JCM Project Design Document Form

A. Project description

A.1. Title of the JCM project

3MW Solar Power Project Utilizing Farmland in Valparaiso Region

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

The proposed project aims to introduce (i) a 3MW solar power plant at farmland in Valparaiso Region and (ii) a 20kW agrivoltaic pilot facility at an experimental farm in Maule Region for the purpose of reducing greenhouse gas (GHG) emissions and promoting renewable energy and agrivoltaics in Chile. Both of the solar photovoltaic systems are connected to the national grid and can replace a portion of the power generated from thermal power plants. *Agrivoltaics: Utilization of the same land area for both agriculture and solar photovoltaic electricity generation

A.3. Location of project, including coordinates

Country	The Republic of Chile
Region/State/Province etc.:	(i) Valparaiso Region (ii) Maule Region
City/Town/Community etc:	(i) San Antonio (ii) Villa Alegre, Linares
Latitude, longitude	(i) 33°38'19.9"S, 71°27'32.5"W (ii) 35°41'45.9"S, 71°40'59.8"W

A.4. Name of project participants

The Republic of Chile	Land and Sea SpA Farmdo Energy Chile SpA
Japan	FARMLAND Co., Ltd.

A.5. Duration

Starting date of project operation	23/11/2023
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 through the Financing Programme 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. Implementation of the proposed project also contributes to the promotion of renewable energy in Chile.

B. Application of an approved methodology(ies)

B.1. Selection of methodology(ies)

Selected approved methodology No.	JCM_CL_AM001
Version number	Ver2.0

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).	Solar PV systems of 3MW and 20kW are newly installed for the project sites (i) and (ii) respectively.
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 at the project sites (i) and (ii) are certified for design qualifications (IEC 61215) and safety qualification (IEC 61730-1 and IEC 61730-2).
Criterion 3	The equipment used for monitoring output power of the solar PV system(s) and irradiance is installed at the project site.	The equipment used for monitoring output power of the solar PV systems and irradiance has been installed at each of the project sites (i) and (ii).

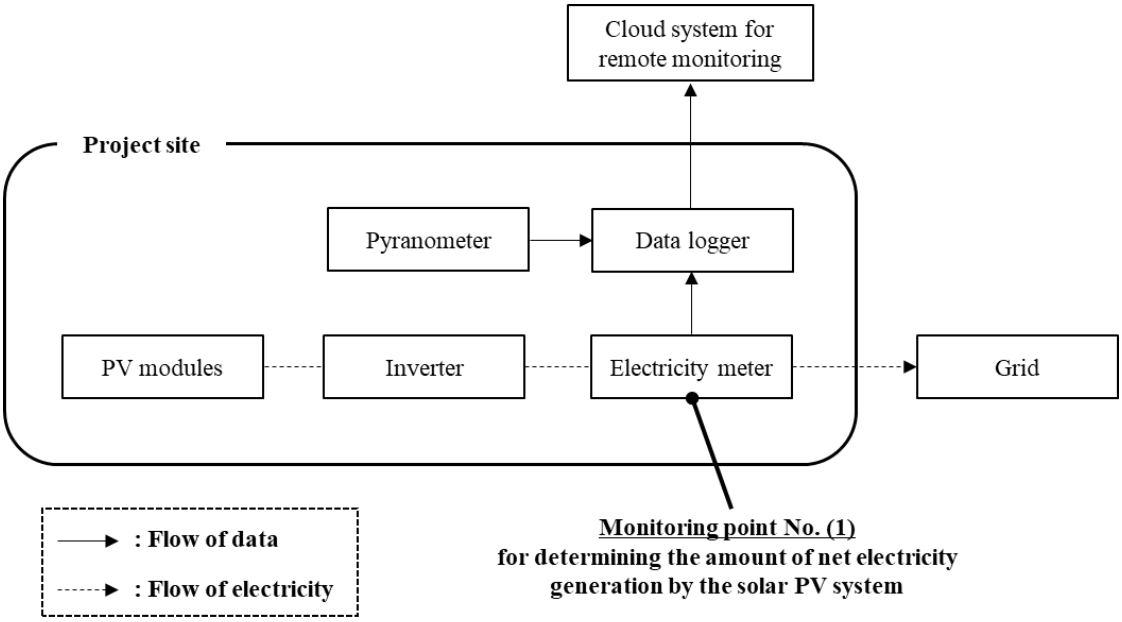
C. Calculation of emission reductions

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(s)	N/A

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

The same structure is used for the project sites (i) and (ii), which is shown below.



C.3. Estimated emissions reductions in each year

Year	Estimated Reference emissions (tCO_2e)	Estimated Project Emissions (tCO_2e)	Estimated Emission Reductions (tCO_2e)
2023	256.0	0	256
2024	2,396.1	0	2,396
2025	2,396.1	0	2,396
2026	2,396.1	0	2,396
2027	2,396.1	0	2,396
2028	2,396.1	0	2,396
2029	2,396.1	0	2,396
2030	2,396.1	0	2,396
Total (tCO_2e)			17,028

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: 13th December 2022, 8:30-9:45 (Chile time) / 20:30-21:45 (Japan time)
Venue: Online by Zoom
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

The following entities were identified and invited as stakeholders. Those who were not able to participate (shown below with '*') were requested to send comments through later follow-up communication, but no additional comments were received.

Stakeholders

- Ministry of Energy
- Ministry of Agriculture *
- Ministry of Environment *
- Ministry of Foreign Affairs *
- National Commission of Energy *
- National Electricity Coordinator *
- Agricultural Research Institute (INIA)
- Compañía General de Electricidad Industrial S.A. (Power distribution company)
- Owner of Project Site
- Gestión de la Información en la Industria Eléctrica (Asset management company) *
- Sherpas Consulting (Consulting company)
- Ingeniería y Construcción Peñablanca S.P.A. (EPC company for the project site (i))
- Energías Eficientes (EPC company for the project site (ii)) *
- Consultoría y Asesoría Micor Limitada (Design and construction supervision company)
- Ovalle Consejeros Legales (Lawyer's office)

- Nexxo Consultores (Accountant's office) *

E.2. Summary of comments received and their consideration

Stakeholders	Comments received	Consideration of comments received
Ovalle Consejeros Legales (Lawyer's office)	Is there any trouble in the development process of this project due to COVID19?	Some trouble on logistics faced by the project participants was explained. No further action is needed.
Agricultural Research Institute (INIA)	The 20kW agrivoltaic pilot facility in Maule is very important for the region. How is the experience of agrovoltaics in Japan?	The Japanese project participant's experience and the relevant situation in Japan were shared. No further action is needed.
Ingeniería y Construcción Peñablanca S.P.A. (EPC company for the project site (i))	How can Chilean companies apply for JCM?	The application rules of JCM were explained. No further action is needed.
Ministry of Energy	What are the timeline and steps in applying to JCM and receiving subsidy?	The actual timeline and steps the project participants experienced were explained. No further action is needed.

F. References

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

Annex

Revision history of PDD		
Version	Date	Contents revised
01.0	09/11/2023	First edition
02.0	12/03/2024 17/08/2024	Second edition Initial registration by the Joint Committee through electronic decision