/2025	First edition