

JCM Validation Report Form

A. Summary of validation

A.1. General Information

Title of the project	3MW Solar Power Project in Chillan, Nuble Region
Reference number	CL002
Third-party entity (TPE)	Lloyd's Register Quality Assurance Limited (LRQA)
Project participant contracting the TPE	FARMLAND Co., Ltd.
Date of completion of this report	17/05/2022

A.2 Conclusion of validation

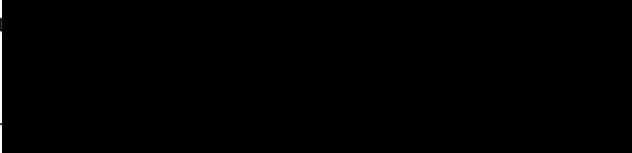
Overall validation opinion	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative
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A.3. Overview of final validation conclusion

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 consultation	The project participants have completed a local stakeholder consultation process and that due steps were taken to engage stakeholders and solicit comments for the proposed project.	<input checked="" type="checkbox"/>
Monitoring	The description of the Monitoring Plan (Monitoring Plan	<input checked="" type="checkbox"/>

Item	Validation requirements	No CAR or CL remaining
	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.	<input checked="" type="checkbox"/>
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.	<input checked="" type="checkbox"/>
	The MoC has been correctly completed and duly authorized.	<input checked="" type="checkbox"/>
Avoidance of double registration	The proposed JCM project is not registered under other international climate mitigation mechanisms.	<input checked="" type="checkbox"/>
Start of operation	The start of the operating date of the proposed JCM project does not predate January 1, 2013.	<input checked="" type="checkbox"/>

Authorised signatory:	Mr. <input checked="" type="checkbox"/>	Ms. <input type="checkbox"/>
Last name: Chiba	First name: Michiaki	
Title: Climate Change Manager - Asia & Pacific		
Specimen signature		Date: 17/05/2022

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"/>	Michiaki Chiba	LRQA Ltd.	Team leader	<input checked="" type="checkbox"/>	Technical competence authorised	<input type="checkbox"/>
Mr. <input type="checkbox"/> Ms. <input checked="" type="checkbox"/>	Olga Rivas	LRQA Spain	Team member	<input type="checkbox"/>	N/A	<input type="checkbox"/>
Mr. <input type="checkbox"/> Ms. <input checked="" type="checkbox"/>	Alejandra Isabel Llarena Astudillo	LRQA Ltd.	Team member	<input type="checkbox"/>	N/A	<input type="checkbox"/>
Mr. <input checked="" type="checkbox"/> Ms. <input type="checkbox"/>	Xianxin Yan	LRQA China	Internal reviewer	<input checked="" type="checkbox"/>	N/A	<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>

The project participants (The PPs) are responsible for the preparation and fair presentation of the project design document (PDD) with the monitoring spreadsheet in accordance with the requirements of JCM rules and the validator is responsible for expressing an opinion on the PDD based on the validation. The PDD was checked and confirmed as complete against the JCM Guidelines for Developing Project Design Document (PDD) and Monitoring Report (MR) No. JCM_CL_GL_PDD_MR_ver02.0. A valid form of the JCM PDD Form as of the time of commencement of the public comment period No. JCM_CL_F_PDD_ver02.0 was used for the PDD Version 01.0 dated 24/09/2021. The revised PDD Version 02.0 dated 22/02/2022 was also checked the completeness through the validation.

The details of the persons interviewed and the documents reviewed are shown in the Section E of this report.

<Findings>

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

No issue was raised to the requirements of this section.

<Conclusion based on reporting requirements>

Please state conclusion based on reporting requirements.

The validation team confirmed that the PDD was completed using the valid form of the JCM PDD Form and in accordance with the JCM Guidelines for Developing PDD and MR.

C.2. Project description

<Means of validation>

The project is to install a 3 MW grid connected solar photovoltaic (PV) power plant in Chillan, Nuble Region in Chile, displace a part of electricity generated from fossil fuel firing power plants connected to the national electricity grid system and reduce greenhouse gas (GHG) emissions. Total 2,979.2 kW of solar PV panels XSOL XLM144-400SV single crystal module (400 Wp x 7,448 pcs) have been installed with single axis solar tracking system.

The project is implemented by Land and Sea SpA and Farmdo Energy Chile SpA from The Republic of Chile and FARMLAND Co., Ltd. from Japan (the PPs).

The start date of project operation is on 04/06/2021 and the expected operational lifetime of the project is for 17 years. The PPs referred to the Statutory useful life for the calculation of depreciation and amortization for machinery and equipment issued by Japan's Ministry of Finance for the basis of the expected operational lifetime of the project solar power system indicated as for 17 years (the other facilities mainly made of metal).

The project receives financial support for JCM model projects from the Ministry of the Environment, Japan. The project contributes to a sustainable power supply using renewable energy in Chile.

The validation team assessed the PDD and the supporting documents, interviewed the PPs to validate the requirements concerning accuracy and completeness of the project description.

The details of the persons interviewed and the documents reviewed are shown in the Section E of this report.

<Findings>

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

Grade / Ref: CL 1

Nature of the issue raised: The PPs were required to provide relevant evidence to support the start date of the project operation on 04/06/2021.

Nature of responses provided by the PPs: The PPs provided relevant supporting documents for review by the validation team.

Assessment of the responses: The start date of the project operation was confirmed based on the evidence submitted by the PPs including the Commissioning Protocol from the Technical Standard for Connection and Operation of Small Distributed Generation Means in Medium Voltage Installations and Commissioning Request Letter sent and signed by the legal

representative of Farmdo Energy Chile SpA to the sector institution National Electrical Coordinator in conformance with the Technical Standard for Connection and Operation of Small Distributed Generation Means in Medium Voltage Installations.

The electricity generation started from 05/06/2021 following the completion of the grid connection on 04/06/2021.

The CL was closed.

Grade / Ref: CAR 1

Nature of the issue raised: The monitoring point number corresponding to that in the Monitoring Plan Sheet (MPS) was not indicated in the figure of PDD Section C.2.

Nature of responses provided by the PPs: The monitoring point number is added in the figure of PDD Section C.2.

Assessment of the responses: The validation team confirmed that the monitoring point number is added in the figure of Section C.2. in the revised PDD.

The CAR was closed.

Grade / Ref: CL 2

Nature of the issue raised: The PPs were required to clarify the basis of the estimated GHG emission reductions in the first year indicated in the PDD Section C.3.

Nature of responses provided by the PPs: The PPs provided the calculation details for the GHG emission reductions in the first year.

Assessment of the responses: The validation team reviewed the calculation for the first year that used the same calculation tool and data as the subsequent years while it considered the generation start date of 05/06/2021 and 26 operation days in June 2021. The estimated values from July to December are the same as the subsequent years.

The CL was closed.

<Conclusion based on reporting requirements>

Please state conclusion based on reporting requirements.

The validation team assessed the project description provided in the PDD with the supporting documents to the requirements on the accuracy and completeness. The validation team confirmed that the proposed JCM project in the PDD is described in accurate and complete manners that is understandable the nature of the proposed project activity.

C.3. Application of approved methodology(ies)

<Means of validation>

The project applied the approved methodology JCM_CL_AM001_ver02.0 Installation of Solar PV System, Version 02.0.

LRQA assessed if the selected methodology is applicable to the proposed project. The project applicability was checked against each eligibility criterion in the selected approved methodology. The steps taken to validate each eligibility criterion and the conclusions about its applicability to the proposed project are summarised as below.

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

Justification in the PDD: 3MW solar PV system is newly installed.

Steps taken for assessment: Document review was conducted on the project documentation, technical specification, the project completion report, and a remote assessment including interviews.

Conclusion: Based on the validation processes taken, the validation team confirmed that the project newly installed solar PV system at Chillan, Nuble Region in Chile and the criterion is met.

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).

Justification in the PDD: Introduced PV modules comply with design qualifications (IEC 61215) and safety qualification (IEC 61730-1 and IEC 61730-2).

Steps taken for assessment: Document review was conducted on the technical specification, certificates of design qualifications and safety qualification, the project completion report, and a remote assessment including interviews.

Conclusion: Based on the validation processes taken, the validation team confirmed that the PV modules of the project solar PV system have obtained the certificates in compliance with the international standards IEC61215, IEC61730-1, IEC61730-2 and IEC61701. The criterion was therefore satisfied.

Criterion 3: The equipment used for monitoring output power of the solar PV system(s) and irradiance is installed at the project site.

Justification in the PDD: The monitoring equipment for output power and irradiance of the solar PV system(s) have been installed at the project site.

Steps taken for assessment: Document review was conducted on the technical specification, the project completion report, and a remote assessment including interviews.

Conclusion: Based on the validation processes taken, the validation team confirmed that the monitoring equipment has been installed for output power of the solar PV system as well as irradiance at the project site. Thus the criterion was confirmed as satisfied by the project.

<Findings>

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

No issue was raised to the requirements of this section.

<Conclusion based on reporting requirements>

Please state conclusion based on reporting requirements.

The validation team confirmed that the project applied the valid version of the approved methodology and the applicability was demonstrated to the eligibility criteria.

C.4. Emission sources and calculation of emission reductions

<Means of validation>

The project supplies electricity generated by 3 MW solar PV system and displaces electricity generation in the national power grid system. Total 2,979.2 kW of solar PV panels XSOL XLM144-400SV single crystal module (400 Wp x 7,448 pcs) have been installed with solar tracking system. Total 67 AI equipped single axis trackers installed with the project contribute increase of solar electricity generation. The tracker consumes 0.08 kWh each per day according to the manufacturer's specification. The electricity meter is installed at the exit of the project solar power plant and the grid connection point to measure net electricity exported to the grid after deducted the internal electricity consumption.

The source of GHG emissions is consumption of grid electricity and CO₂ emissions in the reference scenario are considered to determine the reference emissions (REs), while the project emissions (PEs) are assumed to be zero for the solar PV system in accordance with the applied methodology. The annual electricity generation of the project is estimated ex-ante at 6,023.461 MWh. The default CO₂ emission factor of 0.404 t-CO₂/MWh for the SEN grid is applied as the project locates in the suburb of Chillan, approximately 400 km south of the capital Santiago, Chile. The annual GHG emission reductions (ERs) are calculated using the estimated annual electricity generation of the project: $ERs = REs - PEs = 6,023.461 \text{ MWh} \times 0.404 - 0 = 2,433 \text{ t-CO}_2\text{e}$. The project started operation from 04/06/2021 and the ERs in the first year is estimated at 1,291 tCO₂e considering 26 days of generation and internal consumption in June 2021.

The validation team assessed the documented evidence and confirmed that all the relevant GHG emission sources covered in the applied methodology are addressed, and the steps taken and the equations applied to calculate REs for the proposed project comply with the requirements of the approved methodology.

The details of the persons interviewed and the documents reviewed are shown in the Section E of this report.

<Findings>

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

Grade / Ref: CAR 2

Nature of the issue raised: The Monitoring Plan Sheet did not confirm which of the Case 1,

Case 2 or Case 3 are applied to the proposed JCM project for determination of the electricity emission factor.

Nature of responses provided by the PPs: The PPs confirmed that the Case 1 is applicable to the project and provided the revised MP.

Assessment of the responses: The validation team reviewed the revised MP received from the PPs and confirmed the information corrected.

The CAR was closed.

<Conclusion based on reporting requirements>

Please state conclusion based on reporting requirements.

The validation team confirmed that:

- The methodology was applied correctly to calculate PEs and REs and no other significant emission source was identified that would be affected and reasonably attributed by implementation of the proposed project but not addressed by the applied methodology;
- The choice of whether an emission source or gas is to be included where the applied methodology allows was reasonably justified by the PPs;
- The Monitoring Plan Sheet (MPS) was not altered and the fields were filled in as required so that all estimates of the REs could be replicated using the data and parameter values provided in the PDD;
- The values for the project specific parameters fixed ex ante listed in the MPS were appropriate with all the data sources and assumptions and the calculations were correct to the proposed JCM project;
- All assumptions and data used by the PPs were listed in the PDD, including their references and sources; and
- All values used in the PDD were considered reasonable in the context of the proposed JCM project.

C.5. Environmental impact assessment

<Means of validation>

The project installs total 2,979.2 kW solar PV system and an environmental impact assessment is not required by laws of the host country. The validation team assessed the applicable legal requirements in the host country using its local sources/expertise and confirmed that an environmental impact assessment is not required to be conducted for implementation of the project.

The details of the persons interviewed and documents reviewed are provided in the Section E of this report.

<Findings>

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

No issue was raised to the requirements of this section.

<Conclusion based on reporting requirements>

Please state conclusion based on reporting requirements.

The validation team confirmed by assessing the relevant documents and using the local sources/expertise that the project does not need an environmental impacts assessment to be conducted to meet the legal requirement of the host country and the PDD satisfies the requirements of the JCM.

C.6. Local stakeholder consultation

<Means of validation>

The PPs identified the government of the host country and local consultant as the main local stakeholder and held a consultation meeting. Representatives of the local stakeholder attended the meeting provided no negative comment through the process.

The details of the persons interviewed and documents reviewed are provided in the Section E of this report.

<Findings>

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

No issue was raised to the requirements of this section.

<Conclusion based on reporting requirements>

Please state conclusion based on reporting requirements.

The validation team confirmed that the PPs have invited comments to the proposed project from the relevant local stakeholders, the summary of the comments received is provided in the PDD in a complete manner and the PPs have taken due account of all the comments received from the local stakeholders as the processes described in the PDD.

C.7. Monitoring

<Means of validation>

The MP consisting of the MPS and Monitoring Structure Sheet (MSS) is based on the approved methodology.

The electricity generated by the project solar PV system is directly and continuously measured.

The reading is taken by an electricity meter.

The electricity meter is designed to comply with requirements of IEC 62053-22 and the accuracy class is 0.2s.

The roles and responsibilities of the persons are described in the MSS in accordance with the requirements of the applied methodology. The reading results of electricity meters are monthly recorded, checked by the Project supervisors.

The validation team confirmed that the MP complied with the requirements in the approved

methodology and that the PPs will be able to apply the MP following the monitoring arrangements described in it.

CAR 3 and CAR 4 were issued that the details of resolution are as described below.

The details of the persons interviewed and the documents reviewed are shown in the Section E of this report.

<Findings>

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

Grade / Ref: CAR 3

Nature of the issue raised: The measurement method and procedures of the Monitoring Plan Sheet (MPS) was not completed with the detailed information of the measuring equipment, accuracy level and the calibration information (frequency, date of calibration and validity).

The PPs were also required to describe the QA/QC procedures applied to monitoring of the parameter.

Nature of responses provided by the PPs: The PPs submitted the revised MP with the supporting evidence.

Assessment of the responses: The validation team reviewed the revised MP and supporting evidence provided by the PPs and confirmed that the information required is filled.

The CAR was closed.

Grade / Ref: CAR 4

Nature of the issue raised: The PPs are required to confirm how the PPs ensure that data monitored and required for verification and issuance be kept and archived electronically for two years after the final issuance of credits.

Nature of responses provided by the PPs: The PPs submitted the revised MP with the supporting evidence. The PPs confirmed that the contract has been signed with the provider of the monitoring system and it will be maintained to keep the monitored data for the required period.

Assessment of the responses: The validation team reviewed the revised MP and supporting evidence provided by the PPs and confirmed that the information required is filled.

The CAR was closed.

<Conclusion based on reporting requirements>

Please state conclusion based on reporting requirements.

The validation team confirmed that the MP was described in compliance with the requirements of the approved methodology and the Guidelines for developing PDD and MR, and the PPs have demonstrated feasibility of the monitoring structure and their ability to implement the MP.

C.8. Modalities of Communication

<Means of validation>

The MoC was submitted to LRQA in the form JCM_CL_F_MoC_ver01.0. The MoC nominates FARMLAND Co., Ltd. as the focal point and was signed by the authorized representatives of all the PPs with the contact details. The form used is the latest one as of the time of validation. The validation team directly checked evidence for corporate and personal identity and details, employment and specimen signatures presented in the MoC through the remote assessment including interviews.

CAR 5 was issued that the details of resolution are as described below.

The details of the persons interviewed and the documents reviewed are shown in the Section E of this report.

<Findings>

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

Grade / Ref: CAR 5

Nature of the issue raised: The form of MoC was not completed with the required information.

Nature of responses provided by the PPs: Revised MoC was submitted to the validation team.

Assessment of the responses: The validation team reviewed the revised MoC and confirmed the relevant information is filled for the PPs.

The CAR was closed.

<Conclusion based on reporting requirements>

Please state conclusion based on reporting requirements.

The validation team confirmed that the MoC was completed using the latest form after assessment conducted on relevance of the MoC in compliance with the requirements of the JCM Guidelines.

C.9. Avoidance of double registration

<Means of validation>

The validation team assessed and confirmed relevance of the written confirmation in the MoC from the PPs that the proposed JCM project was not registered under the other international climate mitigation mechanisms.

The team in addition to the interviews with the PPs checked publicly accessible information of Clean Development Mechanism (CDM), Joint Implementation (JI), Verified Carbon Standard (VCS) and Gold Standard (GS). Particular attention was given to that there are total 16 solar power projects in Chile proposed to the other schemes and but found none of them was identical to project as the proposed JCM project in terms of the name of entities, applied technology, scale, the equipment manufacturer and model, and the location. The result of researches confirmed that the proposed project was not registered under the other international climate mitigation mechanisms than JCM and it will not result in a double counting of GHG emission reductions.

The details of the persons interviewed and the documents reviewed are shown in the Section E of this report.

<Findings>

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

No issue was raised to the requirements of this section.

<Conclusion based on reporting requirements>

Please state conclusion based on reporting requirements.

The validation team confirmed that the proposed JCM project was not registered under the other international climate mitigation mechanisms.

C.10. Start of operation

<Means of validation>

The start date for the operation of the proposed JCM project is indicated in the PDD as 04/06/2021.

The validation team confirmed correctness/relevance of the information by reviewing the supporting evidence, including but not limited to assessing of the contracts and project completion report, and that the date is not before 01/01/2013 as required to be eligible as a JCM project.

<Findings>

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

No issue was raised to the requirements of this section.

<Conclusion based on reporting requirements>

Please state conclusion based on reporting requirements.

The validation team confirmed that the start date of operation of the proposed JCM project is 04/06/2021 and not before 01/01/2013 as required to be eligible as a JCM project.

C.11. Other issues

<Means of validation>

No issue was identified as relevant element not covered above.

<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

In line with the JCM Project Cycle Procedure, the PDD is to be made publicly available for 30 days to invite public comments. The PDD was made publicly available in line with the requirements of the procedure for the period of 07/02/2022 to 05/02/2022 as per <https://www.jcm.go.jp/cl-jp/projects/102>.

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

No comment was received during the above period to receive public inputs.
Thus no action was required to be taken by the PPs to satisfy the JCM requirement.

E. List of interviewees and documents received

E.1. List of interviewees

FARMLAND

Yusuke Murota, General Manager, Overseas Business Department (Project manager)

Laura Andrades Fernández, Project coordinator, Overseas Business Department (Project supervisor)

Land and Sea SpA / Farmdo Energy Chile SpA

Javier Lorenzo Campos Carcamo, CEO

Gustavo Enrique Reyes Franco, Electrical Project Engineer (Project supervisor)

Felipe Alonso Leal Lara, Project Manager

Nippon Koei Co., Ltd.

Sae Ishiyama, Consultant

E.2. List of documents received

Category A documents (documents prepared by the PP)

- PDD Version 01.0 dated 24/09/2021 with the monitoring spreadsheet

- Revised PDD Version 02.0 dated 22/02/2022 with the monitoring spreadsheet
- MoC dated 19/10/2021
- Project introduction by Farmdo Energy Chile SpA
- Introduction of LAS Energy
- Project schedule
- EPC contract
- Technical specification of photovoltaic module
- Photographs of project construction
- Commissioning report for inverter
- Commissioning Test Report for Trackers
- Installation Report for SCADA system
- Conditions of warranty for the solar modules
- Electricity diagram
- Product data sheet for power meter
- Specification of power control station, data acquisition, data loggers, pyranometer
- National regulation for electricity meter
- Test and calibration certificate for electricity meter
- Certificate of IEC 61215
- Certificate of IEC 61730-1 and IEC 61730-2
- Estimated power generation and CO2 emission reductions
- Yield assessment of the photovoltaic power plant
- Records of monitored data
- List of electricity CO2 emission factor
- Monitoring manual
- Reading instruction for electricity meter
- Evidence for authorized signatories for the MoC
- Technical report for solar project
- Records of local stakeholder consultation
- Commissioning Protocol from the Technical Standard for Connection and Operation of Small Distributed Generation Means in Medium Voltage Installations
- Commissioning Request Letter sent and signed by the legal representative of Farmdo Energy Chile SpA to the sector institution National Electrical Coordinator in conformance with the Technical Standard for Connection and Operation of Small Distributed Generation Means in Medium Voltage Installations.
- Operation & Maintenance Best Practice guidelines for Solar Power Plant
- VCOM license agreement
- Revised MoC dated 29/04/2022

- Additional evidence for revised MoC

Category B documents (other documents referenced)

- JCM_CL_AM001_ver02.0 Installation of Solar PV System, Version 02.0
- JCM Approved Methodology Revision Request to JCM_CL_AM001_ver01.0
- Additional information on calculating the emission factors of Chile for the JCM
- JCM Project Cycle Procedure JCM_CL_PCP_ver02.0
- JCM Guidelines for Validation and Verification JCM_CL_GL_VV_ver01.0
- JCM Guidelines for Developing PDD and MR JCM_CL_GL_PDD_MR_ver02.0
- JCM Glossary of Terms JCM_CL_Glossary_ver01.0
- JCM PDD Form JCM_CL_F_PDD_ver02.0
- JCM MoC Statement Form JCM_CL_F_MoC_ver01.0
- JCM Validation Report Form JCM_CL_F_Val_Rep_ver01.0
- XSOL single crystal solar PV module – product information
- Validation and uncertainty of solar resource data, Solargis
- Methodology – Solar radiation modelling, Solargis
- Technical specification, Solargis
- Solar prospecting tool for fast and reliable project pre-feasibility, Solargis
- Energy supply by source – Chile, IEA
- Energy Policies beyond IEA Countries – Chile
- Energy Policies of Chile ENERGIA 2050
- Approved Small Scale CDM Methodology AMS I.D. Version 18.0 Grid connected renewable electricity generation
- Approved CDM Methodological Tool to calculate the Emission Factor for an electricity system
- Proposed and registered projects under CDM, VCS, Gold Standard, and the other international schemes
- IEC 62053-22, Electricity metering equipment (a,c,) - Particular requirements - Part 22: Static meters for active energy (classes 0.2 S and 0.5 S)
- ISO 14064-2:2019 - Specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancements
- ISO 14064-3:2019 – Specification with guidance for the verification and validation of greenhouse gas statements

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.

Certificate of Appointment is attached to this report.



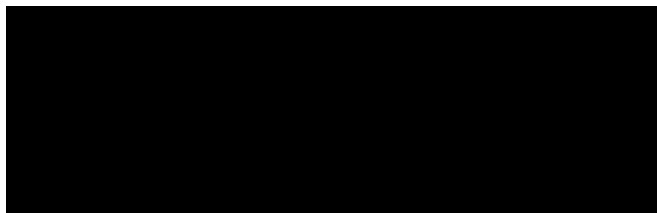
Joint Crediting Mechanism Certificate of Appointment

Title of Project: 3MW Solar Power Project in Chillan, Nuble Region
(Ref No. CL002)

We hereby certify that the following personnel have engaged in the validation process that has fully satisfied the competence requirements of the validation of the JCM project.

Name of Person	Assigned Roles
Michiaki Chiba	Team Leader
Olga Rivas	Team Member
Alejandra Isabel Llarena Astudillo	Team Member
Xianxin Yan	Technical Reviewer

Signed by



Michiaki Chiba
Climate Change Manager – Asia & Pacific
29/12/2021

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