

## JCM Validation Report Form

### A. Summary of validation

#### A.1. General Information

Title of the project	3MW Solar Power Project Utilizing Farmland in Valparaiso Region
Reference number	CL003
Third-party entity (TPE)	Japan Quality Assurance Organization (JQA) (TPE-CL-002)
Project participant contracting the TPE	FARMLAND Co., Ltd.
Date of completion of this report	14/03/2024

#### A.2 Conclusion of validation

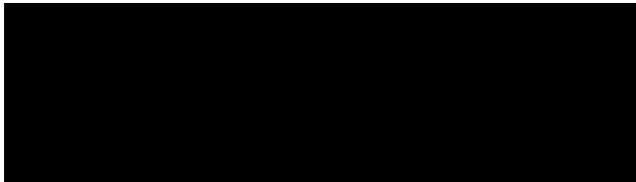
Overall validation opinion	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative
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#### A.3. Overview of final validation conclusion

*Only when all of the checkboxes are checked, overall validation opinion is positive.*

Item	Validation requirements	No CAR or CL remaining
Project design document form	The TPE determines whether the PDD was completed using the latest version of the PDD forms appropriate to the type of project and drafted in line with the Guidelines for Developing the Joint Crediting Mechanism (JCM) Project Design Document, Monitoring Plan and Monitoring Report.	<input checked="" type="checkbox"/>
Project description	The description of the proposed JCM project in the PDD is accurate, complete, and provides comprehension of the proposed JCM project.	<input checked="" type="checkbox"/>
Application of approved JCM methodology (ies)	The project is eligible for applying applied methodology and that the applied version is valid at the time of submission of the proposed JCM project for validation.	<input checked="" type="checkbox"/>
Emission sources and calculation of emission reductions	All relevant GHG emission sources covered in the methodology are addressed for the purpose of calculating project emissions and reference emissions for the proposed JCM project.	<input checked="" type="checkbox"/>
	The values for project specific parameters to be fixed <i>ex ante</i> listed in the Monitoring Plan Sheet are appropriate, if applicable.	<input checked="" type="checkbox"/>
Environmental impact assessment	The project participants conducted an environmental impact assessment, if required by the Republic of Chile, in line with Chilean procedures.	<input checked="" type="checkbox"/>
Local stakeholder	The project participants have completed a local stakeholder consultation process and that due steps were taken to engage	<input checked="" type="checkbox"/>

Item	Validation requirements	No CAR or CL remaining
consultation	stakeholders and solicit comments for the proposed project.	
Monitoring	The description of the Monitoring Plan (Monitoring Plan Sheet and Monitoring Structure Sheet) is based on the approved methodology and/or Guidelines for Developing the Joint Crediting Mechanism (JCM) Project Design Document, Monitoring Plan, and Monitoring Report. The monitoring points for measurement are appropriate, as well as whether the types of equipment to be installed are appropriate if necessary.	☒
Public inputs	All inputs on the PDD of the proposed JCM project submitted in line with the Project Cycle Procedure are taken into due account by the project participants.	☒
Modalities of communications	The corporate identity of all project participants and a focal point, as well as the personal identities, including specimen signatures and employment status, of their authorized signatories are included in the MoC.	☒
	The MoC has been correctly completed and duly authorized.	☒
Avoidance of double registration	The proposed JCM project is not registered under other international climate mitigation mechanisms.	☒
Start of operation	The start of the operating date of the proposed JCM project does not predate January 1, 2013.	☒

Authorised signatory:	Mr. <input checked="" type="checkbox"/>	Ms. <input type="checkbox"/>
Last name: Asada	First name: Sumio	
Title: Senior Executive		
Specimen signature:	Date: 14/03/2024	
		

## B. Validation team and other experts

	Name	Company	Function*	Scheme competence*	Technical competence*	On-site visit
Mr. <input checked="" type="checkbox"/> Ms. <input type="checkbox"/>	Hiroshi Motokawa	JQA	Team Leader	<input checked="" type="checkbox"/>	Authorized	<input checked="" type="checkbox"/>
Mr. <input type="checkbox"/> Ms. <input checked="" type="checkbox"/>	Tamami Nagayama	JQA	Team Member	<input checked="" type="checkbox"/>	-	<input checked="" type="checkbox"/>
Mr. <input type="checkbox"/> Ms. <input checked="" type="checkbox"/>	Sachiko Hashizume	JQA	Internal Reviewer	<input checked="" type="checkbox"/>	Authorized	<input type="checkbox"/>
Mr. <input type="checkbox"/> Ms. <input type="checkbox"/>				<input type="checkbox"/>		<input type="checkbox"/>

Please specify the following for each item.

- \* *Function: Indicate the role of the personnel in the validation activity such as team leader, team member, technical expert, or internal reviewer.*
- \* *Scheme competence: Check the boxes if the personnel have sufficient knowledge on the JCM.*
- \* *Technical competence: Indicate if the personnel have sufficient technical competence related to the project under validation.*

## C. Means of validation, findings, and conclusion based on reporting requirements

### C.1. Project design document form

#### <Means of validation>

In this report, the validation team (hereinafter, the team) validates two versions of PDD, the version 01.0 submitted for validation (hereinafter, the PDD), and the version 02.0 revised during the validation and dated 12/03/2024 (hereinafter, the revised PDD).

Regarding the documents referred to in this report, the same applies to the Monitoring Plan Sheet (i.e., the MPS and the revised MPS), Monitoring Structure Sheet (the MSS and the revised MSS) and the Modalities of Communication (the MoC).

By reviewing the PDD, it is checked and confirmed that the PDD is completed using the latest version of the PDD form (JCM\_CL\_F\_PDD\_ver02.0) appropriate to the type of project and drafted in line with JCM Guidelines for Developing PDD and MR, JCM\_CL\_GL\_PDD\_MR\_ver02.0 (hereinafter, the guidelines).

#### <Findings>

*Please state if CARs, CLs, or FARs are raised, and how they are resolved.*

No outstanding issue was raised.

#### <Conclusion based on reporting requirements>

*Please state conclusion based on reporting requirements.*

The team concludes that the PDD is completed using the valid form and drafted in line with

the guidelines.

## C.2. Project description

### <Means of validation>

The proposed JCM project is “3MW Solar Power Project Utilizing Farmland in Valparaiso Region” (hereinafter, the project). The project aims to reduce CO2 emissions and to promote renewable energy and agrivoltaics in Chile by introducing (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.

The starting date of project operation is 23/11/2023 and the expected operational lifetime of the project is 17 years.

The team conducted the following process to validate the accuracy and completeness of the project description;

- 1) Desk review the documents and photos and identification of points to check during the on-site visit,
- 2) On-site visit at the project sites during the period from 10/01/2024 to 15/01/2024, including the interviews with the PPs and stakeholders,
- 3) CARs/CLs identification and solution.

Issues were raised.

### <Findings>

*Please state if CARs, CLs, or FARs are raised, and how they are resolved.*

< CAR01 >

The team confirms that the descriptions in A.3 include the coordinates of the two project sites. However, each of them doesn't indicate the correct location of the project site.

< PP response to this issue >

The coordinates of the two sites were corrected in A.3 as follows:

(i) 33°38'19.9"S, 71°27'32.5"W

(ii) 35°41'45.9"S, 71°40'59.8"W

< Assessment of PP response >

The team confirmed that the PPs corrected the coordinates in the revised PDD appropriately.

This issue was therefore closed.

### <Conclusion based on reporting requirements>

*Please state conclusion based on reporting requirements.*

The team concludes that the project description in the revised PDD is accurate and complete.

## C.3. Application of approved methodology(ies)

### <Means of validation>

The project applies the approved methodology, CL\_AM001 Ver2.0, “Installation of Solar PV System” (hereinafter, the methodology).

The team confirms that;

- 1) The applied version of the methodology is valid, by checking the JCM website at the time of submitting the project for validation,
- 2) The methodology is correctly quoted and applied, by comparing the PDD with the actual text of the methodology,
- 3) The project meets each of the eligibility criterion of the methodology, by reviewing the relevant documentation, including the documentation referenced in the PDD, and by reviewing comparable information as deemed necessary.

The validation for each eligibility requirement is given below.

Criterion 1: The project newly installs solar PV system(s).

The PDD states as project information for this criterion in the section of B.2. “Solar PV systems of 3MW and 20kW are newly installed for the project sites (i) and (ii) respectively”.

By reviewing the photos taken before/after the project construction, conducting the on-site visit and interviewing with the PPs/stakeholders, the team confirms that the project newly installs solar PV system(s).

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 PDD states in B.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).”

By reviewing the certificates issued by Tuv Rheinland (No. PV50456702, dated 08/25/2020) and Tuv Sud (No. Z2 086674 0010 Rev. 02, dated 06/07/2021, valid until 04/07/2026), it is confirmed that installed PV modules are certified for design qualifications (IEC 61215, IEC 61646 or IEC 62108) 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 PDD states in B.2. “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)”.

By the on-site visit, the team confirms that the equipment, i.e. electricity meter and pyranometer, is installed at each project site.

The team therefore concludes that the project meets all of the above criteria.

#### <Findings>

*Please state if CARs, CLs, or FARs are raised, and how they are resolved.*

No outstanding issue was raised.

**<Conclusion based on reporting requirements>**

*Please state conclusion based on reporting requirements.*

The team confirms that the project meets all eligibility criteria of the applicable version of the methodology in a valid status at the time the project is submitted for validation. Therefore, the team concludes that the project is eligible for applying the methodology.

## C.4. Emission sources and calculation of emission reductions

**<Means of validation>**

The MPS was prepared and submitted for validation by using JCM\_CL\_AM001\_Ver02.0. The team confirms that the MPS is not altered, and its required fields are appropriately filled in line with the methodology and the guidelines.

By reviewing the single line diagrams, the layout drawing and other relevant documents of the project sites and by conducting the on-site visit, the team confirms that

- The solar PV system(s) of the project is connected to a regional grid directly without any captive power generator,
- All the emission sources covered by the methodology are included and
- There are no other emission sources at the project sites to be considered in the project ER calculation.

The methodology states the parameter, EFER,i, is set as per the connected regional grid, i.e. National System, Aysén System, Magallanes System.

By reviewing the project site locations and regional map of Chile, and by interviewing with the PPs, the team confirms that

- Both project sites are included in the area of National System and
- Accordingly, EFRE,i is set at 0.404 tCO<sub>2</sub>/MWh in line with the methodology.

The value of  $\sum EGi,p$ , to be fixed ex post, is set at 5,930.85 MWh/p in the MPS(input) for ER estimate. By reviewing its calculation process and relevant documents, the team confirms that

- This value is derived from the estimation using solar power generation simulation software and
- The simulation is properly performed by setting many parameters and attempting to make realistic estimates.

**<Findings>**

*Please state if CARs, CLs, or FARs are raised, and how they are resolved.*

No outstanding issue was raised.

**<Conclusion based on reporting requirements>**

*Please state conclusion based on reporting requirements.*

The team reaches the conclusion that the selected emission sources and GHG types are justified

for the project. The team assesses the estimated values for project specific parameters in the MPS including intermediate processes to derive the values. As a result, the values are considered reasonable in the context of the project.

#### C.5. Environmental impact assessment

##### <Means of validation>

"Decree 40, Approves Regulations for the Environmental Impact Assessment System (Publication Date: 12/08/2013), Ministry of the Environment" indicates that the project is NOT subject to an environmental impact assessment.

In addition, by interviewing with the PPs and reviewing the approval letter from the environment authority, the team confirms that what is stated in the above law is directly applicable to the project.

##### <Findings>

*Please state if CARs, CLs, or FARs are raised, and how they are resolved.*

No outstanding issue was raised.

##### <Conclusion based on reporting requirements>

*Please state conclusion based on reporting requirements.*

The team concluded that the PP did not conduct the EIA as it was not required and that it followed the procedures required by the Republic of Chile.

#### C.6. Local stakeholder consultation

##### <Means of validation>

By reviewing the relevant documents and interviews with the PPs and stakeholders, the team confirms that the date, time, venue, participants, summary of the comments received at the Local stakeholder consultation (hereinafter, LSC), and due account of all comments received are consistent with those provided in the PDD.

##### <Findings>

*Please state if CARs, CLs, or FARs are raised, and how they are resolved.*

##### <CAR02>

The PP lists all stakeholders invited by the PP in the PDD, whether or not they attended the LSC. The PP also invited stakeholders who did not attend the LSC to comment after the LSC.

The team requests the PPs to address the following;

- 1) Stakeholders who actually attended the LSC are to be indicated in the PDD,
- 2) The attendee list provided to the team as one of the pieces of evidence for the LSC includes "Regional Ministerial Secretariat (SEREMI) of Valparaiso". However, this organization does not appear in the PDD,
- 3) Mr Felipe Ramirez of INIA, who was interviewed by the team as a participant in the LSC,

is not included in the attendee list.

< PP response to this issue >

Stakeholders attended to the LSC and those not attended were clarified in the PDD. Additionally, the list of attendees was corrected to include Mr. Felipe Ramirez. SEREMI was found to have been abolished after listing invitees. The list of invitees was modified to clarify the above-mentioned fact.

< Assessment of PP response >

The team confirms all points 1)-3) were addressed appropriately considering the team's comments.

This issue is therefore closed.

**<Conclusion based on reporting requirements>**

*Please state conclusion based on reporting requirements.*

The team concludes that the LSC of the project has completed adequately and the process and information considered above are stated in the revised PDD.

#### C.7. Monitoring

**<Means of validation>**

By reviewing the specifications of installed electricity meters and conducting the on-site visit, the team confirms the following specifications of the electricity meters:

< (i) Valparaiso Region >

- Model: METSEION7400
- Serial No. MR-2010C784-02
- Accuracy class: Class 0.2

< (ii) Maule Region >

- Model: DTSD1352-C
- Serial No. 122123300890124
- Accuracy class: 0.5S.

By reviewing the calibration certificates of electricity meters installed at the project sites (i) and (ii), the team confirms that those calibrations conducted before/after the shipping show that the instrumental errors stay within the required level of accuracy.

By the interview with the PPs and on-site visit, the team confirms that the PPs check the data daily recorded by the cloud system and prepare the monitoring report continuously, and that the PPs review the situation and give the necessary instructions to the contractor of the project equipment when the PPs find any problem with the monitoring equipment or data.

Considering the above-mentioned statement, the team confirms the means of implementation

of the monitoring plan, including the data management and quality assurance and quality control procedures, are sufficient for ex post reporting and verification, in line with the methodology.

By reviewing the MPS and relevant documents, the team confirms that;

- 1) All the parameters are listed in the MPS appropriately based on the methodology,
- 2) Monitoring information described in the MPS(input) complies with the requirements of the methodology,
- 3) Monitoring point and the type of monitoring equipment, i.e., electricity meter, are illustrated in the figure of C.2.

The Monitoring Structure Sheet (MSS) stated the following in the MPS:

- Project Manager (Farmland),

Project manager is responsible for project planning, implementation, monitoring results and reporting;

- Project supervisor (Farmland),

Farmland 1) checks the data recorded via remote monitoring system and 2) gives instructions to the contractor for operation and maintenance if there is a problem with the monitoring equipment or data;

- Local project supervisor (Farmdo Energy Chile);

Farmdo Energy Chile 1) checks the data recorded via remote monitoring system and 2) gives instructions to the contractor for operation and maintenance if there is a problem with the monitoring equipment or data,

- Operator,

The contractor performs daily maintenance and responds to problems with the monitoring equipment or data.

Two issues were raised.

#### <Findings>

*Please state if CARs, CLs, or FARs are raised, and how they are resolved.*

< CAR03 >

By interviewing with "Local project supervisor" and "Operator", the team finds that;

- 1) Daily operation is not implemented by "Operator", it is implemented remotely through the cloud system by the supervisor,
- 2) The respective role of the local project supervisor and the project supervisor is not the same.

The PPs are requested to revise the MSS considering team's findings.

< PP response to this issue >

The MSS was revised considering the TPE's findings.

- Project manager [FARMLAND Co., Ltd.]

Project manager is responsible for project planning, implementation, monitoring result and reporting.

- Project supervisor [FARMLAND Co., Ltd.]

Project supervisor is responsible for 1) checking the data recorded through the cloud system for remote monitoring, 2) preparing monitoring report, and 3) giving instructions to the local project participants for operation and maintenance if there is a problem with the monitoring equipment or data.

- Local project supervisor [Land and Sea SpA or Farmdo Energy Chile SpA]

Local project supervisor is responsible for maintaining equipment and emergency responding to equipment failure in cooperation with local contractors.

< Assessment of PP response >

The team confirms that

1) The role of the Project Supervisor has been revised accordingly, taking into account the team's comments,

2) The role of the local project manager has also been revised to take account of the team's comments, and it is distinct from that of the project supervisor.

Thus, this issue is closed.

< CL01 >

Regarding the measurement methods and procedures of EGi,p, the PPs describes as below.

The electricity meters are replaced or calibrated at an interval following the regulations in Chile as shown below:

- Frequency of calibration is every 7 years; and

- Frequency of replacement is every 15 years.

The first calibration dates are 30/10/2020 and 16/02/2023 for the project sites (i) and (ii), respectively.

By interviewing the PPs, it is confirmed that the PPs have not yet decided whether to replace or calibrate electricity meters, or both, although the MPS states in column (h) that the electricity meters are to be replaced or calibrated at an interval following the regulations in Chile.

The PPs are requested to clarify the following,

1) What is the current monitoring plan to be described in column (h) regarding the replacement/calibration,

2) How the calibration dates are relevant to the current monitoring plan to be described in column (h).

< PP response to this issue >

Description in (h) column was revised in the revised MPS to clarify that necessary steps will be taken following the regulations in Chile.

< Assessment of PP response >

The team confirmed that the descriptions was appropriately revised in the revised MPS considering the team's comments by focusing on what is relevant and what is clear at the moment.

Thus, this issue is closed.

**<Conclusion based on reporting requirements>**

*Please state conclusion based on reporting requirements.*

The team concludes that the monitoring plan described in the revised MPS complies with the requirements of the methodology and the guidelines, and that the PPs have ability to implement the described monitoring plan including feasibility of monitoring structure.

#### C.8. Modalities of Communication

**<Means of validation>**

By checking the version and information in the MoC, it is confirmed that the latest version of the form (JCM\_CL\_F\_MoC\_ver01.0) is used.

By directly reviewing personal business cards, relevant websites and specimen signatures, it is confirmed that all corporate and personal details described in the MoC are valid and accurate, and that the MoC is correctly completed and duly authorized.

**<Findings>**

*Please state if CARs, CLs, or FARs are raised, and how they are resolved.*

No outstanding issue was raised.

**<Conclusion based on reporting requirements>**

*Please state conclusion based on reporting requirements.*

The team concludes that the MoC complied with all relevant forms and requirements.

#### C.9. Avoidance of double registration

**<Means of validation>**

By reviewing the relevant websites (e.g. CDM website, Markit Environmental Registry, etc.) and the Section 7 of the MoC, the team confirms that the project is not registered under other international climate mitigation mechanisms.

**<Findings>**

*Please state if CARs, CLs, or FARs are raised, and how they are resolved.*

No outstanding issue was raised.

**<Conclusion based on reporting requirements>**

*Please state conclusion based on reporting requirements.*

The team concludes that the project is not registered under the other international climate mitigation mechanisms.

#### C.10. Start of operation

##### <Means of validation>

By reviewing the relevant documents provided by the PPs, it is confirmed that

- 1) The interconnection date agreed by a distribution company is 16/11/2023, i.e. the stating date of project operation stated in the PDD, which does not predate January 1, 2013,
- 2) The plant commenced its operation on 20/11/2023.

An issue was raised.

##### <Findings>

*Please state if CARs, CLs, or FARs are raised, and how they are resolved.*

< CL02 >

By reviewing the relevant documents for PMGD Malvilla and interviewing with the PPs, the team confirms the following:

- 1) FORMULARIO 20 VALIDACIÓN DE NOTIFICACIÓN CONEXIÓN PROYECTO PMGD Malvilla (FORM 20 NOTIFICATION VALIDATION CONNECTION PROJECT PMGD Malvilla) indicates interconnection date agreed by a distribution company is November 16th, 2023,
- 2) FORMULARIO21 PROTOCOLO DE PURESTA EN SERVICIO Malvilla (Form 21 Commissioning Protocol) indicates that the plant was commissioned on November 20th, 2023, in the presence of the signatories; the distribution company and PMGD installer, PMGD constructor, and PMGD operator Farmdo Energy Chile, SpA.

By reviewing the monitored data, the team confirms that the PPs have been monitoring full daily generation since 23rd November, prior to which only partial data was available.

Considering the above-mentioned confirmations, it is not clearly explained why the starting date of the project operation is set at November 16th, 2023.

< PP response to this issue >

The starting date of project operation was corrected as 23/11/2023 in A.5 of the PDD.

Following that, the amount of estimated emissions reductions in 2023 was corrected in C.3.

< Assessment of PP response >

The team confirms that the starting date of project operation was revised accordingly in the revised PDD, taking into account the team's comments.

The amount of estimated emission reductions in 2023 was revised accordingly in Section C.3 of the revised PDD to reflect the change in the start date.

This issue is therefore closed.

**<Conclusion based on reporting requirements>**

*Please state conclusion based on reporting requirements.*

The team confirms that the starting date of project operation in the PDD is determined appropriately.

## C.11. Other issues

**<Means of validation>**

No other issue was identified.

**<Findings>**

*Please state if CARs, CLs, or FARs are raised, and how they are resolved.*

Not applicable.

**<Conclusion based on reporting requirements>**

*Please state conclusion based on reporting requirements.*

Not applicable.

**D. Information on public inputs**

## D.1. Summary of public inputs

The PDD had been publicly available for 30 days between 14/11/2023 and 13/12/2023 to invite public inputs on the JCM website, <https://www.jcm.go.jp/cl-jp/projects/116>.

No public comments were received.

## D.2. Summary of how inputs received have been taken into account by the project participants

No action was required to be taken into due account by the project participants.

**E. List of interviewees and documents received**

## E.1. List of interviewees

- Mr. Yusuke Murota, General Manager, Overseas Business Department, Farmland Co., Ltd. / Director, Farmdo Energy Chile SpA
- Ms. Andrades Fernandez Laura, Manager, Overseas Business Department, Farmland Co., Ltd.
- Mr. Javier Lorenzo Campos Carcamo, CEO, Land and Sea SpA / CEO, Farmdo Energy Chile

## SpA

- Mr. Jorge Humberto Leal Saldivia, Co-founder, Land and Sea SpA
- Mr. Jaoquin Felipe Campos Silva, Project Manager, Land and Sea SpA
- Mr. Jorge Rios Julio, Developer, Land and Sea SpA
- Mr. Javier Dominguez, General Manager, AGRICOLA SANTA TERESA SpA
- Mr. Claudio Prieto, General Manager, AGRICOLA SANTA TERESA SpA
- Mr. Juan Carrasco, Electrico Penablanca
- Mr. Richard Oviedo Silva, Electrico Penablanca
- Ms. Dominga Astaburuaga, Journalist, INIA
- Mr. Felipe Ramirez Contreras Agronomo, INIA
- Mr. Gonzalo Lillo V., Administrator, INIA
- Ms. Kei Sakakibara, Manager, Ernst & Young ShinNihon LLC

## E.2. List of documents received

1. Project Design Document (JCM\_CL003\_PDD\_draft.pdf)
2. Project Design Document (JCM\_CL003\_PDD\_ver02.0.docx)
3. Monitoring Plan Sheet and Monitoring Structure Sheet (JCM\_CL003\_MPS\_draft.xlsx)
4. Monitoring Plan Sheet and Monitoring Structure Sheet (JCM\_CL003\_MPS\_ver02.0.xlsx)
5. Modalities of communications statement (JCM\_CL\_F\_MoC\_ver01.0\_09112023.pdf)
6. JCM Approved Methodology CL\_AM001 Ver2.0, Installation of Solar PV System (JCM\_CL\_AM001\_ver02.0.pdf)
7. Monitoring Plan Sheet and Monitoring Structure Sheet (JCM\_CL\_AM001\_ver02.0.xlsx)
8. JCM Glossary of Terms (JCM\_CL\_Glossary\_ver01.0.pdf)
9. JCM Guidelines for Developing Project Design Document and Monitoring Report (JCM\_CL\_GL\_PDD\_ver02.0.pdf)
10. JCM Project Cycle Procedure (JCM\_CL\_PCP\_ver02.0.pdf)
11. JCM Guidelines for Validation and Verification (JCM\_CL\_GL\_VV\_ver01.0.pdf)
12. JCM Modalities of Communication Statement Form (JCM\_CL\_F\_MoC\_ver01.0.pdf)
13. JCM Project Design Document Form (JCM\_CL\_F\_PDD\_ver02.0.docx)
14. JCM Validation Report Form (JCM\_CL\_F\_Val\_Rep\_ver01.0.docx)
15. JCM website of project information, <https://www.jcm.go.jp/cl-jp/projects/116>
16. JCM website of JCM\_CL\_AM001, <https://www.jcm.go.jp/cl-jp/methodologies/124>
17. Specifications or catalogues of the solar power systems including the solar modules, pyranometers, inverters, electricity meters, data logger and cloud systems for remote monitoring systems using data loggers/PC work stations installed at the project sites (i) and

- (ii), respectively.
18. Single line diagrams of the project sites indicating all the lines connected with the grid(s) and captive generator at the project sites (i) and (ii), respectively.
  19. Location of the project sites shown by Google Map.
  20. The Project Completion Report.
  21. Organization info of Land and Sea SpA.
  22. Organization info of Farmdo Energy Chile SpA.
  23. Organization info of FARMLAND Co., Ltd., <https://farmdo.com/en/company.html>
  24. Forms indicating the starting date of project operation; FORM 20 NOTIFICATION VALIDATION CONNECTION PROJECT PMGD Malvilla and Form 21 Commissioning Protocol for project site (i) Malvilla, Connection Protocol Form for project site (ii) Maule.
  25. Legal lifetime of the installed equipment under Japanese tax regulation, 17 years, <https://elaws.e-gov.go.jp/document?lawid=340M50000040015>
  26. Project site photos/drawing before and after the newly installation of solar PV systems of 3MW and 20kW for the project sites (i) and (ii), respectively.
  27. Models and types of the equipment installed at the project sites including the monitoring instruments.
  28. Certificates for design qualifications (IEC 61215, IEC 61646 or IEC 62108) and safety qualification (IEC 61730-1 and IEC 61730-2)
  29. Layout drawing and photos of the project equipment for the project sites (i) and (ii), respectively
  30. Environmental Relevance Report on San Antonio Malvilla Solar Park Project 2.99MW and Documents indicating the decision of environmental impact assessment according to national or local regulations in Chile by Environmental Assessment Service, Valparaiso Region.
  31. LSC (Local Stakeholder Consultation) documents including invitation mail, presentation materials, minutes, and list of attendance.
  32. Monthly electricity generation calculation sheet indicating data source of the value,  $\Sigma EG_i$ , 5930.85 MWh/p in the MPS(input).
  33. Regulations in Chile that determine the frequency of calibration and replacement of electricity meters.
  34. Calibration certificates of electricity meters installed at the project sites (i) and (ii), respectively.
  35. Copies of Business cards and signatures of the personnel shown in the MoC.

**Annex Certificates or curricula vitae of TPE’s validation team members, technical experts and internal technical reviewers**

*Please attach certificates or curricula vitae of TPE’s validation team members, technical experts and internal technical reviewers.*

**Statement of competence**



Name: Mr. Hiroshi Motokawa  
 Qualified and authorized by Japan Quality Assurance Organization.

Function	Date of qualification
Validator	2014/12/22
Verifier	2014/12/22
Team leader	2014/12/22

Technical area within sectoral scopes	Date of qualification
TA 1.1. Thermal energy generation	2014/12/22
TA 1.2. Renewables	2014/12/22
TA 3.1. Energy demand	2014/12/22
TA 4.1. Cement and lime production	2014/12/22
TA 5.1. Chemical industry	-
TA 10.1. Fugitive emissions from oil and gas	-
TA 13.1. Solid waste and wastewater	2014/12/22
TA 14.1. Afforestation and reforestation	-

**Statement of competence**



Name: Ms. Tamami Nagayama  
 Qualified and authorized by Japan Quality Assurance Organization.

Function	Date of qualification
Validator (JCM project only)	2019/8/19
Verifier (JCM project only)	2019/8/19
Team leader	-

Technical area within sectoral scopes	Date of qualification
TA 1.1. Thermal energy generation	-
TA 1.2. Renewables	-
TA 3.1. Energy demand	-
TA 4.1. Cement and lime production	-
TA 5.1. Chemical industry	-
TA 10.1. Fugitive emissions from oil and gas	-
TA 13.1. Solid waste and wastewater	-
TA 14.1. Afforestation and reforestation	-

**Statement of competence**



Name: Ms. Sachiko Hashizume  
 Qualified and authorized by Japan Quality Assurance Organization.

Function	Date of qualification
Validator	2015/11/20
Verifier	2015/11/20
Team leader	2018/6/22

Technical area within sectoral scopes	Date of qualification
TA 1.1. Thermal energy generation	2015/11/20
TA 1.2. Renewables	2015/11/20
TA 3.1. Energy demand	2015/11/20
TA 4.1. Cement and lime production	-
TA 5.1. Chemical industry	-
TA 10.1. Fugitive emissions from oil and gas	-
TA 13.1. Solid waste and wastewater	2015/11/20
TA 14.1. Afforestation and reforestation	-