JCM Project Design Document Form

A. Project description

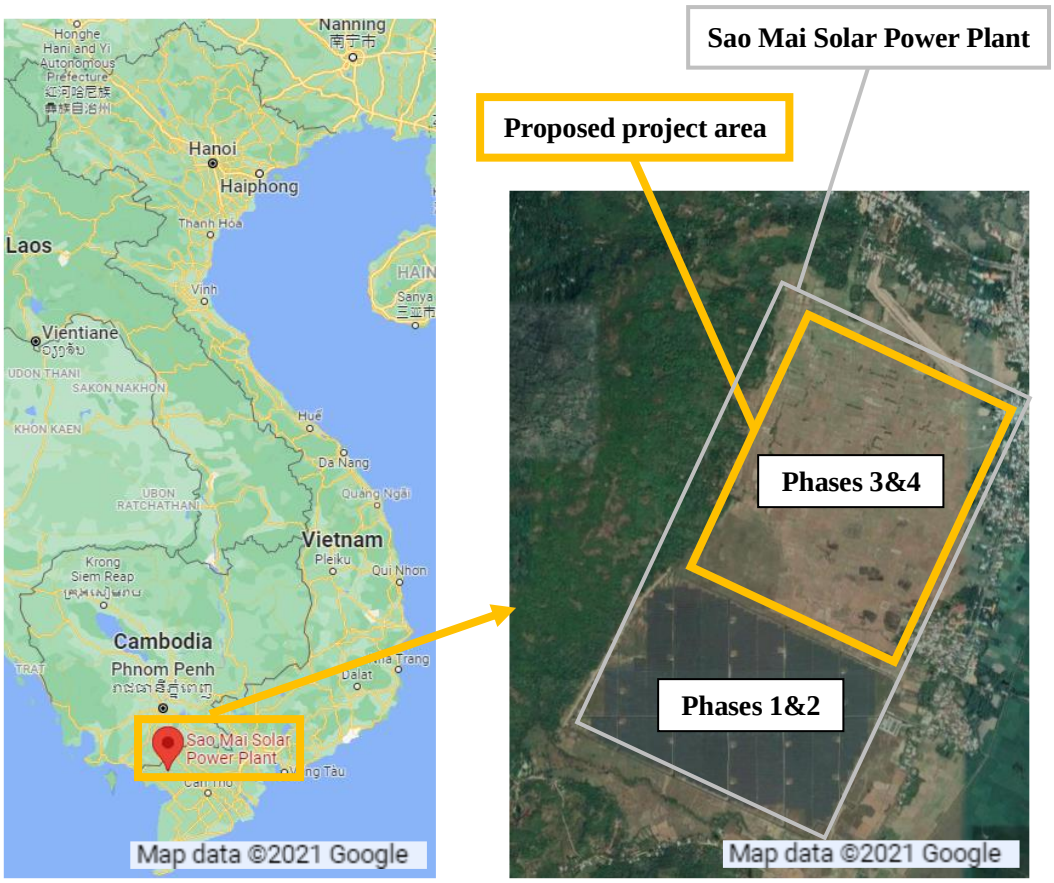
A.1. Title of the JCM project

106MW Solar Power Project in An Giang Province

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

The proposed JCM project aims to reduce CO_2 emissions by installing a large-scale solar power plant with the generating capacity of 106MW in An Giang Province, Viet Nam. The electricity generated by the project is supplied to the national grid of Viet Nam and displaces electricity generated by fossil-fuel based power plants, thus contributing to reduction of greenhouse gas emissions.

The proposed project is a part of Sao Mai Solar Power Plant Project, which is made up of four phases, and covers the Phases 3 and 4 of it as shown in the map below. The electricity generation in each of the Phases is monitored individually.



Location of the proposed project

The expected emission reduction that would be achieved by the proposed project is 897,854 tonnes CO_2 until December 2037. Actual emission reduction may vary depending on the actual operation of the power plant and the sun radiation in the area throughout the year.

A.3. Location of project, including coordinates

Country	The Socialist Republic of Viet Nam
Region/State/Province etc.:	An Giang Province
City/Town/Community etc:	An Hao Commune, Tinh Bien District
Latitude, longitude	N 10° 28’ 48.0” and E 105° 01’ 12.0”

A.4. Name of project participants

The Socialist Republic of Viet Nam	Sao Mai Group Corporation
Japan	Kanematsu KGK Corp.

A.5. Duration

Starting date of project operation	15/12/2020
Expected operational lifetime of project	17 years

A.6. Contribution from Japan

The proposed project was partially supported by the Ministry of the Environment, Japan (MOEJ) through the Financing Programme for JCM Model projects, which provided financial support of less than half of the initial investment for the projects in order to acquire JCM credits. Further, the technology of large-scale solar power plants is introduced with support from the Japanese project participant and implementation of the proposed project promotes technology transfer of low carbon power generation technologies in Viet Nam.

B. Application of an approved methodology(ies)

B.1. Selection of methodology(ies)

Selected approved methodology No.	JCM_VN_AM007
Version number	01.0

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

Eligibility criteria	Descriptions specified in the methodology	Project information

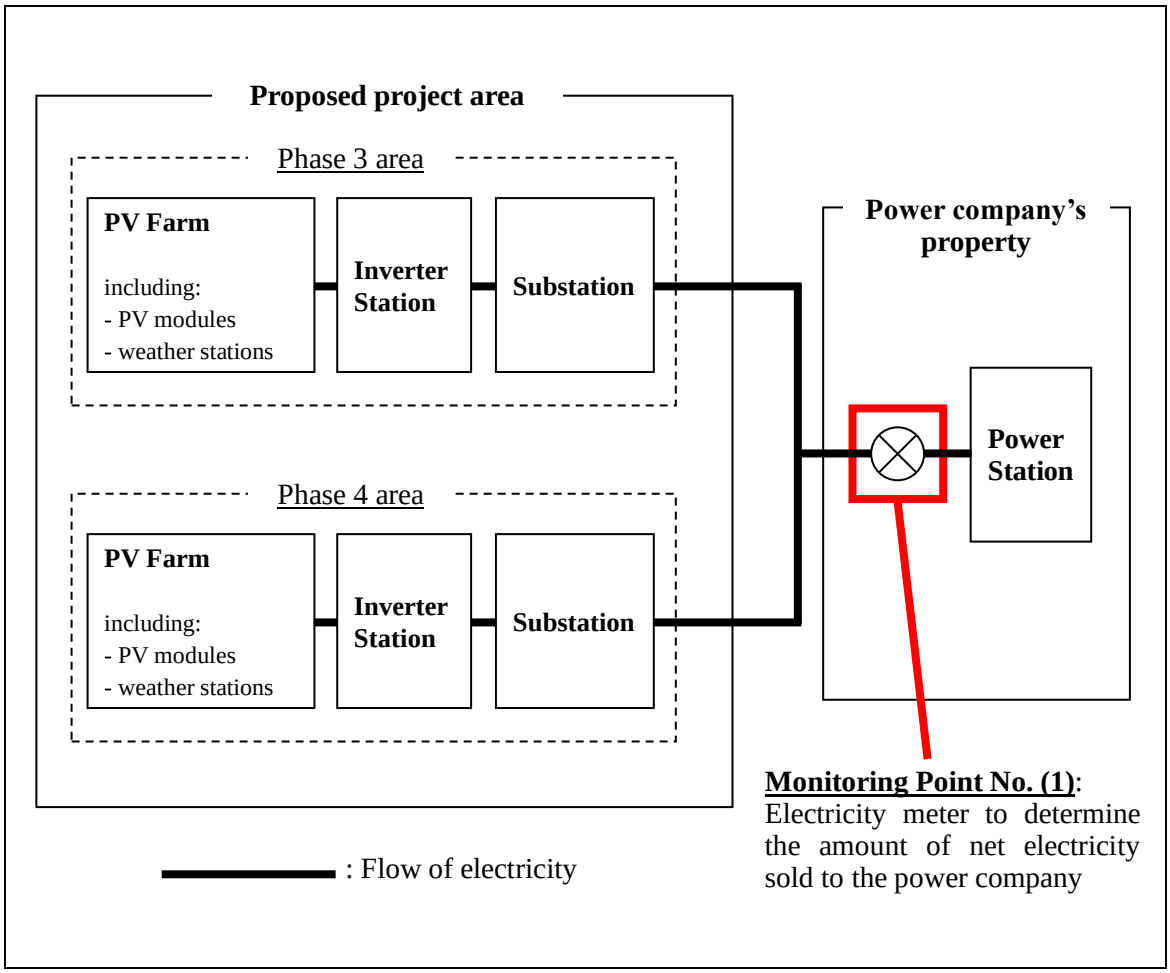
Criterion 1	The project newly installs solar PV system(s).	The proposed project installs a new solar PV system.
Criterion 2	The PV modules are certified for design qualifications (IEC 61215, IEC 61646 or IEC 62108) and safety qualification (IEC 61730-1 and IEC 61730-2).	The PV modules installed in the proposed project are certified for design qualifications (IEC 61215) and safety qualification (IEC 61730-1 and IEC 61730-2).
Criterion 3	The equipment to monitor output power of the solar PV system(s) and irradiance is installed at the project site.	The equipment to monitor output power of the solar PV system and irradiance is installed at the proposed project site.

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 and/or captive electricity	CO_2
Project emissions	
Emission sources	GHG type
Generation of electricity from solar PV system(s)	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_{2e})	Estimated Project Emissions (tCO_{2e})	Estimated Emission Reductions (tCO_{2e})
2013	-	-	-
2014	-	-	-
2015	-	-	-
2016	-	-	-
2017	-	-	-
2018	-	-	-
2019	-	-	-
2020	2,459.9	0	2,459
2021	52,815.1	0	52,815
2022	52,815.1	0	52,815
2023	52,815.1	0	52,815

2024	52,815.1	0	52,815
2025	52,815.1	0	52,815
2026	52,815.1	0	52,815
2027	52,815.1	0	52,815
2028	52,815.1	0	52,815
2029	52,815.1	0	52,815
2030	52,815.1	0	52,815
2031	52,815.1	0	52,815
2032	52,815.1	0	52,815
2033	52,815.1	0	52,815
2034	52,815.1	0	52,815
2035	52,815.1	0	52,815
2036	52,815.1	0	52,815
2037	50,355.2	0	50,355
Total (tCO_{2e})	897,856.7	0	897,854

D. Environmental impact assessment	
Legal requirement of environmental impact assessment for the proposed project	YES

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 October 2021, 13:30-15:00 (Vietnam time) / 15:30-17:00 (Japan time)
Venue: Headquarters of Sao Mai Group Corporation and Online by Microsoft Teams

The following three entities were identified and invited as stakeholders, and all attended the meeting with the following agenda.

Stakeholders
- Office of the People's Committee of An Giang Province
- Department of Natural Resources and Environment of An Giang Province
- Power Company of An Giang Province

Agenda
1. Opening remarks
2. Introduction of participants
3. Overview of the project
4. Concepts of JCM and MRV methodology for the project
5. Q&A
6. Closing remarks

E.2. Summary of comments received and their consideration

Stakeholders	Comments received	Consideration of comments received
Department of Natural Resources and Environment of An Giang Province	This JCM project contributes to CO_2 reductions in Vietnam and we highly appreciate it. We hope you will be able to complete the project registration process as scheduled.	No action is needed.
Office of the People's Committee of An Giang Province	Are the Phases 1 and 2 of the Sao Mai Solar Power Plant Project also JCM projects?	It was explained that the Phases 1 and 2 are not JCM projects. No further action is needed.
Department of Natural Resources and Environment of An Giang Province	Is there any obstacle in developing a JCM project?	Necessary conditions for JCM project development were explained. No further action is needed.
Department of Natural Resources and Environment of An Giang Province	The duration of this project is 17 years, but how long is the lifetime of solar panels? How will the panels be treated when they are disposed of?	It was explained that the project duration is covered by the term of the manufacturer’s product guarantee and that solar panels will be disposed of in accordance with the local rules. No further action is needed.

F. References
Approval letter by the Ministry of Natural Resources and Environment, No.1659/QD-BTNMT, dated 24/5/2018, for the environmental impact assessment mentioned in Section D.

Annex
N/A

Revision history of PDD		
Version	Date	Contents revised
01.0	25/10/2021	First edition