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Validation Report

VALIDATION OF THE CDM-POA:

PROGRAMME FOR THE PROMOTION AND DEVELOPMENT OF GRID-CONNECTED SOLAR PV PROJECTS IN LATIN AMERICA

AND VALIDATION OF THE SPECIFIC CDM-CPA:

CALAMA SOLAR 1: 9MW SOLAR PHOTOVOLTAIC POWER PLANT

REPORT NO. 600500945

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TÜV SÜD Industrie Service GmbH
Carbon Management Service
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Date of first issue of this report	**Revision No. of this report**
26-06-2012	04.1
Managing Entity (contractor): Solarpack Chile S.A. (Client) Estoril 50, office 1013 Las Condes, Santiago, Chile	**Host Country:** Chile
CPA Implementer: Calama Solar 1 S.A. Estoril 50, office 1013 Las Condes, Santiago, Chile	**Project Site:** City of Calama, Northern Chile GPS coordinates (Centre): Latitude: -22.444229°; Longitude: -68.870141°
Applied Methodology / Version: ACM0002 / Version 13.0.0	**Scope(s):** 1 **Technical Area(s):** 1.2
First PoA-DD Version (GSP): PoA-DD version date: 20-03-2012 Version No.: 01 Period for Comments 31-03-2012 – 29-04-2012	**First CPA-DD Version (GSP):** CPA-DD version date: 20-03-2012 Version No.: 01 Period for Comments 31-03-2012 – 29-04-2012
Final PoA-DD version: PoA-DD version date: 12-09-2012 Version No.: 01.4	**Final CPA-DD version:** PoA-DD version date: 12-09-2012 Version No.: 01.4

VALIDATION OPINION

TÜV SÜD has performed a validation of the aforementioned CDM programme of activity (PoA) and specific CPA.

Standard auditing techniques have been used for the validation of the PoA and the specific CPA. An internal validation checklist has been prepared to conduct the validation process in a transparent and comprehensive manner.

The review of the PoA and CPA design documentation, subsequent follow-up interviews, and further verification of references have provided TÜV SÜD with sufficient evidence to determine the fulfilment of stated criteria in the protocol. In the opinion of TÜV SÜD, the PoA and the specific CPA fulfil all relevant UNFCCC requirements for the CDM if the underlying assumptions do not change. TÜV SÜD recommends the PoA for registration by the CDM Executive Board. TÜV SÜD also recommends the specific CPA for inclusion under the PoA.

An analysis, as provided by the applied methodology, demonstrates that the proposed activity is not a likely baseline scenario. Emission reductions attributable to the activity are additional to any that would occur in the absence of the programme. Considering that the PoA will be implemented as designed, the CPAs under the same are likely to achieve emission reductions. Considering that the specific CPA will be implemented as designed, the specific CPA is likely to achieve the estimated amount of emission reductions of 22,830 tCO_2e (on average per year) and a total estimated of 228,304 tCO_2e (for the fixed 10 year crediting period) as specified within the final specific CPA-DD version.

The validation has been performed following the requirements of the latest version of the CDM VVS and on the basis of the contractual agreement. The single purpose of this report is its use during the registration process as part of the CDM project cycle. Based on the work described in this report, nothing has come to our attention that causes us to believe that any project component or issue has not been covered by the validation process.

Munich, 04/10/2012	Munich, 04/10/2012
Certification Body “climate and energy” TÜV SÜD Industrie Service GmbH	Assessment Team Leader

Abbreviations

ACM	Approved Consolidated Methodology
BM	Build Margin
CAR	Corrective Action Request
CB	Certification Body
CDM	Clean Development Mechanism
CDM EB	CDM Executive Board
CPA	Component Project Activity
CPA-DD	Component Project Activity Design Document
CER	Certified Emission Reduction
CM	Combined Margin
CME	Coordinating Managing Entity
CMP	Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol
CL	Clarification Request
DNA	Designated National Authority
DOE	Designated Operational Entity
EF	Emission Factor
EIA / EA	Environmental Impact Assessment / Environmental Assessment
ER	Emission Reduction
FAR	Forward Action Request
FSR	Feasibility Study Report
GHG	GreenHouse Gas(es)
GSP	Global Stakeholder Consultation / Process
IPCC	Intergovernmental Panel on Climate Change
IRL	Information Reference List
IRR	Internal Rate of Return
KP	Kyoto Protocol
MP	Monitoring Plan
NGO	Non Governmental Organisation
OM	Operational Margin
PoA	Programme of Activities
PoA-DD	Programme of Activities Design Document
PP	Project Participant
SING	Northern Interconnected System (Sistema Interconectado del Norte Grande)
TÜV SÜD	TÜV SÜD Industrie Service GmbH
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Clean Development Mechanism Validation And Verification Standard

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1 INTRODUCTION

1.1 Objective

The objective of the validation process is to provide an independent assessment by a third party, a Designated Operational Entity (DOE), of the proposed Programme of Activities (PoA) and the Component Project Activity (CPA; generic and specific) against the applicable CDM requirements. The assessment involves the evaluation whether the proposed activities comply with the requirements of §37 of the CDM modalities and procedures, the applicability conditions of the selected methodology and any applicable guidance issued by the CDM Executive Board (CDM-EB).

The PoA validation is part of the PoA CDM project cycle and results in a conclusion by the executing DOE on whether or not the PoA is valid to be submitted for registration to the CDM-EB. The CPA validation is also part of the PoA CDM project cycle and results in a conclusion by the executing DOE on whether or not a CPA is valid to be included under the proposed PoA. The ultimate decision on the registration of a proposed PoA rests with the CDM-EB and the Parties involved.

1.2 Scope

The scope of any assessment is defined by the underlying legislation, regulation and guidance given by relevant entities or authorities. In the case of CDM PoA, the scope is set by:

- The Kyoto Protocol, in particular §12 and modalities and procedures for the CDM;
- Decision 2/CMP1 and Decision 3/CMP.1 (Marrakech Accords);
- Further COP/MOP decisions with reference to the CDM (e.g. decisions 4 – 8/CMP.1);
- Clean Development Mechanism Validation And Verification Standard (VVS) published under http://cdm.unfccc.int;
- Decisions and specific guidance outlined by the EB which are published under http://cdm.unfccc.int;
- Guidelines for completing the CDM PoA and CPA design documents (PoA-DD and CPA-DD) and the applied CDM methodology;
- Baselines and monitoring methodologies (including GHG inventories);
- Management systems and auditing methods;
- Environmental issues relevant to the applicable sectoral scope;
- Applicable environmental and social impacts and aspects of the CDM PoA;
- Sector specific technologies and their applications;
- Current technical and operational knowledge of the specific sectoral scope and information on best practice.

The validation process is not meant to provide any form of consulting to the project participant (PP). However, stated requests for clarifications, corrective actions, and/or forward actions may provide input for improvement of the programme design.

Once TÜV SÜD receives the design documents, it is made publicly available through a dedicated interface on the UNFCCC CDM website for global stakeholder consultation. The duration of the period for submission of comments for the global stakeholder consultation is 30 days.

2 VALIDATION METHODOLOGY

The information provided by the project participant(s) is assessed by applying the means of validation specified in the “Clean Development Mechanism Validation And Verification Standard“ and standard auditing techniques. In the absence of specific means of validation specified in the VVS, the standard auditing techniques are applied.

A competent team is selected for the performance of the validation prior to the start of the assessment. The team is selected to cover the technical scope(s), sectoral scope(s), and relevant host country experience for evaluating the CDM PoA and specific CPA. Once the program is made available for the stakeholder consultation process, members of the team carry out the desk review, follow-up actions, resolution of issues identified, and the preparation of the validation report. The prepared validation report and other supporting documents then undergo an internal quality control by the CB “climate and energy” before being submitted to the CDM-EB.

In case the validation team identifies issues that require further elaboration, research or expansion in order to determine whether the activities meet the CDM requirements, and whether the CPAs under the same PoA can achieve credible emission reductions, findings are raised as specified in the VVS.

All corrective action and clarification requests shall be closed out in order to submit the request for registration for this PoA.

All requests are listed in annex 1 of this validation report including the responses provided by the project participant(s) as well as the means of validation of these responses and any references to any resulting changes in the design documents or supporting annexes.

2.1 Appointment of the Assessment Team

According to the technical scopes and experiences in the sectoral or national business environment, TÜV SÜD composed a project team in accordance with the appointment rules of the TÜV SÜD certification body “climate and energy”.

The composition of an assessment team has to be approved by the Certification Body (CB) to assure that the required skills are covered by the team. The CB TÜV SÜD operates the following qualification levels for team members that are assigned by formal appointment rules:

- Assessment Team Leader (ATL);
- Validator (V);
- Validator Trainee (T);
- Technical Experts (TE);
- Country expert (CE);
- Technical review (TR).

It is required that the sectoral scope(s) and the technical area(s) (TA) linked to the methodology and project has to be covered by the assessment team. A technical review is conducted to perform a check on quality and completeness. Appointment certificates are attached to this report in Annex 3.

Assessment Team:

Name	Qualification	Coverage of scope	Coverage of technical area	Coverage of financial aspect	Host country experience	Conducted On-site visit
Katrin Hartmann	**ATL**	☑	☑	☑	-	☑
Karin Wagner	V	☑	☑	☑	-	☑
Adriana Amaro	T/CE	-	-	-	☑	☑

Technical Reviewer:

Name	Qualification	Coverage of scope	Coverage of technical area	Coverage of financial aspect
Nikunj Agarwal	TR	☑	☑	☑

Appointment certificates are attached to this report in Annex 3.

2.2 Review of Documents

The GSP-DDs and additional background documents related to the PoA and specific CPA design and baseline have been reviewed to verify the correctness, credibility, and interpretation of the presented information. Furthermore, a cross-check between information provided and information from other sources was performed as an initial step of the validation process. A complete list of all documents and evidences reviewed is attached as annex 2 to this report.

2.3 Follow-up Interviews

From 12/06/2012 to 14/06/2012, TÜV SÜD performed a physical site inspection and interviews with project stakeholders to confirm relevant information and to resolve issues identified in the first document review. A list of all persons interviewed in this process is presented in annex 2 to this report.

2.4 Cross-check

During the validation process the team has made reference to available information related to similar projects or technologies as described in the CDM PoA and CPA. Project documentation has also been reviewed against the approved methodology applied to confirm the appropriateness of formulae and correctness of calculations.

2.5 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the validation is to resolve the requests for corrective actions (CAR), clarifications (CL), and any other outstanding issues which need to be clarified for TÜV SÜD`s conclusion on the PoA and CPA design. The CARs and CLs raised by TÜV SÜD are resolved during communication between the managing entity, the CPA implementer and TÜV SÜD. To guarantee the transparency of the validation process, the concerns raised and responses that have been given are documented in more detail in annex 1 to this report.

2.6 Internal Quality Control

Internal quality control within the team is assured by means of a technical review process that takes place after the on-site assessment and after the closure of findings. The internal quality control in the validation process is given by the final decision (Validation Opinion) made by the CB “climate and energy”.

3 REPORTING REQUIREMENTS

The assessment work and the main results are described below in accordance with the CDM Validation and Verification Standard (VVS). The reference documents indicated in this report are stated in annex 2 of this report. The changes from the GSP DDs to the final DDs are reflected in the list of findings included in Annex 1 of this report.

3.1 Global stakeholder consultation

No comments have been received during the global stakeholder process.

3.2 Approval, Authorization and Contribution to sustainable development

Party / DNA	Authorized Project Participant(s)
Chile / National Environment commission (Ministerio del Medio Ambiente)	Solarpack Chile S.A.
The DNA of Chile issued a LoA (IRL 47) on 27/07/2012 authorizing Solarpack Chile S.A. as a project participant. TÜV SÜD received the letter from the project participant directly and considers the provided letters as authentic. In addition, the LoA was further confirmed via e-mail by the Chilean DNA Team of the respective ministry (IRL 49). The letter also indicates that the participating Party is a Party to the Kyoto Protocol, and that the participation in the above mentioned PoA is voluntary. In addition, the letter also confirms that the proposed PoA contributes to the sustainable development of Chile (host country). After checking the provided LoA, TÜV SÜD confirms that the letter refers to the precise proposed PoA title in line with the title in the PoA-DD submitted for registration. Based on the information given in the letter, TÜV SÜD considers the approval as unconditional with respect to these items. The LoA was issued by the Party's DNA and is valid for the proposed PoA. The LoAs do not refer to a specific version of the validation report. In summary, TÜV SÜD considers the § 39 – 42 of the VVS as met.	

3.3 Modalities of Communications

TÜV SÜD used notarized documentation (IRL 52) in order to perform due diligence on the Modalities of Communication (MoC) statement (IRL 78). The notarized documentation (IRL 52) confirms the corporate identity of the project participant and the focal point included in the MoC statement, as well as the personal identities, including specimen signatures and employment status, of their authorized signatories.

TÜV SÜD confirms that the MoC statement complies with all relevant forms and requirements as

- the latest version of the form "Modalities of Communication statement" (F-CDM-MOC) has been used, and
- the information required as per the F-CDM-MOC, including its annex 1, is correctly completed, and
- the project participant´s authorized signatories signing the F-CDM-MOC correspond to the project participant´s authorized signatories included in F-CDM-MOC, annex 1.

3.4 Design Documents

The PoA-DD and the CPA-DDs are in compliance with the relevant forms and guidance as provided by UNFCCC. The most recent versions of the PoA-DD and CPA-DD forms were used. It can be further confirmed that the two parts of the PoA-DD including the first part (i.e. PoA) and the second part (i.e. generic CPA) have been filled correctly. There are two generic CPAs reflecting the two different types of CPA regarding the demonstration of additionality (for details please refer to section 3.6.3 and 3.6.8.2 and 3.6.8.3 of this report).

TÜV SÜD considers that the guidelines for the completion of the PoA documents in their most recent version have been followed. Furthermore, TÜV SÜD confirms that the PoA-DD and the CPA-DDs (generic and specific) are in compliance with relevant forms and guidance, hence the requirement of VVS § 62 is fulfilled.

3.5 Application of the selected baseline and monitoring methodology

3.5.1 Applicability of the selected baseline and monitoring methodology

Compliance with each applicability condition as listed in the chosen baseline and monitoring methodology has been demonstrated.

The validation team assessed by checking the UNFCCC webpage that the baseline and monitoring methodology selected by the project participant is the valid version of those approved by the Board.

Applicability criteria from ACM0002 Version 13.0.0
The project activity is the installation, capacity addition, retrofit or replacement of a power plant/unit of one of the following types: hydro power plant/unit (either with a run-of-river reservoir or an accumulation reservoir), wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit.
Information from PoA-DD including generic and specific CPA-DDs:
A CPA under the present PoA will consist of a solar PV power plant (greenfield plant) that delivers the energy generated to the national grid.
Assessment:
The validator compared the actual text of the applicable version of the methodology with the information stated in the PoA-DD and the generic and specific CPA-DDs. *The specific CPA-DD refers to the Environmental Qualification Resolution (IRL 24) which was verified by the assessment team. Hence it is confirmed by the local and sectoral knowledge of the assessment team that the content of this document is correctly quoted and interpreted in the DDs.* *In addition it has been verified on-site that the power plant will be a Greenfield plant that delivers the energy to the national grid. This could also be verified with an agreement regarding the connection with the grid (IRL 59).*
Validation opinion:
The documentation content is correctly quoted and interpreted in the DDs. The applicability criterion is met. Based on the underlying documentation as well as the on-site observations and interviews, it can be confirmed that this criterion is met for the specific CPA.

Applicability criteria from ACM0002 Version 13.0.0
In the case of capacity additions, retrofits or replacements (except for wind, solar, wave or tidal power capacity addition projects which use Option 2: on page 10 to calculate the parameter $EG_{PJ,y}$): the existing plant started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline

emission section, and no capacity expansion or retrofit of the plant has been undertaken between the start of this minimum historical reference period and the implementation of the project activity
Information from PoA-DD including generic and specific CPA-DDs: *Not Applicable. A CPA does not involve capacity addition, retrofit or replacement of existing power plants.*
Assessment: *The validator compared the actual text of the applicable version of the methodology with the information stated in the PoA-DD and in the generic and specific CPA-DDs.* *Hence, it can be confirmed that this criterion is not applicable for this PoA (i.e. only greenfield solar PV plants are included into this PoA).*
Validation opinion: *The documentation content is correctly quoted and interpreted in the DDs. The applicability criterion is met. It can be further confirmed that this criterion is not applicable for the specific CPA.*

Applicability criteria from ACM0002 Version 13.0.0 *In case of hydro power plants:* *• The project activity is implemented in an existing simple or multiple reservoirs, with no change in the volume of any reservoirs;* *• The project activity is implemented in an existing simple or multiple reservoirs, where the volume of any of reservoirs is increased and the power density of each reservoir, as per definitions given in the Project Emissions section, is greater than 4 W/m2;* *• The project activity results in new single or multiple reservoirs and the power density of each reservoir, as per definitions given in the Project Emissions section, is greater than 4 W/m2.*
Information from PoA-DD including generic and specific CPA-DDs: *Not applicable. The program only consists of new solar photovoltaic power plants and has no hydropower components.*
Assessment: *The validator compared the actual text of the applicable version of the methodology with the information stated in the PoA-DD and the generic and specific CPA-DDs.* *Hence, it can be confirmed that this criterion is not applicable for this PoA (i.e. only solar PV plants are included into this PoA).*
Validation opinion: *The documentation content is correctly quoted and interpreted in the DDs. The applicability criterion is met. It can be further confirmed that this criterion is not applicable for the specific CPA.*

TÜV SÜD confirms that the chosen baseline and monitoring methodology is applicable to the PoA and the specific CPA.

3.5.2 Baseline scenario identification and description

The PoA-DD including the generic CPA-DDs as well as the specific CPA-DD define the following baseline scenario: The baseline scenario is the electricity delivered to the grid by the PoA (i.e. each CPA) that otherwise would have been generated by the operation of grid-connected power plants and by the addition of new generation sources into the respective electricity grid.

The assessment team confirms that the procedure contained in the methodology to identify the most reasonable baseline scenario has been correctly applied. This procedure is as follows (IRL 60):

"If the project activity is the installation of a new grid-connected renewable power plant/unit, the baseline scenario is the following: Electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in the "Tool to calculate the emission factor for an electricity system"."

The information presented in the DDs has been validated by an initial document review of all data. Further confirmation has been made based on the on-site visit and a review of information from similar projects and technologies. The sources referenced in the DDs have been quoted correctly. The information was verified against credible sources, such as the following:

- Inclusion manual (IRL 19, 38) as well as the underlying PoA-DD (IRL 73), clearly indicating that only new grid-connected solar PV plants are eligible under this PoA, and
- applied methodology (ACM0002, Version 12.3.0, IRL 60), clearly indicating the baseline for this type of power plant.

TÜV SÜD has determined that no reasonable alternative scenario has been excluded.

Based on the validated assumptions used for project activity calculations, TÜV SÜD considers that the identified baseline scenario for the PoA is reasonable. Furthermore, the baseline scenario identified for the specific CPA is reasonable and in accordance with the PoA-DD.

Taking the definition of the baseline scenario into account, TÜV SÜD confirms that all relevant CDM requirements, including relevant and/or sectoral policies and circumstances, have been identified correctly in the PoA-DD including the generic CPA-DDs as well as the specific CPA-DD.

As a result, TÜV SÜD confirms the following statements:

(a) All the assumptions and data used by the project participants are listed in the PoA, including their references and sources;

(b) All documentation used is relevant for establishing the baseline scenario and correctly quoted and interpreted in the PoA-DD including the generic CPA-DDs as well as the specific CPA-DD;

(c) Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence, and can be deemed reasonable;

(d) Relevant national and/or sectoral policies and circumstances are considered and listed in the PoA-DD including the generic CPA-DDs as well as the specific CPA-DD.

The approved baseline methodology has been correctly applied to identify the most reasonable baseline scenario, and the identified baseline scenario reasonably represents what would occur in the absence of the proposed CDM PoA.

3.5.3 Algorithms and/or formulae used to determine emission reductions

TÜV SÜD has assessed the calculations of project emissions, baseline emissions, and emission reductions. Corresponding calculations have been carried out based on calculation spreadsheets. The parameters and equations presented in the DDs, as well as other applicable documents, have been compared with the information and requirements presented in the methodology and respective tools. An equation comparison has been made to ensure consistency between all the formulae presented in the calculation files and in the DDs, methodology, and tools.

The estimate of the baseline emissions are considered correct as the calculations have been reproduced by the audit team with the attainment of the same results.

The assumptions and data used to determine the emission reductions are listed in the DDs and all the sources have been reviewed.

The grid emission factor is calculated based on the ex-ante calculation for both the operating margin and the build margin and is fixed for the entire length of the crediting period.

The six steps were correctly applied as discussed in the following paragraphs:

Step 1: The Northern Interconnected System (SING) in Chile was correctly identified as the relevant electricity system.

Step 2: Off-grid power plants are excluded from the project electricity system, which is in line with the available options provided by the tool.

Step 3: For the purposes of this project, the alternative "(a) Simple OM" has been correctly chosen, since low-cost/must-run resources account for less than 50% of total grid generation in the average of the five most recent years. Besides, for the Simple OM calculation the option "ex-ante" is chosen based on the data from 2009, 2010, and 2011, which means that the EF is determined once at validation stage, not requiring further recalculation during the crediting period. The assessment team confirms that this in line with the options provided by the tool for the OM determination.

Step 4: Due to lack of data regarding net electricity generation of each power unit, Option B of the Tool is correctly chosen to calculate Simple OM; also considering the renewable source as low-cost/must-run power plant; and based on known fuel type and total fuel consumption of the project electricity system.

Step 5: Option 1 was chosen from the Tool, so EF_{BM} is calculated ex-ante based on the most recent information available on units already built in vintage 2011. As it was determined that AEGSET-5-units is larger than AEGSET-⩾20%, and none of the units comprised in SETsample started to supply electricity to the grid more than 10 years ago, it was correctly decided that SETsample was determined to be SET5-units. All of this is consistent with the criteria stated in the Tool. The applied approach is deemed to be fully in line with the available options provided by the tool.

Step 6: The EF_{CM} was correctly calculated by using the Weighted Average CM (based on a 75/25 weighting as indicated by the applied emission factor tool).

The operating margin emission factor and the build margin emission factor were calculated based on fossil fuel consumption data, electricity generation data for power plants/units, as well as the energy conversion efficiencies of power units, fuel specific emission factors and net calorific values sourced from the IPCC Guidelines, the grid's transmission system operator (CDEC-SING with latest available data) and the national energy balance (CNE with latest available data; see IRL 31, 39, 41, 42). After thorough review of the underlying documents, it can be confirmed that the publishers and the available data sources and assumptions are deemed to be appropriate and reliable and calculations are correct as applicable to the proposed program of activities (i.e. § 98 of the VVS).

As a result, the assessment team considers the applied values for the operating and build margin emission factor (i.e. 0.811 and 0.964 $tCO2_e$/MWh, respectively) and the combined margin emission factor of 0.849 $tCO2_e$/MWh (fixed ex-ante) as realistic and appropriate. It can further be confirmed that the applied values are consistently reported throughout all documents (i.e. IRL 74, 86)[*].

Assumption / Data / References used for estimating the emission reductions in the PoA-DD including the generic CPA-DDs	**Value applied in specific CPA-DD**	**Information cross-checked by**	**Conclusion**
$EG_{facility,y}$ $EG_{PJ,y} = EG_{facility,y}$	27,500 MWh (electricity generation in the first year); av-	A CPA under the present PoA is a Greenfield project. According to the	As per the baseline methodology ACM0002, it can be confirmed that

[*] It may be noted that the combined margin emission factor changed from the first to the final CPA-DD. The main reason for this change from 0.799 tCO2e/MWh to 0.849 tCO_{2e}/MWh was the revision of the emission reduction calculation model to ensure consistency of the data vintages for OM and BM calculation. As a result, the estimated emission reductions increased as well.

Assumption / Data / References used for estimating the emission reductions in the PoA-DD including the generic CPA-DDs	Value applied in specific CPA-DD	Information cross-checked by	Conclusion
which is the quantity of net electricity generation supplied by the project plant/unit to the grid in year y (MWh)	erage = 26,889 MWh (based on a yearly module degradation of 0.5% and 10 years crediting period).	methodology, the baseline emissions are to be calculated as electricity generation multiplied with emission factor of the grid.	the equation is applicable for greenfield renewable energy power plants. The applied values for the specific CPA-DD were confirmed via IRL 24 and IRL 62 and IRL 63, hence deemed to be reasonable.
$EF_{grid, CM,y}$ Combined margin CO_2 emission factor for grid connected power generation in year y calculated using the latest version of the "Tool to calculate the emission factor for an electricity system" (tCO2/MWh)	0.849 $tCO2_e$/MWh (fixed ex-ante for the PoA and therefore also for the specific CPA-DD; see descriptions above).	The emission factor applied is the one that is calculated for the specific electricity grid that the CPA is connected to. The EF tool includes six steps to be applied to determine the combined margin.	It can be confirmed that the grid emission factor ($EF_{grid, CM,y}$) and all its basic calculations are in conformity with the requirements stated in the "Tool to calculate the emission factor for an electricity system" (Version 2.2.1).

As a summary TÜV SÜD confirms the following statements

(a) All assumptions and data used by the project participants are listed in the DDs, including their references and sources;

(b) All documentation used by project participants as the basis for assumptions and source of data is correctly quoted and interpreted in the DDs;

(c) All values used in the DDs are considered reasonable in the context of the proposed PoA and CPA.

(d) The baseline methodology and corresponding tool(s) have been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions;

(e) All estimates of the baseline emissions can be replicated using the data and parameter values provided in the DDs;

(f) Any estimates for monitored data or parameter are reasonable for estimating the emission reductions in the generic and specific CPA-DDs;

(g) Different options for equations and parameters are selected appropriately.

(h) The data and parameters fixed ex-ante are conservative and appropriate.

3.6 Programme of activities / component project activities

3.6.1 Coordinating/managing entity and participants in a PoA

A clear and transparent description of the operational and management arrangement has been established by Solarpack Chila S.A. and stated in the PoA-DD. This has been verified during the site audit and various interviews and could be confirmed based on the following underlying documentation:

- PoA Management System (IRL 76), and
- Inclusion Manual (IRL 38), and
- End user agreement (between CME and participants; IRL 77).

After thorough review of the management system and the associated documents, the assessment team confirms that the system includes a clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs. Furthermore, the system includes clear records of arrangements for training and capacity development for personnel as well as a transparent procedure for technical review of inclusion of any CPAs. A procedure to avoid double-counting is also included in the management system and deemed to be fully sufficient: The CPA implementer shall enter into a contractual agreement (IRL 77) with Solarpack Chile S.A. confirming that the CPA has not and will not be registered as a CDM project activity or as CPA of another PoA. The agreement further states that the implementing entity is aware that the CPA will be subscribed to the present PoA and the implementing entity cedes its rights to claim and own emission reductions under the CDM to the managing entity of the present PoA. Such an agreement is already signed for the first CPA (i.e. Calama Solar 1, see IRL 82).

Furthermore, it can be confirmed that there is a clear and transparent record keeping system and documentation control process established for each CPA under the PoA: each CPA will be kept in the record keeping system and each CPA under the PoA will identify each solar PV plant under a serial numbering system to uniquely identify its location in addition to its technical details, address and GPS coordinates. In addition, the management system includes measures for continuous improvement. The record keeping system for the specific CPA is strictly following the procedures of the management system, which was confirmed during the on-site visit (IRL 76).

In summary, the assessment team confirms that the management system allows the CME to easily check the features of any potential CPAs and ensures that each CPA meets all requirements and eligibility criteria before inclusion in the PoA. As a result, it can be confirmed that the requirements of the “Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities” with respect to the management system are fully met (see also IRL 48 and VVS §186).

3.6.2 CPA Design Document

The proposed specific CPA was assessed by the validation team and it can be confirmed that it complies with the eligibility criteria specified in the PoA-DD. Please refer to section 3.6.9 below for a detailed assessment of the compliance with the eligibility criteria.

The means of validation of the specific CPA include a desk review as well follow-up interviews and a site visit. Hence, the requirements of §187 and §188 are considered to be fully met.

3.6.3 Description of a PoA/CPA

The following description of the programme as per PoA-DD was verified: The programme involves the promotion and development of grid-connected new solar PV plants in Chile. As per the applied methodolgy, the following conditions can be confirmed for all CPAs:

- The renewable power generation technology is PV solar power plant/unit; and
- The project activity type is exclusively a greenfield; and

- The legal and regulatory framework is the same for all CPAs (since there is only one country, i.e. Chile).

The PoA-DD includes two generic CPA-DDs reflecting the two types of CPAs. The only reason for the two types of CPAs is the different approach with respect to the demonstration of additionality (i.e. first of its kind and investment analysis). After thorough review, the assessment team confirms that this approach of the two types of CPAs is in line with the requirements for PoAs outlined in the applied methodology. It can be further confirmed that all other conditions are the same for all CPAs as outlined above.

The specific CPA involves the construction and operation of a new 9 MW PV plant that is connected to the Northern Interconnected System (SING). Hence, the SING is considered to be the boundary of the specific CPA, which is located within the geographical boundary of the PoA.

The information presented in the PoA-DD on the programme description has been assessed for accuracy and completeness using standard auditing techniques including:

(a) Document review including

- A review of data and information;
- Cross checks between information provided in the PoA-DD, CPA-DD and information from sources other than those used including the DOE´s sectoral or local expertise. In addition, independent background investigations were performed.

(b) Follow-up actions including:

- Interviews with relevant stakeholders in the host country, personnel with knowledge of the PoA/CPA design and implementation;
- Cross checks between information provided by interviewed personnel (i.e. by checking sources or other interviews) to ensure that no relevant information has been omitted.

(c) Reference to available information relating to projects or technologies similar to the proposed PoA under validation;

It is TÜV SÜD's opinion that the project description, as included in the PoA-DD including the generic CPA-DDs and the specific CPA-DD, is accurate and complete; and it provides a correct understanding of the proposed programme and the specific CPA.

After assessment of the PoA-DD including the generic CPA-DDs and the specific CPA-DD that was submitted to TÜV SÜD by the CME, the assessment team confirms the framework developed for the implementation of the PoA, and defining a CPA under the PoA as per VVS §189. For a more detailed assessment of the framework including CME and participants, physical/geographical boundary, technology/measures and public funding information please refer to the sections below.

3.6.4 Application of Multiple Methodologies

Not applicable.

3.6.5 Boundary for the PoA in terms of geographical area

The boundary of the PoA within which all CPAs are included, was assessed considering information gathered from the physical site inspection, interviews, and secondary evidence received on the design of the PoA.

Aspect of the Boundary	Onsite Observations	Relevant Documents for the specific CPA
Electricity Grid (those regions of Chile covered by the regional electricity transmission grids, i.e. four transmission grids and considering all relevant national laws and regulations in those regions)	During the on-site visit and based on the local and sectoral expertise of the assessment team, it can be confirmed that the boundary of the PoA within all CPAs are included are those regions of Chile covered by the electrcity grid of Chile.	Environmental Qualification Resolution (RCA) (IRL 24); Grid connection agreement (IRL 59)

After thorough assessment of the PoA-DD and the underlying documentation (IRL 6, 7, 73, 74), it can be confirmed that the project participants in establishing the boundary of the PoA have taken into consideration all applicable national and/or sectoral policies and regulations within that chosen boundary.

Therefore, the audit team confirms that the identified boundary, the selected sources, and gases as documented in the PoA-DD are justified for the proposed PoA (including the generic and specific CPAs) and are fully in line with the requirements set by the applied methodology and the PoA-DD as per VVS §87. Furthermore, it can be confirmed that the boundary of the specific CPA is correctly identified and in line with the underlying requirements. It could also be confirmed that the sources and gases included in the specific CPA boundary are in accordance with the above.

Emission sources, not addressed by the applied methodology and expected to contribute more than 1% of the overall expected average annual emission reductions, have not been identified.

Hence, TÜV SÜD confirms that the boundary for the PoA in terms of geographical area is accurately selected and complete in order to comply with the VVS (§§191-192).

3.6.6 Start Date of a PoA / CPA -

The start date of the PoA is the 19/12/2011, the date on which Solarpack Chile S.A. signed an agreement with Bridge Builders, the consultant for the design and development of the CDM PoA (IRL 16). In addition the assessment team further confirms that the start date of the CPA is not prior to the commencement of the validation of the PoA. The start date of the specific CPA is expected to be 01/01/2013, on which the down-payment for the concession of the land is supposed to be. This could be confirmed with the negotiations communication between the Ministry of National Assets Antofagasta and Calama Solar 1 S.A, IRL 36. Hence, it can be confirmed that the start date of the specific CPA is not prior to the date the CDM-PoA-DD was first published for global stakeholder consultation (i.e. 31/03/2012). As a result, it can be confirmed that the requirements of VVS §193 are met.

3.6.7 Prior Consideration of the CDM

According to EB 60, annex 26 and VVS §194, the demonstration and assessment of prior consideration of the CDM does not apply to PoAs.

3.6.8 Demonstration of additionality of the PoA as a whole

After thorough review of the PoA-DD and the underlying documents (IRL 73, 74, 75), it can be confirmed that the additionality was demonstrated by clearly establishing that in the absence of CDM, none of the CPAs would occur. Since the PoA consists of one or more large scale projects as CPAs, the eligibility criteria for the demonstration of additionality was based on the “Tool for the demonstration and assessment of additionality” (Version 06, IRL 83), as specified in the additionality section of the applied methodology. A detailed assessment of the application of the four steps of the addition-

ality tool is provided in the following sections. Please refer to section 3.6.9 below for a detailed assessment of the additionality-related eligibility criteria set in the PoA-DD. As a result, it can be confirmed that the requirements of the "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" with respect to the demonstration of additionality are fully met (see also IRL 48 and VVS §195).

3.6.8.1 Identifications of alternatives

As already indicated above (see section 3.5.2), the baseline scenario for new Solar PV plants is prescribed in the applied methodology. Hence, as per VVS §115, no further analysis is required. As a result, it can be confirmed that the list of alternative (i.e. the baseline scenario which equals the pre-project scenario) is credible and complete.

3.6.8.2 Investment Analysis

An investment analysis was conducted in the PoA-DD. As already outlined above, the PoA consists of two different types of CPAs. The two types are different with regard to the demonstration of additionality: one type of the generic CPA applies the investment analysis whereas the other type applies the first of its kind analysis in order to demonstrate the additionality. The assessment of the demonstration of additionality based on the investment analysis is described in this section. For the assessment of the demonstration of additionality based on the first of its kind analysis is described in the section below (i.e. 3.6.8.3).

Since any CPA will generate financial or economic benefits other than CDM (i.e. from the electricity sales to the grid), the benchmark analysis option was applied, which is in compliance with the requirements of the underlying tool.

The analysis was performed on a range of parameters of technologies and measures covering all cases intended for inclusion in the PoA. These parameters include the power generation (i.e. the plant load factor = PLF), the tariff (US$/MWh) and the unit cost of capacity (i.e. US$/MW). The lower and upper end of these parameters that are applied in the investment model is confirmed as follows:

Parameter	Range	Assessment and Conclusion
PLF	≤0.15 - 0.45 (any projects with a PLF of less than 0.15 may apply the model with the PLF of 0.15, which is deemed to be conservative; any projects with a PLF greater than 0.45 are excluded from this PoA)	Based on the assessment team's local and sectoral expertise, the range of PLFs is deemed to be appropriate: A PLF of 0.45 is equivalent to 3942 operating hours per year. This means that the plant would be operational for almost 11 hours (10.8) per day on average, i.e. almost all hours of sunlight. Therefore, a higher plant load factor would be practically impossible. Furthermore, based on published literature where typically values of less than 0.2 are indicated, it can be confirmed that the upper value is deemed to be highly conservative (see IRL 85).
Tariff	82.5 US$/MWh – 160 US$/MWh (any projects with a tariff of less than 82.5 US$/MWh may apply the model with the tariff of 82.5 US$/MWh, which is deemed to be conser-	Based on the assessment team's local and sectoral expertise, as well as based on two studies performed by a Chilean consulting

Parameter	Range	Assessment and Conclusion
	vative; any projects with a tariff of more than 160 US$/MWh are excluded from this PoA)	firm called Synex (IRL 66, 67), it can be confirmed that the identified ranges are reasonable and appropriate. Synex is deemed to to be a reliable source since it is an experienced company that has designed and implemented various price systems in the electricity sector for Chile and other countries (IRL 90).
Unit cost of capacity	1.5 million US$/MW – 4.6 million US$/MW (any projects with a unit cost of capacity of less than 1.5 million US$/MW are excluded from this PoA, any projects with a unit cost of capacity of more than 4.6 million US$/MW may apply the model with the value of 4.6 million US$/MW, which is deemed to be conservative)	Based on the assessment team's local and sectoral expertise, as well as based on studies by Enertis Solar (IRL 62, 63), it can be confirmed that the identified ranges are reasonable and appropriate. Enertis Solar is deemed to be a reliable source since it is an independent European firm specializing in the engineering project development and the provision of high added value services to the photovoltaic energy sector throughout the world (IRL 91).

In addition, the following parameters are fixed in the investment analysis model:

Parameter	Value	Assessment and Conclusion
Degradation of PV modules	0.5% (per year)	The applied value was cross-checked and confirmed via a due diligence technical report prepared by Enertis (IRL 63). In addition, the applied value is deemed to be conservative, based on the textbook, where a value of up to 7% per month is indicated (IRL 85). Hence, it can be confirmed that the applied value is considered to be valid and appropriate.
Operation and maintenance	15,000 US$/MW (per year)	The applied value was cross-checked and confirmed via a due diligence technical report prepared by Enertis (IRL 63). Hence, it can be confirmed that the applied value is considered to be valid and appropriate.
Yearly equipment replacement costs	0.125% of investment (year 3-5); 0.250% of investment (year 6-20)	The applied values were cross-checked and confirmed via a due diligence technical report prepared by Enertis (IRL 63). Hence, it can be confirmed that the applied values are considered to be valid and appropriate.
Land lease	10.978 US$/MW (per year)	The applied value was confirmed by document provided by the Ministry of National Assets Antofagasta communication (IRL 35).

Parameter	Value	Assessment and Conclusion
Insurance	0.15% of investment per year (damage) 0.40% of investment per year (limited liability)	The applied values were confirmed by a report provided by the insurance company (IRL 64).
Technical lifetime	25 years	The technical lifetime was confirmed by the Environmental Impact Declaration (IRL 70) as well as by a publication by the Chilean government (IRL 24).
National Benchmark	10% (project IRR, pre-tax)	The applied benchmark was adopted from a publication by the Chilean Ministry (IRL 12). Based on its local and sectoral expertise, TÜV SÜD confirms that the applied benchmark is appropriate and applicable to the program. The chosen benchmark is suitable to be compared with the selected type of IRR, which is line with EB 62, annex 5, §12 (IRL 45).
Depreciation, residual value	Accelerated depreciation (20 years), terminal value depends on the variables set for each CPA	TÜV SÜD confirms that depreciation and the fair value are calculated as per the latest investment guidance (IRL 45) and are in line with applicable laws and regulations in Chile (IRL 65, 70).
Exchange Rate	500 CLP/US$	The applied values are both confirmed by the National Bank of Chile (IRL 87), hence deemed to be appropriate and reasonable.
Exchange Rate (Unit of Acccount)	22,619 CLP/CLF	

It is concluded from above that all the input parameters and ranges are applicable and valid for the proposed PoA and its CPAs. In addition, by applying due diligence, as well as based on local and sectoral expertise, TÜV SÜD was able to confirm that the input parameters and ranges used in the financial analysis are reasonable and adequately represent the current economic situation of the program, and have been applied consistently applied in all calculations of the underlying model. As per the applied methodology, the parameters may be updated every two years in order to reflect the current technical and market circumstances of any future CPA implementation.

In summary, the IRR calculation and the underlying model including its array functions is considered to be traceable and correct and also in line with the latest requirements of the Guidelines on the assessment of the investment analysis (EB62, Annex 5; IRL 45).

As clearly shown in the underlying investment analysis model (IRL 75), the resulting financial indicators are below the benchmark for certain combinations of the parameters including the tariff, the PLF and the investment costs / MW. The possible combinations of the parameters that are considered to be additional, i.e. where the IRR is below the benchmark are highlighted in green in the model. This allows a clear overview of the additional and thus eligible CPAs.

The procedure to check on the additionality of any proposed CPA based on the investment analysis is confirmed to be as follows:

The parameters including the tariff, PLF and investment costs / MW are identified for the proposed CPA based on available data at the time of the investment decision or at the time of the CPA inclusion (whichever occurs earlier). As a next step, sensitivity analysis is applied in a conservative way,

i.e. the PLF and the tariff increase by 10%, whereas the unit investment cost / MW decreases by 10%. The resulting IRRs are identified as per the tables presented in the model (IRL 75). The proposed CPA is considered to be additional, if the IRR for each sensitivity case is below the benchmark (i.e. highlighted in green in the respective tables in the model).

Furthermore, a conservative approach will be applied for any values that are not represented in the model, which is deemed to be appropriate by the assessment team.

The specific conditions for each parameter are included in the eligibility criteria taking into account all relevant requirements of the investment analysis. The assessment team confirms that the resulting eligibility criterion allows a straight forward check on the additionality of a proposed CPA based on the investment analysis by means of a direct comparison of the main raw data (see also section see section 3.6.9). In addition, it can be confirmed that the applied approach is in line with the requirements outlined in the applied methodology with respect to the definition of eligibility criteria for CPA inclusion for a distinct type of CPAs.

3.6.8.3 Barrier analysis

A barrier analysis was conducted in the PoA-DD by applying the barriers due to prevailing practice, inter alia “first-of-its-kind” (foik). As already outlined above, the PoA consists of two different types of CPAs. The two types are different with regard to the demonstration of additionality: one type of the generic CPA applies the investment analysis whereas the other type applies the first of its kind analysis in order to demonstrate the additionality. The assessment of the demonstration of additionality based on the foik analysis is described in this section. For the assessment of the demonstration of additionality based on the investment analysis is described in the section above (i.e. 3.6.8.2).

As per the applied “Tool for the demonstration and assessment of additionality” (Version 06, IRL 83; §40.2(a)), any activity included in the program is the foik in the applicable geographical area, if the project is the first in the applicable geographical area that applies a technology that is different from any other technologies able to deliver the same output and that have started commercial operation in the applicable geographical area before the start date of the project; and project participants selected a crediting period for the project activity that is “a maximum of 10 years with no option of renewal”.

The applicable geographical area is defined as the host country, i.e. Chile. This is in line with the tool, where the applicable geographical area is set as default as the host country (§5). The technology is defined as grid-connected solar PV plants. This is also in line with the tool, where the different technologies in the context of “foik” are technologies that deliver the same output (i.e. electricity), but differ by at least one item including the energy source/fuel (i.e. solar) (§8). As per the information provided by the National Energy Commission (IRL 13), it can be confirmed that no grid-connected solar PV plant started commercial operation in Chile yet. In addition, the fixed 10-year crediting period is also taken into account.

The resulting eligibility criterion that is derived from the requirements regarding the foik, could be confirmed as follows:

Any proposed CPA may be considered as foik as long as there is no other ground-mounted, grid-connected solar PV plant in Chile that has started commercial operation before the submission of the proposed CPA for inclusion or before the starting date of the CPA (whichever is earlier). In addition, the crediting period shall be fixed with10-years and it not renewable.

In summary, it can be confirmed that the foik barrier analysis was conducted as per the given requirements and a clear eligibility criterion has been derived from these requirements (see also section 3.6.9 below).

3.6.8.4 Common practice analysis

The common practice analysis was conducted in the PoA-DD according to the requirements of the applied “Tool for the demonstration and assessment of additionality” (Version 06, IRL 83).

As per §43 of the applied tool, this analysis can be omitted for any activity type that has demonstrated to be foik. However, it shall be performed for activities that are applying the investment analysis. Since the PoA is considered to be included in the measures listed in §6 of the additionality tool, the common practice is performed as per the §47 of the additionality tool. It can be confirmed that the four steps are correctly applied as follows:

Step 1: the applicable output range is defined as a minimum capacity of 50 kW. This is in line with the given requirements, where a range of +/-50% of the design capacity is required. In combination with the limitations of this PoA, where the capacity is limited to a minimum of 100 kW, it can be confirmed that the minimum output is 50 kW is deemed to be correct. There are no restrictions on the maximum output range, which is also confirmed to be correct and in line with this PoA.

Step 2: It can be confirmed that the number of all power plants that deliver the same output (i.e. electricity exported to the grid), within the applicable output range (i.e. ≥ 50 kW), and that have started commercial operation before the start date of the activity is correctly listed (i.e. N_{all}). The number was cross-checked with the underlying sources provided by the Chilean Energy Commission (see IRL 13). The assessment team considers the sources as valid and reliable and hence confirms that the number for N_{all} is deemed to be appropriate and correct (i.e. N_{all} = 194).

Step 3: As already outlined above in section 3.6.8.3 (Foik barrier analysis), it can be confirmed that the number of plants that apply a technology that is different from the technology applied in the proposed PoA (i.e. grid-connected solar PV) equals the number of plants that are identified in step 2 (i.e. $N_{all} = N_{diff}$).

Step 4: The assessment team confirms that the calculations are correctly performed and that the results clearly show that the proposed PoA is not a common practice in the applicable geographical area which is defined as the host country Chile (i.e. $F = 1 - N_{all}/N_{diff} = 1 - 1 = 0 < 2$ and $N_{all} - N_{diff} = 194 - 194 = 0 < 3$).

In summary, the assessment team confirms that the four steps are correctly applied to the PoA and it is clearly demonstrated that the program is not a common practice in the defined region.

The common practice analysis was performed on the PoA level and it is clearly demonstrated that the proposed PoA is not a common practice in the defined region (i.e. Chile). As a result, it can be confirmed that no eligibility criterion is necessary for this analysis.

3.6.9 Eligibility criteria for inclusion of a CPA in the PoA

All the eligibility criteria required for the inclusion of the CPA under the PoA have been addressed in the PoA-DD including its two generic CPA-DDs and will be assessed for each potential CPA through the procedures described in the PoA Management System (PoA MS). The stated confirmation against each eligibility criteria has been checked and found acceptable. It can be confirmed that the criteria are verifiable, sufficiently objective as well as comprehensive. Please refer to the following sections for a detailed assessment of the individual criteria as per the “Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities” (IRL 48; further referred to as the “PoA standard”).

PoA Standard requirement	Assessment and Conclusion (PoA-DD and generic CPA-DDs)	Assessment and Conclusion (specific CPA)
The geographical boundary of the CPA including any time-induced boundary consistent with the geographical boundary set in the PoA.	The criterion clearly describes that for any CPA, it shall be demonstrated that all units are within the geographical boundaries of the country that issued an approval for the PoA. The PoA-DD clearly indicates the geographic boundary of any CPA that shall be within the	The proposed CPA will be located in the region of Antofagasta, near Calama, which is in Chile, i.e. within the geographical boundary (IRL 24). In addition, this could be confirmed based on the on-site visit.

PoA Standard requirement	Assessment and Conclusion (PoA-DD and generic CPA-DDs)	Assessment and Conclusion (specific CPA)
	host country (i.e. Chile) which is consistent with the geographic boundary of the PoA. Hence, it can be confirmed that the requirement of the PoA standard with respect to this criterion is met (i.e. §14a).	
Conditions that avoid double counting of emission reductions like unique identifications of product and end-user locations (e.g. programme logo).	The CME addresses this criterion by using unique identification of each PV plant via the exact geographic location. The assessment team considers that this approach is deemed as reasonable to address and avoid double-counting. Hence, it can be confirmed that the requirement of the PoA standard with respect to this criterion is met (i.e. §14a).	The specific coordinates of the CPA have been presented in the CPA-DD (IRL 74) and could be confirmed during on the on-site visit (IRL 71). Further, the assessment team confirms after thorough assessment of the UNFCCC website, that no other solar PV power plant is registered as a CDM project or included in another PoA in the same location.
The specifications of technology/measure including the level and type of service, performance specifications including compliance with testing/ certifications.	The technology/measure is clearly defined as a greenfield grid-connected solar PV power plant that generates electricity from solar energy (i.e. renewable) which a minimum capacity of 100 kW. The assessment team confirms that this is also in line with the applicability criteria of the applied methodology. In addition, the compliance with testing/certifications is to be demonstrated and substantiated by the CPA implementer. Hence, it can be confirmed that the requirement of the PoA standard with respect to this criterion is met (i.e. §14c).	The proposed CPA is a Greenfield grid-connected solar photovoltaic power plant, which generates electricity from solar energy and has an installed capacity of at least 100 kW (IRL 24). In addition the CPA implementer has provided evidence that the used equipment in the proposed CPA complies with national/international standards or certifications (IRL 82). The sworn declaration, which has been submitted by the CPA implementer, can be accepted by the assessment team.
Conditions to check the start date of the CPA through documentary evidence.	The start date of any CPA is based on the date of the first implementation, construction or real case (such as the first payment date). The start date of each CPA shall be demonstrated and substantiated by the CPA implementer. Any CPA may either be developed by the CME or any other CPA implementer. A template including the relevant declaration guaranteeing the access of the CME to documentary evidence to check the starting date of CPAs not developed by the CME	As Calama Solar 1 is initially developed by the CME, i.e. Solarpack Chile S.A., the start date of the CPA will be checked by the CME itself, which is the case here. The eligibility criterion of the start date of the proposed CPA has been already confirmed in section 3.6.6; hence the fulfillment of the criterion can be accepted.

PoA Standard requirement	Assessment and Conclusion (PoA-DD and generic CPA-DDs)	Assessment and Conclusion (specific CPA)
	has been provided by the assessment team (see IRL 77) (see IRL 77). In addition, this criterion also indicates that any CPA is only eligible if its start date is after the starting date of the PoA (i.e. if the starting date of any CPA is in the future, this criterion is fulfilled automatically). Hence, it can be confirmed that the requirement of the PoA standard with respect to this criterion is met (i.e. §14d).	
Conditions that ensure compliance with applicability and other requirements of single or multiple methodologies applied by CPAs.	After assessment of this criterion, the assessment team confirms that it is fully in line with the applied methodology, i.e. any CPA shall install a new (i.e. greenfield) power plant. For a detailed assessment of the applicability, please refer to section 3.5.1 above. As a result, it can be confirmed that the requirement of the PoA standard with respect to this criterion is met (i.e. §14e).	The proposed CPA is a Greenfield grid-connected solar photovoltaic power plant, which generates electricity from solar energy and has an installed capacity of at least 100 kW (i.e. for the specific CPA the installed capacity is 9 MW, which is greater than 100 kW, see IRL 24). In addition, this could be confirmed based on the on-site visit.
The conditions that ensure that CPAs meet the requirements pertaining to the demonstration of additionality.	The additionality-based eligibility criteria are derived from the additionality tool (IRL 83). At least one of the two criteria shall be fulfilled in order to meet the requirements with respect to the additionality of any CPA: • The parameters of a proposed CPA including tariff, PLF and investment / MW are within certain ranges as defined above and in the underlying model. In addition, the resulting IRR is below the benchmark (for a detailed assessment please refer to section 3.6.8.2 and IRL 75). It can be further confirmed that this approach is also in line with the requirements of the applied methodology with regard to PoAs, i.e. all relevant technical	As Calama Solar 1 is initially developed by the CME, i.e. Solarpack Chile S.A., the CME has the competence to check this criterion. In addition the CPA implementer has declared that all mandatory legal and regulatory requirements at the time of the CPA inclusion will be complied with (IRL 82). In addition the proposed specific CPA uses the First-of-its-kind, which has been already discussed and confirmed in section 3.6.8.3. Based on the underlying documentation (IRL 13) and the on-site interviews and observations, it can be confirmed that the proposed specific CPA is the first of its kind, since there is no other grid-connected PV solar plant operational in Chile so ar. Hence the fulfillment of this cri-

PoA Standard requirement	Assessment and Conclusion (PoA-DD and generic CPA-DDs)	Assessment and Conclusion (specific CPA)
	and economic parameters are correctly considered including technology specific parameters, parameters reflecting the investment climate and ranges of costs and revenues. • The proposed CPA is first of its kind in Chile as per the requirements of the tool (please refer to section 3.6.8.3 above for a detailed assessment). As a result, it can be confirmed that the requirement of the PoA standard with respect to this criterion is met (i.e. §14f). It can be further confirmed that the two approaches regarding the demonstration of additionality are transparently correctly described in the two types of generic CPA-DDs that are included in the PoA-DD.	terion can be accepted.
The PoA-specific requirements stipulated by the CME including any conditions related to undertaking local stakeholder consultations and environmental impact analysis.	The local stakeholder consultation and the environmental impact analysis are demonstrated on CPA level as specified in section C and D of the PoA-DD. The procedure for the local stakeholder consultation are clearly presented in the management system (IRL 76), and deemed to be in line with the underlying requirements as well as fully appropriate. Regarding the environmental impact analysis, it is confirmed to be the CPA implementer's duty to provide proof of compliance with the Chilean environmental regulations for each proposed CPA. As a result, it can be confirmed that the requirement of the PoA standard with respect to this criterion is met (i.e. §14g).	A local stakeholder consultation has been performed for the proposed CPA, which can be confirmed with through the in depth assessment of section C of the CPA-DD (IRL 74). In addition several interviews with relevant authorities have been conducted during the on-site visit, who confirmed the appropriateness of the PPs approach. Please also refer for a detailed discussion to section 3.6.15. In addition the proposed CPA is in compliance with Chile´s environmental regulations, which can be confirmed with the Environmental Qualification Resolution (RCA) stating that the project complies with all applicable general and sectoral requirements related to environmental impacts (IRL 24). For a detailed discussion, please refer to section 3.6.14. In conclusion the assessment team confirms the fulfillment of this eligibility criterion.
Conditions to provide	In order to fulfill this criterion, the	The CPA implementer has provided

PoA Standard requirement	Assessment and Conclusion (PoA-DD and generic CPA-DDs)	Assessment and Conclusion (specific CPA)
an affirmation that funding from Annex I parties, if any, does not result in a diversion of official development assistance.	CPA implementer is required to provide the required affirmation. The assessment team confirms that this criterion is transparently included in the sworn declaration template (IRL 77) that needs to be signed by each CPA implementer. As a result, it can be confirmed that the requirement of the PoA standard with respect to this criterion is met (i.e. §14h).	to the assessment team the affirmation that funding from Annex 1 parties, does not result in a diversion of official development assistance. The sworn declaration has been reviewed and can be accepted by the assessment team. (IRL 82)
Where applicable, target group (e.g. domestic/ commercial/ industrial, rural/ urban, grid-connected/ off-grid) and distribution mechanisms (e.g. direct installation).	The target group is correctly defined as the grid (i.e. any CPA shall be grid-connected, which is also covered by the applicability criterion listed above). As a result, it can be confirmed that the requirement of the PoA standard with respect to this criterion is met (i.e. §14i).	The proposed CPA is a Greenfield grid-connected solar photovoltaic power plant, which generates electricity from solar energy and has an installed capacity of at least 100 kW (IRL 24). In addition, this could be confirmed based on the on-site visit.
Where applicable, the conditions related to sampling requirements for a PoA in accordance with the approved guide-lines/standard from the Board pertaining to sampling and surveys;	Not applicable, no sampling is and will be applied, i.e. the parameters will be monitored as per the applied methodology.	Not applicable.
Where applicable, the conditions that ensure that every CPA in aggregate meets the small-scale or microscale threshold criteria and remains within those thresholds throughout the crediting period of the CPA;	Not applicable, since the PoA applies a large-scale methodology.	Not applicable.
Where applicable, the requirements for the debundling check, in case CPAs belong to small-scale (SSC) or micro-scale project categories.	Not applicable, since the PoA applies a large-scale methodology.	Not applicable.
Others	The CPA implementer shall ensure	The sworn declaration was signed

PoA Standard requirement	Assessment and Conclusion (PoA-DD and generic CPA-DDs)	Assessment and Conclusion (specific CPA)
	that all mandatory legal and regulatory requirements are taken into account at the time of the CPA inclusion. The assessment team confirms that this criterion is transparently included in the sworn declaration template (IRL 77) that needs to be signed by each CPA implementer.	by Calama Solar 1 S.A. for the specific CPA, hence deemed to fulfill the given criterion (IRL 82).

The managing entity employs clear and unambiguous criteria for the inclusion of the CPA. The eligibility criteria stated in the PoA-DD are verifiable with regards to the applicability of the applied methodology and EB 65 annex 3. Furthermore, the DOE confirms that the eligibility criteria are sufficiently objective and comprehensive to permit the assessment of the inclusion of CPAs in the PoA.

The eligibility criteria can be checked at the CPA level by the managing entity and can be confirmed by the DOE during inclusion. The competencies of the CME for assessing each eligibility criterion were evaluated based on the Programme Management System (IRL 76 and 84; see also section 3.6.1) and follow-up interviews. For most eligibility criteria, the competencies required include the access to the relevant documentation of any CPA. Therefore, for CPAs that are developed by the CME, the competencies can be confirmed to exist. For CPAs developed by other entities, these competencies are ensured through the standard agreement between the CME and the CPA implementer, developed as a template and validated (IRL 78). Training needs for the evaluation of each eligibility criterion have also been identified as minimal, and have been considered in the Programme Management System. Based on the above, it can be confirmed that the eligibility criteria can be checked at the CPA level.

Hence, TÜV SÜD considers that the eligibility criteria for inclusion of CPA in the PoA is demonstrated accurately in order to comply with the VVS §196. In addition TÜV SÜD also confirms that each of the generic CPAs is eligible under this PoA and complies with the additionality criteria as outlined above.

3.6.10 Crediting period of a PoA

The assessment team confirms that the length of the PoA is 28 years, hence it is in line with VVS §197.

3.6.11 Monitoring plan for a PoA

The monitoring of electricity supplied to the grid will be carried out per each CPA. Primary data will be stored by the implementing entities, and the managing entity will store the data in an electronic database. Furthermore, the set-up of the monitoring plan and the underlying system (i.e. inclusion manual; IRL 84) allows the exact determination of the status of each CPA with respect to its verification and CER issuance, monitoring periods, etc. This system to identify the status of verification of each CPA has also been clearly indicated in the generic CPA-DDs and the underlying documents (IRL 84). The monitoring process and the verification status of each CPA will be done by Solarpack Chile S.A. through the review of information provided by the CPA implementers.

The project participants have opted for a verification method that does not use sampling of CPAs by the verifying DOE, and each CPA is verified by the verifying DOE to ensure that no double accounting occurs and that the status of verification can be determined at any time for each CPA.

As mentioned above, the proposed PoA does not utilize any sampling for the determination of parameter values for the calculation of the emission reductions. As a result, TÜV SÜD confirms that no sampling plan is required as per the sampling standard (EB 65, Annex 2).

The operational and management structure has been clearly described and is in compliance with the envisioned situation. The responsibilities and institutional arrangements for data collection and archiving have been clearly provided. The information provided in the PoA-DD could be confirmed based on the on-site interviews and also through the submitted documentary evidence – management system (IRL 76).

Hence it could be confirmed that the PP would be able to implement the monitoring plan as per the methodology and the reporting requirement as per VVS §133 and §198.

3.6.12 Monitoring plan for a CPA

The monitoring plan presented in the specific CPA-DD complies with the requirements of the generic CPA-DDs and the applicable methodology. The assessment team has verified all parameters in the monitoring plan against the requirements of the methodology and no deviations have been found.

The procedures have been reviewed by the assessment team through document review and interviews with the relevant personnel. The information provided has allowed the assessment team to confirm that the proposed monitoring plan is feasible within the project design. The relevant points of monitoring plan have been discussed with the CME and the CPA implementer. Specifically, these points include the monitoring methodology, data management, quality assurance and quality control procedures to be implemented in the context of the activity.

The specific CPA will be equipped with electricity meters, at least one main meter and one back-up meter. The maximum error is at 0.2S and the calibration will be performed according to applicable industry standard, set by TSO CDEC-SING (IRL 79). The electricity invoices will be used for cross-checking.

The only parameter, which will be monitored ex-post, is $EG_{facility,y}$:

Quantity of net electricity generation supplied by the project plant/unit to the grid in the year y: This parameter shall be continuously monitored and hourly measured by an energy meter and at least monthly recorded. The recorded data will be cross-checked with the records of electricity sold (using invoices/receipts, official data).

It can be confirmed that the parameter that is determined ex-post is correctly presented and is considered to be in accordance with the applied methodology and the applied tool.

Therefore, the CPA implementer will be able to implement the monitoring plan and the achieved emission reductions can be reported ex-ante and verified.

3.6.13 Sampling

Not applicable.

3.6.14 Environmental analysis of a PoA/CPA

It has been indicated that the environmental analysis is done at the CPA level.

According to the Law 19.300, “The Environmental General Base Law” IRL 17 every project developer in Chile has to analyze if his project requires an Environmental Impact Assessment, following the specific criteria stated on the Environmental Impact Assessment System (SEIA) Regulations. If the CPA requires an Environmental Impact Assessment, the project shall obtain from the SEIA the approval for this Assessment, which is done by means of an authorization document, published on the SEIA webpage (IRL 22). Depending on the potential impact of the project, the CPA implementer has either to present an Environmental Impact Declaration (for projects with lower environmental impacts) or an Environmental Impact Assessment (for projects with higher potential environmental impacts).

For Calama Solar 1 an Environmental Impact Declaration has been presented to the regional environmental commission CONAMA of the region of Antofagasta by the CPA implementer, Calama Solar 1 S.A. The assessment team has reviewed the Environmental Impact Declaration (IRL 36) and the Environmental Qualification Resolution (RCA) (IRL 24). Both documents confirm the correctness of the approach used by the PP. In conclusion, the PP has followed the requirements of the host country with regards to addressing environmental impacts.

As a result, it can be confirmed that the analysis of the environmental impacts was conducted as described in the CDM-PoA-DD and the CDM-CPA-DD (i.e. VVS §200).

3.6.15 Local stakeholder consultation

It has been indicated that the local stakeholder consultation is done at the CPA level.

The relevant local stakeholders have been invited via the Environmental Impact Commission of Antofagasta (CONAMA Antofagasta) in 2009. In addition as per the regulations of the SEIA, the wider public was informed of the commencement of the consultation and had the chance to participate in the process. The evidences of these invitations are given by IRL 22, 72 and 80. Furthermore, the project was announced and presented at an energy forum of the Northern Interconnected System (Foro SING) in Antofagasta, the capital, where the project is to be implemented (IRL 81). Based on the underlying documentation (IRL 22), it can be confirmed that CDM was already considered at that time.

The assessment team has reviewed the documentation in order to validate the inclusion of relevant stakeholders. The local expertise of the assessment team confirmed that the communication method used to invite the stakeholders is appropriate and ensures transparency and the unbiased representation of the project information. The summary of comments presented in the CPA-DD has been verified with the documentation of the stakeholder consultation and has been found to be complete.

Comments presented by the local stakeholders have been taken into account by the managing entity and has been verified with information obtained during on-site interviews.

As a result, it can be confirmed that the local stakeholder consultation is in accordance with the level of consultation specified by the managing entity and that the local stakeholder comments were taken into account and described in the CDM-PoA-DD and the CDM-CPA-DD (i.e VVS §201 and §202).

3.6.16 Determination of occurrences of de-bundling under a PoA

Not applicable as per VVS §203.

Annex 1
List of Findings

List of Findings - Compilation and Resolutions

Version: 04.1

Project Title: Programme for the promotion and development of grid connected solar PV projects in Latin America

Definitions	
Shall / Should / May	In addition to the definitions contained in the Glossary of CDM terms, the following terms apply in the VVS (VVS/10): Shall is used to indicate requirements to be followed; Should is used to indicate that among several possibilities, one course of action is recommended as particularly suitable; May is used to indicate what is permitted.
Credible	Information is credible if it is authentic and is able to inspire belief or trust, and the willingness of persons to accept the quality of evidence. (VVS/17)
Reliable	Information is reliable if the quality of evidence is accurate and credible and able to yield the same results on a repeated basis. (VVS/17)
CAR	The DOE shall raise a corrective action request (CAR) if one of the following situations occurs (VVS/27): (a) The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable, verifiable and additional emission reductions; (b) The applicable CDM requirements have not been met; (c) There is a risk that emission reductions cannot be monitored or calculated.
CL	The DOE shall raise a clarification request (CL) if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met. (VVS/26)
FAR	The DOE shall raise a forward action request (FAR) during validation to identify issues related to project implementation that require review during the first verification of the project activity. The DOE shall not raise a FAR that relates to the CDM requirements for registration (VVS/27)

Compilation and Resolutions of CARs, CLs of the PoA-DD

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	The sources of Figure 1 and Figure 6 are not clear (section A.2, A.6; Part I).	☑ Finding Closed IRL 4, 36, 55
Requirement	PS[1] §16 “completeness” and §19 “transparency”. VVS[2] §17d: “Assess the accuracy, conservativeness, relevance, completeness, consistency, and transparency of the information provided by project participants”.	

[1] PS = CDM Project Standard (Version 01.0)

Corrective Action Requests by validation team		
Corrective Action Request	**Corrective Action Request No.1** PP shall add the relevant references (sources of Figure 1 and Figure 6) to the PoA-DD.	
Response 01	The PoA-DD was revised as to include the sources of the figures.	
Assessment 01 Means of validation	The respective source for Figure 6 is still missing. In addition, the version and date of the PoA-DD shall be updated after any revisions are performed.	
Response 02	The PoA-DD has been updated accordingly.	
Assessment 02 Means of validation	The assessment team performed a review of the revised PoA-DD. As a result, it can be confirmed that the sources are clearly listed and the labelling of the figures is transparent and complete with respect to their sources (i.e. with publications from the Phoenix Sun and photos included in the Environmental Impact Declaration for Calama Solar 1).	
Adjustment on design documents	The PoA-DD was revised accordingly in section A.2 and A.6 of Part I.	

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	The host country/boundary of the PoA is not clear.	☑ Finding Closed IRL 4, 36, 55
Requirement	VVS §191. “The DOE shall assess the boundary of the PoA within which all CPAs included in the PoA will be implemented.”	
Corrective Action Request	**Corrective Action Request No.2** PP shall clearly state the name of the host country/countries and the respective boundary of the proposed PoA.	

[2] VVS = Validation and Verification Standard (Version 02.0)

Corrective Action Requests by validation team		
Response 01	The PoA-DD was revised and includes the sources of the figures.	
Assessment 01 Means of validation	The revised PoA-DD still indicates “host countries” (plural) at various sections throughout the document (e.g. “The geographical boundary of the CPA shall be within the borders of the host countries …”; B.2). PP shall clarify why the plural is used although the one and only identified host country is Chile (as per section A.4 of the revised PoA-DD).	
Response 02	The PoA-DD was revised accordingly, including Eligibility Criterion 1.	
Assessment 02 Means of validation	The assessment team performed a review of the revised PoA-DD. As a result, it can be confirmed that the project boundary is correctly identified as the regional electricity transmission grid within Chile, and the host country has been clearly identified as Chile. No plural version of host country could be detected in the revised PoA-DD.	
Adjustment on design documents	The PoA-DD was revised with respect to the host country (i.e. only Chile). The project boundary is now also in line with the host country (i.e. the respective grid within Chile).	

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	Several sections of the PoA-DD only indicate Solarpack, whereby it is not clear if this refers to Solarpack Chile S.A. or to Solarpack Spain.	☑ Finding Closed IRL 55
Requirement	PS §16 “completeness” and §19” transparency”. VVS §17d “Assess the accuracy, conservativeness, relevance, completeness, consistency, and transparency of the information provided by project participants”.	
Corrective Action Request	**Corrective Action Request No.3** PP shall clearly identify the companies/CME throughout the PoA-DD.	
Response 01	The PoA-DD was revised accordingly.	
Assessment 01	Several section of the revised PoA-DD still indicate only “Solarpack” and it is still not clear	

Corrective Action Requests by validation team		
Means of validation	whether this refers to Solarpack Chile S.A. or Solarpack Corporación Tecnológica S.L. PP shall further clarify.	
Response 02	The PoA-DD has been updated accordingly.	
Assessment 02 Means of validation	The assessment team performed a review of the revised PoA-DD. As a result, it can be confirmed that the company names are now clearly identified.	
Adjustment on design documents	The PoA-DD was revised accordingly throughout all sections.	

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	The PoA-DD indicates that a “typical CPA would be a PV power plant”. The definition of “typical” shall be further clarified. In addition, based on the current descriptions, it is not clear whether concentrated solar power (CSP) is excluded from the PoA.	☑ Finding Closed IRL 55
Requirement	PS §16 “completeness” and §19” transparency”. VVS §17d “Assess the accuracy, conservativeness, relevance, completeness, consistency, and transparency of the information provided by project participants”.	
Corrective Action Request	**Corrective Action Request No.4** PP shall clarify the definition of “typical”.	
Response 01	The term “typical CPA” is a remnant from the previous version of the PoA-DD form. Reference to “typical CPA” in the PoA-DD has been revised and deleted. It has further been clarified that a CPA under the present PoA will not consist in a CSP plant.	
Assessment 01 Means of validation	The “typical CPA” is mentioned at various sections throughout the revised PoA-DD. PP shall clarify the definition of “typical” CPA where ever it is stated in the revised PoA-DD.	
Response 02	The PoA-DD has been revised accordingly and there is no mention of a “typical CPA” anymore.	

Corrective Action Requests by validation team		
Assessment 02 Means of validation	After review of the revised PoA-DD, the assessment team confirms that the description of a "typical" CPA has been removed so that there are no doubts left with respect to the understanding of a "typical" CPA.	
Adjustment on design documents	The PoA-DD was revised with respect to the wording of "typical" CPA and the revised descriptions are transparent and complete.	

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	It is not clear whether the barriers listed in B.1 (other than the FoiK) are also included in the list of eligibility criteria in B.2.	☑ Finding Closed IRL 55
Requirement	PS §16 "completeness" and §19" transparency". VVS §17d "Assess the accuracy, conservativeness, relevance, completeness, consistency, and transparency of the information provided by project participants".	
Corrective Action Request	**Corrective Action Request No.5** PP shall clarify the relevance of these barriers listed in B.1 (other than the FoiK) with respect to the eligibility criteria.	
Response 01	The barriers are difficult to demonstrate for each and every project, but according to a recognized published public source they do apply currently to all projects. Therefore these barriers help demonstrate that none of the CPAs would happen without CDM, but are not included in the eligibility criteria. The description of the barriers was shortened in the PoA-DD.	
Assessment 01 Means of validation	The revised PoA-DD still indicates that "The analysis may be complemented with a demonstration that the pro-posed CPA faces barriers other than First of its Kind." PP shall clarify this statement.	
Response 02	The paragraph has been deleted.	

Corrective Action Requests by validation team		
Assessment 02 Means of validation	After review of the revised PoA-DD, the assessment team confirms that the only remaining barrier is the first-of-its-kind barrier. This is now consistently and transparently presented in the revised PoA-DD.	
Adjustment on design documents	The PoA-DD was revised with respect to the actual applied barriers (i.e. only Foik barrier is applied in the latest PoA-DD version).	

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	The presentation of the two benchmark options as indicated in B.1 (Part I) and B.5 (Part I) is not in line with the PoA requirements with respect to the eligibility criteria.	☑ Finding Closed IRL 12, 55
Requirement	PoA Standard §10: "PoAs that consist of one or more large scale projects as CPAs shall include eligibility criteria derived from all the relevant requirements contained in the additionality section of the large scale methodologies."	
Corrective Action Request	**Corrective Action Request No.6** PP shall explain the rationale for the chosen benchmarks and explain how this is in line with the requirements of the additionality of a PoA set out in EB65, Annex 03 (i.e. this shall be transferred into a clear eligibility criterion).	
Response 01	The national benchmark has been chosen as the only benchmark applicable. The PoA-DD has been revised accordingly.	
Assessment 01 Means of validation	The revised PoA-DD still refers to WACC and the national benchmark (e.g. see section B.1). PP shall clarify.	
Response 02	The paragraph has been deleted.	
Assessment 02 Means of validation	After review of the revised PoA-DD, the assessment team confirms that the only benchmark applied is the national benchmark of Chile (pre-tax 10% project IRR). The appropriateness of this benchmark could be confirmed based on the assessment team's local and sectoral expertise as well as based on a publication by the Chilean Ministry of Economy, Development and Recon-	

Corrective Action Requests by validation team		
	struction.	
Adjustment on design documents	The PoA-DD has been revised accordingly and now only includes one benchmark as indicated above.	

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	The type of benchmark and IRR is not consistent throughout the PoA-DD (pre- and post-tax).	☑ Finding Closed IRL 12, 55
Requirement	PS §17 “consistency”. VVS §17d “Assess the accuracy, conservativeness, relevance, completeness, consistency, and transparency of the information provided by project participants”.	
Corrective Action Request	**Corrective Action Request No.7** PP shall ensure consistency throughout the documents with respect to the type of benchmark and pre and/or post-tax IRR.	
Response 01	The PoA-DD has been revised to ensure consistency.	
Assessment 01 Means of validation	The revised PoA-DD is still not consistent with respect to the clear identification of a pre- or post-tax IRR (section B.1). PP shall clarify.	
Response 02	A pre-tax Project IRR has been selected and the PoA-DD has been revised accordingly.	
Assessment 02 Means of validation	After review of the revised PoA-DD, the assessment team confirms that inconsistency has been removed. Therefore, it can be confirmed that the applied benchmark is appropriate to the type of the IRR calculated (i.e. pre-tax project IRR).	
Adjustment on design documents	The PoA-DD has been revised accordingly and consistently refers to a pre-tax project IRR and benchmark.	

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	The unit is not indicated for each parameter listed in the parameter table. A detailed list of the parameters is missing (B.1 (Part I) and B.5 (Part II)).	☑ Finding Closed IRL 46, 55
Requirement	PS §16 “completeness” and §19” transparency”. VVS §17d “Assess the accuracy, conservativeness, relevance, completeness, consistency, and transparency of the information provided by project participants”.	
Corrective Action Request	**Corrective Action Request No.8** PP shall add the missing information with respect to the units in the parameter table. A break-down of investment as well as O&M costs shall also be presented.	
Response 01	The tables have been modified accordingly. Preferred units have been introduced in B.1. (Part I), and break-down of investment and O&M costs is required. The examples of references have been deleted from Table 4 in Section B.5. (Part II) and are now only contained in Part I of the PoA-DD.	
Assessment 01 Means of validation	The unit for the exchange rate is not clear (i.e. US$). PP shall clarify. In addition, see also follow-up on CAR17.	
Response 02	The currency units have been indicated in ISO 4217 code to ensure clarity.	
Assessment 02 Means of validation	After review of the revised PoA-DD and associated cash flow Excel calculation tool, it can be confirmed that the units are now properly and transparently indicated. The theoretical break-down of investment costs and O&M costs are also clearly presented in the revised Excel calculation tool (the new tool presents the ranges of costs and revenues for the determination of the eligibility criteria as per ACM0002, Version 13).	
Adjustment on design documents	The PoA-DD and the Cash Flow Excel Calculation Tool have been revised accordingly.	

Corrective Action Requests by validation team

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	The region for the first of its kind barrier is not clear.	☑ Finding Closed IRL 73
Requirement	PoA Standard §10: "PoAs that consist of one or more large scale projects as CPAs shall include eligibility criteria derived from all the relevant requirements contained in the additionality section of the large scale methodologies."	
Corrective Action Request	**Corrective Action Request No.9** PP shall clarify and present clear criteria how the region for the first of its kind barrier shall be defined (i.e. based on which criteria).	
Response 01	The criteria have been clarified as varying economic (electricity prices) or physical (global horizontal irradiance) conditions between the different regions or electricity systems.	
Assessment 01 Means of validation	Explanation given by PP in the revised PoA DD is not clear. PP shall transform the first-of-its-kind barrier into a clear eligibility criterion.	
Response 02	The applicable geographical area of the First of its Kind barrier assessment and the corresponding eligibility criterion has been clearly defined as the entire territory of Chile.	
Assessment 02 Means of validation	After checking the revised PoA-DD, the assessment team confirms that the applicable geographical area is correctly defined as the host country, i.e. Chile. The requirements for the FoiK have also been clearly transformed into an eligibility criterion.	
Adjustment on design documents	The PoA-DD has been revised accordingly.	

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	The complementation of the FoiK analysis with other barrier analyses is not listed in the eligibility criteria (B.1 / B.2 (Part I) and B.5 (Part II)).	☑

Corrective Action Requests by validation team		
Requirement	PoA Standard §10: "PoAs that consist of one or more large scale projects as CPAs shall include eligibility criteria derived from all the relevant requirements contained in the additionality section of the large scale methodologies."	Finding Closed IRL 8, 55
Corrective Action Request	**Corrective Action Request No.10** PP shall ensure a transparent presentation of the eligibility criteria addressing the additionality of the PoA (see also CAR5 above).	
Response 01	The FOIK analysis in itself is sufficient to demonstrate additionality of a project and does not require the additional barriers of the EPIA study.	
Assessment 01 Means of validation	The revised PoA-DD still indicates that "The analysis may be complemented with a demonstration that the proposed CPA faces barriers other than First of its Kind." PP shall clarify this statement.	
Response 02	The paragraph has been deleted.	
Assessment 02 Means of validation	After review of the revised PoA-DD, the assessment team confirms that the only barrier applied for the demonstration of additionality in section B.2. is the first-of-its-kind barrier. Additional barriers defined by the European Photovoltaic Industry Association as mentioned in section B.1. of the revised PoA-DD are not transferred into any eligibility criteria, which was deemed to be appropriate and in line with the PoA Standard §10.	
Adjustment on design documents	The PoA-DD has been revised accordingly.	

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	The PDD states that the emission factor may be derived from other PDDs. This is not in line with the applied methodology and the relevant tool. PP shall clarify.	☑ Finding Closed
Requirement	VVS 72c: The DOE shall determine whether the selected methodology applies to the project	

Corrective Action Requests by validation team		
	activity and was correctly applied with respect to the following: … Algorithms and/or formulae used to determine emission reductions;	IRL 46, 55
Corrective Action Request	**Corrective Action Request No.11** PP shall clarify how the emission factor is calculated for the proposed project.	
Response 01	The emission factor considered at the date of investment decision (or the carbon credits per unit of electricity generated) is only an approximate value used for the purposes of an investment decision and is usually not calculated thoroughly at the stage of compiling a feasibility study of a project. Therefore it need not be calculated as per the methodology used as it is not the basis of emission reduction calculations validated in the final CPA-DD for inclusion or the CERs issued eventually to the project. This is also substantiated by the fact that there may be several changes in the methodology and the applicable tools, additional information published by relevant authorities and sources, etc. between the starting date of a project and the date of its inclusion in the PoA. The emission factor used in the estimation of emission reductions and fixed ex-ante for their calculation during the crediting period can and will not be based on registered PDDs but on the applicable methodology and tool.	
Assessment 01 Means of validation	The revised PoA-DD still indicates that the emission factor is from other registered PDDs. PP shall clarify this statement, although the answer provided above clearly indicates that an ex-ante value calculated from the tool will be applied.	
Response 02	The paragraph has been deleted.	
Assessment 02 Means of validation	After review of the revised PoA-DD, the assessment team confirms that the emission factor is now properly calculated as per the tool. In addition, the application of the emission factor for the cash flow analysis is no longer relevant due to the new approach of the financial model.	
Adjustment on design documents	The PoA-DD has been revised accordingly and the emission factor is now properly calculated as per the relevant tool.	

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	The general application of the common practice guidelines and the resulting eligibility criteria are not clear.	☑ Finding Closed IRL 13, 55
Requirement	PoA Standard §10: "PoAs that consist of one or more large scale projects as CPAs shall include eligibility criteria derived from all the relevant requirements contained in the additionality section of the large scale methodologies."	
Corrective Action Request	**Corrective Action Request No.12** PP shall clarify how the eligibility criteria for the common practice analysis are derived from the requirements of the common practice analysis (see also request below on additionality – eligibility criteria).	
Response 01	The application of the common practice guidelines for the PoA has been revised as to only include the step-wise procedure and only for CPAs that do not face the first-of-its-kind barrier.	
Assessment 01 Means of validation	Revision made in the PoA DD is not appropriate; PP shall transform the common practice analysis into clear eligibility criteria.	
Response 02	The PoA-DD has been revised accordingly.	
Assessment 02 Means of validation	After review of the revised PoA-DD, it can be confirmed that the common practice analysis has been demonstrated on the PoA level. Furthermore, it can be confirmed that the four steps have been properly applied as per the additionality tool (Version 06). Based on the underlying information presented by the CNE (National Energy Commission), it can be confirmed that the project is not a common practice in the defined region.	
Adjustment on design documents	The PoA-DD has been revised accordingly and the common practice analysis has been properly performed on the PoA level.	

Corrective Action Requests by validation team

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	The full words for several abbreviations throughout the PoA-DD are missing.	☑ Finding Closed IRL 73
Requirement	PS §16 “completeness” and §19 ”transparency”. VVS §17d “Assess the accuracy, conservativeness, relevance, completeness, consistency, and transparency of the information provided by project participants”.	
Corrective Action Request	**Corrective Action Request No.13** PP shall provide full names for all abbreviations mentioned in the POA-DD.	
Response 01	The PoA-DD has been revised accordingly.	
Assessment 01 Means of validation	The revised PoA-DD does not provide the full names for all abbreviations (e.g. foot-note 7). PP shall clarify.	
Response 02	The PoA-DD has been revised accordingly.	
Assessment 02 Means of validation	After assessment of the revised PoA-DD, it can be confirmed that full words for all abbreviations are provided.	
Adjustment on design documents	The PoA-DD has been revised accordingly. All abbreviations are now also presented with the full word.	

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	Eligibility criteria No. 3: The performance specifications including compliance with testing/certifications is missing.	☑ Finding Closed IRL 73, 77
Requirement	PoA Standard §14c: “The eligibility criteria shall cover as a minimum the following: …The specifications of technology/measure including the level and type of service, performance specifications including compliance with testing/certifications”.	

Corrective Action Requests by validation team		
Corrective Action Request	**Corrective Action Request No.14** PP shall clarify how the compliance with testing/certifications is covered.	
Response 01	Unlike for some lighting and cookstoves methodologies (e.g. AMS-III.AR), the applicable methodology does not specify any testing or certification criteria to be covered. Therefore the compliance with testing and certifications is considered not applicable and is not part of Eligibility Criterion no. 3 of the present PoA.	
Assessment 01 Means of validation	PP shall clarify how it is ensured that the CPA complies with national and/or international solar equipment and services certificates including the types of documents in order to substantiate the compliance with this criterion. However, as per §14d, this shall be covered by the actual eligibility criterion.	
Response 02	The EC has been revised and the Programme Management System includes specifications as to acceptable evidence and the procedure for checking the Eligibility Criterion. A template for a declaration has been prepared.	
Assessment 02 Means of validation	After checking the revised criterion, the assessment team confirms that the revised criterion allows checking of the compliance with testing and certification. The template has been reviewed and deemed to clearly address this issue.	
Adjustment on design documents	The PoA-DD has been revised accordingly.	

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	Eligibility criteria No. 4: There is no control system nor any documentary evidence mentioned that will assure that the CPA implementer will inform immediately the managing entity about the purchase of any equipment or the start of constructions or any other real actions.	☑ Finding Closed IRL 73, 77
Requirement	PoA Standard §14d: “The eligibility criteria shall cover as a minimum the following: … Conditions	

Corrective Action Requests by validation team		
	to check the start date of the CPA through documentary evidence".	
Corrective Action Request	**Corrective Action Request No.15** The conditions to check the start date of the CPA through documentary evidence shall be included into the relevant documents.	
Response 01	The information has been presented in Section C: Management System of the PoA-DD, point 1: Due Diligence Process and point 2: Record Keeping. The Inclusion Manual has been updated accordingly.	
Assessment 01 Means of validation	The assessment team checked the revised PoA-DD and the Inclusion Manual and it can be confirmed that a proper control system is established. However, as per §14d, this shall be covered by the actual eligibility criterion.	
Response 02	The eligibility criterion has been revised to include the conditions to check the start date of the CPA through documentary evidence. A template for a declaration has been prepared.	
Assessment 02 Means of validation	After checking the revised criterion, the assessment team confirms that the revised criterion allows checking of the starting date. The template has been reviewed and deemed to clearly address this issue.	
Adjustment on design documents	The PoA-DD has been revised accordingly.	

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	Eligibility criteria No. 5: The type of the new power plant is not clear. In addition, it is also not clear if the PoA includes only new installations or if replacement/retrofits are also included.	☑ Finding Closed IRL 55
Requirement	PoA Standard §14e: "The eligibility criteria shall cover as a minimum the following: … Conditions that ensure compliance with applicability and other requirements of single or multiple methodologies applied by CPAs"	

Corrective Action Requests by validation team		
Corrective Action Request	**Corrective Action Request No.16** PP shall clearly list all eligibility criteria addressing the applicability criteria of the applied methodology.	
Response 01	As clarified in CAR 4, CSP plants are not eligible under the present PoA. Replacement and retrofit power plants are also not included in the present PoA. Therefore, a CPA is only eligible if it installs a new (Greenfield) photovoltaic power plant, as stated in Eligibility Criterion No. 5.	
Assessment 01 Means of validation	The assessment team checked the revised PoA-DD and confirms that it is now clearly stated that this PoA includes only new solar PV plants.	
Adjustment on design documents	PoA-DD has been revised accordingly with respect to this requirement and now clearly defines as new solar PV plants as the type of project under this PoA.	

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	Eligibility criteria No. 6: It is not clear how the demonstration of additionality at CPA level complies with EB 65, Annex 03, paragraph 10 which requires that the PoA shall include eligibility criteria derived from all the relevant requirements contained in the additionality section of ACM00002 (e.g. how is step 1 and 4 of the additionality tool addressed in the eligibility criteria). Furthermore, as per the Project standard (EB65, Annex 5), the coordinating/managing entity shall consider that a full additionality assessment is not required in the context of CPA. Instead, the confirmation of additionality for CPAs should be conducted by means of the eligibility criteria.	☑ Finding Closed IRL 73, 75
Requirement	PoA Standard §10: ”PoAs that consist of one or more large scale projects as CPAs shall include eligibility criteria derived from all the relevant requirements contained in the additionality section of the large scale methodologies.”	
Corrective Action	**Corrective Action Request No.17**	

Corrective Action Requests by validation team		
Request	PP shall present clear eligibility criteria for the demonstration of additionality of any CPAs.	
Response 01	It is demonstrated in step 1 of section B.2. (Part I) that all CPAs comply with Step 1 of the Additionality tool as long as they comply with national laws and regulations. Therefore no eligibility criterion has been defined for step 1 of the tool. Similarly, according to paragraph 43 of the Additionality Tool, a first of its kind project does not need to apply the common practice step as it is clearly not common practice in the applicable region. Therefore in the eligibility criteria step 4 (common practice) of the Additionality Tool is only required for projects that demonstrate additionality using financial analysis. Therefore, in accordance with paragraph 154 of the Project Standard, confirmation of additionality for a CPA will be conducted by means of eligibility criteria and not of a full additionality assessment.	
Assessment 01 Means of validation	PP shall transform the various steps taken to demonstrate additionality into clear eligibility criteria.	
Response 02	The additionality assessment has been performed in a generic manner for the PoA, in compliance with the Additionality Tool the PoA Standard and the new version of the methodology (ACM0002 version 13.0.0.). Clear eligibility criteria have been extracted from each step of the additionality demonstration where applicable. The confirmation of additionality of a CPA is now based only on these eligibility criteria.	
Assessment 02 Means of validation	After thorough assessment of the revised PoA-DD and the underlying model (Excel File), the assessment team confirms that the additionality based on the investment analysis has been clearly transferred into an eligibility criterion, which allows a straight forward check on the relevant parameters via dedicated ranges.	
Adjustment on design documents	The PoA-DD and the underlying calculation model (Excel File) have been revised accordingly.	

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	Eligibility criteria No. 7: The procedure and the responsibility of the correctness of the stake-holder consultation are not clear.	☑ Finding Closed IRL 73, 76
Requirement	PoA Standard §14g: "The eligibility criteria shall cover as a minimum the following: … The PoA-specific requirements stipulated by the CME including any conditions related to undertaking local stakeholder consultations and environmental impact analysis".	
Corrective Action Request	**Corrective Action Request No.18** PP shall clarify and describe the procedure how Solarpack will control the stakeholder consultation including timing, performance, etc. (i.e. how the managing entity will assure that the stakeholder process complies with the requirements before submitting the CPA for inclusion).	
Response 01	It has been established that the legal requirements for a public consultation during the process of obtaining an Environmental Permit in Chile is in accordance with the requirements of the CDM, and is also transparently published by the national environmental authorities on a website and can be assessed by the CME before submitting the CPA for inclusion. As a CPA is required to submit a proof of compliance with environmental regulations before submitting for inclusion, (Eligibility Criterion 8), a stakeholder consultation process of this sort will necessarily have taken place before submitting the project to a DOE. A CPA implementer also has the option of conducting a local stakeholder consultation through a physical meeting with local community representatives (for example, when a project is smaller than 3MW and does not require a complete environmental impact declaration or assessment. Should the CME have a reason to believe that an additional Stakeholder Consultation meeting is required, it will assist the CPA implementer in conducting such a meeting according to the requirements of the CDM before submitting the CPA for inclusion.	
Assessment 01 Means of validation	After assessment of the revised eligibility criterion and the underlying documentation (i.e. management system), it can be confirmed that the new criterion clearly addresses all the requirements for a stakeholder consultation.	
Adjustment on de-	The PoA-DD and the Management System have been revised accordingly.	

Corrective Action Requests by validation team		
sign documents		

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	It is not clear how all applicable laws/policies and/or regulations are taken into consideration for the inclusion of any CPAs regarding environmental impacts at the planning stage.	☑ Finding Closed IRL 73
Requirement	PoA Standard §14g: "The eligibility criteria shall cover as a minimum the following: … The PoA-specific requirements stipulated by the CME including any conditions related to undertaking local stakeholder consultations and environmental impact analysis".	
Corrective Action Request	**Corrective Action Request No.19** PP shall include clear criteria that the CPA implementer shall follow all latest laws/policies and/or regulations, which are available at the time of the CPA inclusion and which might constitute any obligation to the implementing entities of any of the PV plants.	
Response 01	The Eligibility Criteria have been revised as to include the PoA-specific requirements in terms of environmental impact assessment and stakeholder consultation. Any CPA shall have a proof of compliance with environmental legislation (for example, an Environmental Permit) and of a stakeholder consultation conducted as per the requirements of the CDM before being submitted to a DOA for inclusion.	
Assessment 01 Means of validation	After assessment of the revised eligibility criterion it can be confirmed that the new criterion clearly addresses all the requirements for the environmental impact analysis.	
Adjustment on de-sign documents	The PoA-DD has been revised accordingly.	

Corrective Action Requests by validation team

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	It is not clear how it is ensured that the CPA implementer follows all latest laws, policies and/or regulations.	☑ Finding Closed IRL 73
Requirement	VVS §192: "The DOE shall determine whether, in establishing the boundary of the PoA, the project participants have taken into consideration all applicable national and/or sectoral policies and regulations within that chosen boundary."	
Corrective Action Request	**Corrective Action Request No.20** PP shall include clear criteria that the CPA implementer have taken into consideration all applicable national and/or sectoral policies and regulations within that chosen boundary, which are available at the time of the CPA inclusion.	
Response 01	An eligibility criterion has been included in this regard. A template of a declaration has been prepared.	
Assessment 01 Means of validation	After assessment of the newly included eligibility criterion it can be confirmed that this criterion clearly addresses all the requirements to take all applicable national and/or sectoral policies and regulations into consideration.	
Adjustment on design documents	The PoA-DD has been revised accordingly.	

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	Section A.1 (Part II) is missing a description of each generic CPA.	☑ Finding Closed IRL 55
Requirement	PoA-DD template and guidelines.	
Corrective Action Request	**Corrective Action Request No.21** PP shall follow the PoA-DD template and guidelines and add description of each generic CPA.	

Corrective Action Requests by validation team		
Response 01	The PoA only considers one technology/measure, i.e. a greenfield, ground-mounted grid-connected photovoltaic power plant. No other options of the methodology or combinations of methodologies are eligible under the present PoA. However, according to the requirements for project activities under PoAs in ACM0002 version 13, p.p.12-13, "CPAs are regarded to be of the same type if they are similar with regard to the demonstration of additionality, emission reduction calculations and monitoring." Therefore, 2 generic CPA types have been identified, differing only in the eligibility criterion pertaining to demonstration of additionality.	
Assessment 01 Means of validation	After review of the revised PoA-DD, the assessment team confirms that the description is now included in the relevant section.	
Adjustment on design documents	Section A.1. (Part II) of the PoA-DD has been revised accordingly.	

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	Section B.2 (Part II): The PoA-DD states that the applicability conditions are fulfilled for a typical CPA. It is not clear if only typical CPAs will be included or if there will be any “un-typical” CPAs. Furthermore, it is not clear that the project activity is the installation of a power plant (or also a replacement/retrofit, etc.).	☑ Finding Closed IRL 55
Requirement	PoA-DD template and guidelines. PS §16 “completeness” and §19” transparency”. VVS §17d “Assess the accuracy, conservativeness, relevance, completeness, consistency, and transparency of the information provided by project participants”. PoA Standard §14e: “The eligibility criteria shall cover as a minimum the following: … Conditions that ensure compliance with applicability and other requirements of single or multiple methodologies applied by CPAs”.	

Corrective Action Requests by validation team		
Corrective Action Request	**Corrective Action Request No.22** PP shall clarify the meaning of "typical". Furthermore, PP shall clarify which project types are to be included (installation, replacement, retrofit, etc.).	
Response 01	The term "typical CPA" is a remnant from the previous version of the PoA-DD form. Reference to "typical CPA" in the PoA-DD has been revised or deleted throughout the PDD. A CPA under the present PoA will not consist in a retrofit or a replacement of an existing power plant.	
Assessment 01 Means of validation	The "typical CPA" is mentioned at various sections throughout the revised PoA-DD. PP shall clarify the definition of "typical" CPA where ever it is stated in the revised PoA-DD (see also follow-up on CAR4).	
Response 02	The phrase has been deleted.	
Assessment 02 Means of validation	After review of the revised Generic CPA-DD, the assessment team confirms that the description of a "typical" CPA has been removed so that there are no doubts left with respect to the understanding of a "typical" CPA.	
Adjustment on design documents	The Generic CPA-DD was revised with respect to the wording of "typical" CPA and the revised descriptions are transparent and complete.	

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	A flow diagram is missing in B.3 (Part II).	☑ Finding Closed IRL 55
Requirement	PoA-DD template and guidelines.	
Corrective Action Request	**Corrective Action Request No.23** PP shall follow the PoA-DD template and guidelines.	
Response 01	A flow diagram has been added.	

Corrective Action Requests by validation team		
Assessment 01 Means of validation	After checking the revised PoA-DD, the assessment team confirms that a flow diagram has been added. Furthermore, it can be confirmed that the flow diagram correctly presents the project set-up including the equipments, systems and flows of mass and energy.	
Adjustment on design documents	The PoA-DD has been revised accordingly and the missing flow diagram has been added.	

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	Eligibility criteria No. 9: The description of the target group (e.g. domestic/commercial/industrial, rural/urban, grid-connected/off-grid) and distribution mechanisms (e.g. direct installation) are missing.	☑ Finding Closed IRL 73
Requirement	PoA Standard §14i: "The eligibility criteria shall cover as a minimum the following: … Where applicable, target group (e.g. domestic/commercial/industrial, rural/urban, grid-connected/off-grid) and distribution mechanisms (e.g. direct installation)".	
Corrective Action Request	**Corrective Action Request No.24** PP shall add more information with respect to eligibility criterion "target group"	
Response 01	A relevant eligibility criterion has been included.	
Assessment 01 Means of validation	After checking the revised PoA-DD, the assessment team confirms that the missing criterion was properly added.	
Adjustment on design documents	The PoA-DD has been revised accordingly and the eligibility criterion was added.	

Corrective Action Requests by validation team

	Comments and Results	Conclusion and IRL
Issue	Eligibility criteria No. 10: The conditions related to sampling requirements for a PoA are missing.	☑ Finding Closed IRL 73
Requirement	PoA Standard §14f: ""The eligibility criteria shall cover as a minimum the following: …Where applicable, the conditions related to sampling requirements for a PoA in accordance with the approved guidelines/standard from the Board pertaining to sampling and surveys";	
Corrective Action Request	**Corrective Action Request No.25** PP shall add more information with respect to eligibility criterion "sampling".	
Response	The applicability of each requirement of §14 of the PoA Standard has been discussed. A sampling plan is not required for the PoA as none of the parameters used for the emission reduction calculation are determined through sampling.	
Assessment Means of validation	After assessment of the revised PoA-DD, it can be confirmed that sampling is now listed and also the rationale why sampling is not applicable for this PoA is clearly explained (i.e. none of the parameters used to calculate the CERs is based on sampling, i.e. each parameter is monitored in line with the methodology).	
Adjustment on project design	The PoA-DD has been revised accordingly and the eligibility criterion was revised accordingly.	

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	The technical lifetime is not consistent throughout the documents.	☑ Finding Closed IRL 73, 24, 70
Requirement	PS §17 "consistency". VVS §17d "Assess the accuracy, conservativeness, relevance, completeness, consistency, and transparency of the information provided by project participants".	
Corrective Action Request	**Corrective Action Request No.26** PP shall ensure that the lifetime is consistent throughout the documents. Supporting evidences	

Corrective Action Requests by validation team		
	for the lifetime shall be provided to the assessment team.	
Response 01	The expected technical lifetime of a CPA has been updated consistently throughout the document. The relevant documents were provided.	
Assessment 01 Means of validation	After review of the revised documents, it can be confirmed that the expected lifetime of 25 years is now consistently indicated. In addition, the assessment team confirms that the lifetime of 25 years is reasonable and appropriate.	
Adjustment on design documents	The PoA-DD has been revised accordingly and the lifetime is now consistently indicated with 25 years.	

Clarification Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	Supporting evidences for some eligibility criteria and other requirements are missing.	☑ Finding Closed IRL 77, 78, 47
Requirement	VVS §17d “Assess the accuracy, conservativeness, relevance, completeness, consistency, and transparency of the information provided by project participants”.	
Clarification Request	**Clarification Request No. 1** PP shall submit the following evidences to the assessment team: - ODA Declaration - Double-Counting Declaration - Testing Certification - MoC - LoA	
Response	All declarations have been submitted to the DOE. An MoC has been submitted to the DOE.	

Clarification Requests by validation team		
	The Letter of Approval is pending, expected to be issued shortly.	
Assessment Means of validation	After review of the provided template, the assessment team confirms that the relevant declarations including statement on ODA, double-counting and the compliance with testing and certification are clearly listed in the template that will be signed between each CPA implementer and the CME. The MoC was also provided. Finally, the LoA was also provided to the DOE. Hence, all necessary documents are available.	
Adjustment on project design	n.a.	

Forward Action Requests by audit team		
	Comments and Results	
Issue	None	n.a.
Requirement	-	
Forward Action Request	-	

List of Findings - Compilation and Resolutions

Version: 04.1

Project Title: Programme for the promotion and development of grid connected solar PV projects in Latin America

CPA Title: Calama Solar 1: 9MW Solar Photovoltaic Power Plant

Definitions	
Shall / Should / May	In addition to the definitions contained in the Glossary of CDM terms, the following terms apply in the VVS (VVS/10): Shall is used to indicate requirements to be followed; Should is used to indicate that among several possibilities, one course of action is recommended as particularly suitable; May is used to indicate what is permitted.
Credible	Information is credible if it is authentic and is able to inspire belief or trust, and the willingness of persons to accept the quality of evidence. (VVS/17)
Reliable	Information is reliable if the quality of evidence is accurate and credible and able to yield the same results on a repeated basis. (VVS/17)
CAR	The DOE shall raise a corrective action request (CAR) if one of the following situations occurs (VVS/27): (a) The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable, verifiable and additional emission reductions; (b) The applicable CDM requirements have not been met; (c) There is a risk that emission reductions cannot be monitored or calculated.
CL	The DOE shall raise a clarification request (CL) if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met. (VVS/26)
FAR	The DOE shall raise a forward action request (FAR) during validation to identify issues related to project implementation that require review during the first verification of the project activity. The DOE shall not raise a FAR that relates to the CDM requirements for registration (VVS/27)

Compilation and Resolutions of CARs, CRs of the CPA-DD

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	Version number and completion date of the CPA.	☑ Finding Closed IRL 56
Requirement	CPA-DD template and guidelines. PS §16[1] "completeness" and §19 "transparency". VVS[2] §17d "Assess the accuracy, conservativeness, relevance, completeness, consistency, and transparency of the information provided by project participants".	
Corrective Action Request	**Corrective Action Request No.1** PP shall add in section A.2 of the CPA-DD the current version number and the completion date of the CPA-DD .	
Response	The CPA-DD was revised accordingly.	
Assessment Means of validation	The current version number and the completion date have been added to the revised CPA-DD and are now in line with the CPA-DD templates and guidelines.	
Adjustment on project design	The CPA-DD has been revised accordingly.	

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	Section A.4 is missing the information, if the CPA implementer is a PP	☑

[1] PS = CDM Project Standard (Version 01.0)

[2] VVS = Validation and Verification Standard (Version 02.0)

Corrective Action Requests by validation team		
Requirement	CPA-DD template and guidelines. PS §16 “completeness” and §19 “transparency”. VVS §17d “Assess the accuracy, conservativeness, relevance, completeness, consistency, and transparency of the information provided by project participants”.	Finding Closed IRL 56
Corrective Action Request	**Corrective Action Request No.2** PP shall make clear if the CPA implementer is a PP..	
Response	Calama Solar 1 S.A. is not a project participant in the PoA as its name is not listed in the PoA-DD. A sentence was added in the CPA-DD for clarification.	
Assessment Means of validation	After review of the revised CPA-DD, the assessment team confirms that the relevant information is now included in the relevant section.	
Adjustment on project design	Section A.4. of the CPA-DD has been revised accordingly.	

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	The technical description of the CPA is missing some technical specifications such as load factor and efficiencies, monitoring equipment etc.	☑ Finding Closed IRL 74
Requirement	CPA-DD template and guidelines. PS §16 “completeness” and §19 “transparency”. VVS §17d “Assess the accuracy, conservativeness, relevance, completeness, consistency, and transparency of the information provided by project participants”. EB 48, Annex 11: Guidelines for the reporting and validation of plant load factors (§3)	
Corrective Action Request	**Corrective Action Request No.3** PP shall follow the CPA-DD template and guidelines and add proper technical specifications.	

Corrective Action Requests by validation team		
Response 01	Relevant information has been provided in the CPA-DD.	
Assessment 01 Means of validation	After review of the revised CPA-DD, the assessment team confirms that the relevant technical information is now included in the relevant section. However, according to EB 48, annex 11, para 3 “The plant load factor shall be defined ex-ante in the CDM-PDD according to one of the following three options: (a) The plant load factor provided to banks and/or equity financiers while applying the project activity for project financing, or to the government while applying the project activity for implementation approval; (b) The plant load factor determined by a third party contracted by the project participants (e.g. an engineering company);	
Response 02	The plant load factor provided is based on the application of the project to the government for environmental approval. The CPA-DD has been updated accordingly.	
Assessment 02 Means of validation	After review of the revised CPA-DD, the plant load factor provided is based on the application of the project to the government for environmental approval, which is in line with the requirement of EB48, annex 11, §3(a) and can be accepted by the assessment team.	
Adjustment on project design	The respective section of the CPA-DD has been revised accordingly.	

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	Section A.8.1 of the CPA-DD is missing the determination of the starting date of the CPA.	☑ Finding Closed IRL 56
Requirement	CPA-DD template and guidelines. PS §16 “completeness” and §19 “transparency”. VVS §17d “Assess the accuracy, conservativeness, relevance, completeness, consistency,	

Corrective Action Requests by validation team		
	and transparency of the information provided by project participants".	
Corrective Action Request	**Corrective Action Request No.4** PP shall determine the starting date of the CPA.	
Response	The choice of the starting date has been clarified in the CPA-DD.	
Assessment Means of validation	After review of the revised CPA-DD, the assessment team confirms, that the start date of the CPA has been clearly indicated.	
Adjustment on project design	Section A.8.1. of the CPA-DD has been revised accordingly.	

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	The operational lifetime under section A.8.2. is not fully determined, i.e. months are missing.	☑ Finding Closed IRL 56
Requirement	CPA-DD template and guidelines. PS §16 "completeness" and §19 "transparency". VVS §17d "Assess the accuracy, conservativeness, relevance, completeness, consistency, and transparency of the information provided by project participants".	
Corrective Action Request	**Corrective Action Request No.5** PP shall be precise in defining the operational lifetime.	
Response	The number of months was added.	
Assessment Means of validation	The operational life time is fully determined in the revised CPA-DD, i.e. years and months.	
Adjustment on pro-	Section A.8.2 of the CPA-DD has been revised accordingly.	

Corrective Action Requests by validation team		
ject design		

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	The starting date of the estimated amount of GHG emission reductions table is not clear, (i.e. not the full year is covered for the first and last year).	☑ Finding Closed IRL 56
Requirement	PS §16 “completeness” and §19 “transparency”. VVS §17d “Assess the accuracy, conservativeness, relevance, completeness, consistency, and transparency of the information provided by project participants”.	
Corrective Action Request	**Corrective Action Request No.6** PP shall clarify the starting date of the estimated amount of GHG emission reduction in section A.10.	
Response	The starting date of the crediting period has been revised to 01/01/2014. The table has been revised accordingly and all of the 10 years of the crediting period are now full years.	
Assessment Means of validation	Starting date has been revised to 01/01/2014 and all 10 years of the crediting period are full years.	
Adjustment on pro-ject design	Section A.10. of the CPA-DD has been revised accordingly.	

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	In section D.3 information of evidences are missing to proof that the CPA is located within the geographical boundary of the proposed PoA.	☑

Corrective Action Requests by validation team		
Requirement	CPA-DD template and guidelines. PS §16 “completeness” and §19 “transparency”. VVS §17d “Assess the accuracy, conservativeness, relevance, completeness, consistency, and transparency of the information provided by project participants”.	Finding Closed IRL 24
Corrective Action Request	**Corrective Action Request No.7** PP shall include the proof that the CPA is located within the geographical boundary of the proposed PoA.	
Response	The PDD has been revised as to include proof that the CPA is located within the geographical boundary of the proposed PoA.	
Assessment Means of validation	The proof that the CPA is located within the geographical boundary has been proved in the revised CPA-DD and can be accepted by TÜV SÜD.	
Adjustment on project design	Section D.3 of the CPA-DD has been revised accordingly.	

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	The applicable range for the common practice analysis is not clear.	☑ Finding Closed IRL 55, 56
Requirement	EB 63, annex 11, para 5 (a): “The project is the first in the applicable geographical area that applies a technology that is different from any other technologies able to deliver the same output and that have started commercial operation in the applicable geographical area before the start date of the project”.	
Corrective Action Request	**Corrective Action Request No.8** PP shall clarify why power plants are mentioned, which do not fall under the applicable range mentioned in the CPA-DD.	

Corrective Action Requests by validation team		
Response	The power plants that do not fall under the applicable range were removed from the table in Step 3.	
Assessment Means of validation	The common practice has been provided on a PoA level; hence this CAR is not relevant any-more and has been kept for transparency reason.	
Adjustment on pro-ject design	Both sections of the PoA-DD and the CPA-DD have been revised accordingly.	

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	Section D.6. is missing detailed justification of every selection of options. However, the data vintage taken for the OM calculation is not consistent with the data vintage taken for the BM calculation (regarding the year, i.e. 2008-2010 vs. 2011).	☑ Finding Closed IRL 74, 75
Requirement	PS §16 “completeness” and §19 “transparency”. VVS §17d “Assess the accuracy, conservativeness, relevance, completeness, consistency, and transparency of the information provided by project participants”.	
Corrective Action Request	**Corrective Action Request No.9** PP shall justify every selection of options for the emission factor calculation. In addition PP shall ensure consistency with respect to the data vintages for OM and BM calculation.	
Response	The justification of options and methodological choices has been included in each relevant sec-tion of the CPA-DD. The emission reduction calculation model has been revised to ensure con-sistency of the data vintages for OM and BM calculation.	
Assessment Means of validation	The justification of options and the methodological choices for the calculation of the operating margin, the build margin and the combined margin have been included in section 6.1. of the CPA-DD. Each option and choice of the emission factor calculation is in line with the respective tool. For the OM a 3-year generation-weighted average is used, which covers the years from	

Corrective Action Requests by validation team		
	2009 till 2011, while for the BM data from 2011 is used. Both data vintages for the OM and BM calculation are now consistent and can be accepted by the assessment team.	
Adjustment on project design	The CPA-DD has been updated in the respective section reflecting the justification of every selection of options as well as a consistent data vintage for the OM and BM calculation.	

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	The description of the source of data as well as the monitoring frequency is not in line with the latest version of the methodology.	☑ Finding Closed IRL 56
Requirement	EB 66, ACM0002 / Version 13.0.0	
Corrective Action Request	**Corrective Action Request No.10** PP shall describe the source of data as well as the monitoring frequency according to the latest version of the methodology.	
Response	The CPA-DD has been revised accordingly.	
Assessment Means of validation	The table has been corrected in the revised CPA-DD according to the latest version of the methodology.	
Adjustment on project design	The final CPA-DD has been revised accordingly.	

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	The industry standard for calibration is not clear.	☑

Corrective Action Requests by validation team		
Requirement	EB 23, Report (extract), para 24: "The Board considered recommendations by the Meth Panel and agreed that the specific uncertainty levels, methods and associated accuracy level of measurement instruments and calibration procedures to be used for various parameters and variables should be identified in the PDD, along with detailed quality assurance and quality control procedures. In addition standards recommended shall either be national or international standards. The verification of the authenticity of the uncertainty levels and instruments are to be undertaken by the DOE during the verification stage."	Finding Closed IRL 79
Corrective Action Request	**Corrective Action Request No.11** PP shall define the industry standard, which will be used for the calibration of the electricity meters.	
Response	The industry standard has been defined as that set by the Transmission System Operator. The relevant reference has been provided in Section D.7.2. of the CPA-DD.	
Assessment Means of validation	The meters will be calibrated according to the applicable industry standard, which are set the by Transmission System Operator of the CDEC-SING. The procedure "Energy measurement Systems" has been delivered to the assessment team and can be accepted as a valuable source for the calibration of the meters.	
Adjustment on project design	In the final CPA-DD the document and the source for the calibration standard has been added.	

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	The full names for several abbreviations throughout the CPA-DD are missing.	☑ Finding Closed IRL 56
Requirement	PS §16 "completeness" and §19 "transparency". VVS §17d "Assess the accuracy, conservativeness, relevance, completeness, consistency, and transparency of the information provided by project participants".	

Corrective Action Requests by validation team		
Corrective Action Request	**Corrective Action Request No.12** PP shall provide full names for all abbreviations mentioned in the CPA-DD.	
Response	The CPA-DD has been revised accordingly.	
Assessment Means of validation	After checking the revised CPA-DD, the assessment team confirms that full names are provided for any abbreviations.	
Adjustment on project design	The CPA-DD has been revised accordingly.	

Corrective Action Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	It is not clear how PPs invited local stakeholders to provide comments on the proposed CPA. It is also not clear how due steps/actions were taken to appropriately engage stakeholders and solicit comments.	☑ Finding Closed IRL 74, 72, 36, 80, 81
Requirement	PS§ 66 “Project participants shall invite comments from local stakeholders in an open and transparent manner, in a way that facilitates comments to be received from local stakeholders and allows for a reasonable time for comments to be submitted. Project participants shall describe the proposed CDM project activity or PoA in a manner that allows the local stakeholders to understand the project activity or PoA, taking into account confidentiality provisions of the applicable CDM M&Ps.”	
Clarification Request	**Corrective Action Request No.13** PP shall clarify how the stakeholder consultation is in line with the requirements of the PS as outlined above.	
Response	The stakeholder consultation process has been clarified both in the PoA-DD and the CPA-DD.	
Assessment	After assessing the revised CPA-DD, the relevant underlying documents, i.e. “Regulation of the Environmental Impact Assessment” and the “Environmental Impact Declaration System” includ-	

Corrective Action Requests by validation team		
Means of validation	ing the relevant website for natural and juridical persons to provide comments on the project during the evaluation stage, it can be confirmed that the local stakeholder consultation process is clearly in line with the respective paragraph of the Project Standard. In addition to this formal process the project was presented at an energy forum of the Northern Interconnected System (Foro SING 2009) in Antofagasta. The presentation is still available in the web, which informs about the project activity in a way that allows the local stakeholders to understand the project activity.	
Adjustment on project design	The CPA-DD has been revised addressing the above mentioned issue with respect to the local stakeholder consultation process.	

Clarification Requests by validation team		
	Comments and Results	Conclusion and IRL
Issue	Evidence for eligibility criteria nr. 3 is missing.	☑ Finding Closed IRL 82
Requirement	VVS §17d “Assess the accuracy, conservativeness, relevance, completeness, consistency, and transparency of the information provided by project participants”.	
Clarification Request	**Clarification Request No. 1** PP shall submit a testing/certification document for Calama Solar 1.	
Response	A declaration by the CPA implementer has been submitted to the DOE.	
Assessment Means of validation	A sworn declaration has been submitted by the PP, in which is stated that the equipment used in the Project will comply with the applicable national/international standards. Hence, this can be accepted by the assessment team.	
Adjustment on design documents	The eligibility criteria nr. 3 has been specified and includes now the submission of the evidence that equipment used in the project will comply with national/international standards or certifications	

Forward Action Requests by audit team		
	Comments and Results	
Issue	None	n.a.
Requirement	-	
Forward Action Request	-	

Annex 2
Information Reference List

Project title: Programme for the promotion and development of grid-connected solar PV projects in Latin America
Document revision number: 04.1

Interviewed Persons during onsite audit:

Name	Function	Company
Martha Djourdjin	CDM Consultant	Bridge Builders
Gonzalo de Rojas	Business Developer	Solarpack Chile S.A.
Gloria Aliaga	Director of Planning Secretary	Municipality Calama
Veronica Galleguillo	Civil Engineer	Municipality Calama
Eliezer Chamorro Vargas	Engineer	Municipality Calama
Luis Alfaro	Urban Consultant	Municipality Calama
Diego Zunigo	Provincial Head Officer	Provincial Office of Calama
Karen Rojas	Lawyer	Provincial Office of Calama
Javier Arellano	Director - Manager	Solarpack Chile S.A.

Other Interviewed Persons (not during onsite audit):

Name	Function	Institution/Company	Date of Interview
n.a.	-	-	-

Ref. No.	Author/Editor/ Issuer	Title/Type of Document. Publication place	Issuance and/or submission date (dd/mm/yyyy)	Additional Information (Relevance in CDM Context)
0.	UNFCCC	"Programme for the promotion and development of grid-connected solar PV projects in Latin America": http://cdm.unfccc.int/ProgrammeOfActivities/Validation/DB/80Z6MV07MEK89RW58LERLKO0O8AEHR/view.html	Available online	
1.	Bridge Builders / Solarpack	PoA-DD (Version 01): "Programme for the promotion and development of grid-connected solar PV projects in Latin America"	20/03/2012	GSP DD
2.	Bridge Builders / Solarpack	CPA-DD (Version 01): "Calama Solar 1: 9MW Solar Photovoltaic Power Plant" und the PoA "Programme for the promotion and development of grid-connected solar PV projects in Latin America"	20/03/2012	GSP DD
3.	Bridge Builders / Solarpack	Generic CPA-DD (Version 01): "Programme for the promotion and development of grid-connected solar PV projects in Latin America"	20/03/2012	GSP DD
4.	Phoenix Sun	Solar in the "Sunbelt Countries": http://thephoenixsun.com/archives/tag/sunbelt-countries	15/12/2009	
5.	Local newspaper "Loactual"	Newspaper article: "Deputies visited Spanish PV manufacturing plant Chuquicamata" http://www.loactual.cl/noticias/15-03-2012/Diputados_espanoles_visitaron_planta_industrial_fotovoltaica_en_Chuquicamata	15/03/2012	
6.	National Energy Commission (CNE)	Laws and regulations for the energy sector (general) http://www.cne.cl/normativas/energias/electricidad/529-sector-electrico	n.a.	
7.	National Energy Commission (CNE)	Laws and regulations for the energy sector (renewable) http://www.cne.cl/normativas/energias/renovables	n.a.	

Ref. No.	Author/Editor/ Issuer	Title/Type of Document. Publication place	Issuance and/or submission date (dd/mm/yyyy)	Additional Information (Relevance in CDM Context)
8.	European Photovoltaic Industry Association (EPIA)	"Solar Generation 6. Solar Photovoltaic Electricity Empowering the World"; http://www.epia.org/publications/epiapublications/solar-generation-6.html	2011	
9.	European Communities	Photovoltaic Solar Energy	2009	
10.	Tennessee Valley Authority	Schematic representation of a PV plant; http://www.tva.gov/greenpowerswitch/solar_diagram.htm	n.a.	
11.	European Photovoltaic Industry Association (EPIA)	Unlocking the Sunbelt - Potential of Photovoltaics (Second Edition); http://www.epia.org/fileadmin/EPIA_docs/public/EPIA_Unlocking_the_Sunbelt_Potential_of_Photovoltaics_v2.pdf	October 2010	
12.	Chilean Ministry of the Economy, Development and Reconstruction	Article 165 of the Decree DFL-4/20018; http://www.economia.cl/transparencia/pdf/decretos_fuerza_ley/DFL%204,%202006.pdf		
13.	National Energy Commission (CNE)	"Installed Generation Capacity"; http://www.cne.cl/images/stories/estadisticas/energia/Electricidad/capacidad_instalada_de_generacion.xls	2012	
14.	CDEC-SING	Power Generation Facilities; http://cdec2.cdecsing.cl/pls/portal/url/PAGE/PG_CDEC_001/inf_nt_pmgd_central	2012	
15.	Solarpack Chile S.A.; Bridge Builders UG	Management System, Solarpack Chile S.A.: Programme for the promotion and development of grid-connected solar PV projects in Latin America, Version 1.0	March 2012	
16.	Solarpack Chile S.A.;	Agreement for the design and development of the CDM PoA and Amendment	19/12/2011	

Ref. No.	Author/Editor/ Issuer	Title/Type of Document. Publication place	Issuance and/or submission date (dd/mm/yyyy)	Additional Information (Relevance in CDM Context)
	Bridge Builders	to the Agreement for a large scale PoA	24/01/2012	
17.	Chilean Government	Law N° 19.300, “The Environmental General Basis Law”; http://www.leychile.cl/Navegar?idNorma=30667		
18.	Chilean Government	Law N° 20.417, Modification to “The Environmental General Basis Law”; http://www.ist.cl/acerca_ley/leyes/ds30.pdf; http://www.sea.gob.cl/contenido/que-es-el-sistemade-evaluacion-de-impacto-ambiental		
19.	Bridge Builders, Solarpack Chile S.A.	Inclusion Manual (Excel File)	April 2012	
20.	Bridge Builders, Solarpack Chile S.A.	Emission Reduction Calculations – Calama Solar	March 2012	
21.	SING	Data from the TSO of the SING (installed capacity): http://cdec2.cdec-sing.cl/portal/page?_pageid=33,44061&_dad=portal&_schema=PORTAL	2003 - 2012	
22.	SEIA	Official responses during local stakeholder consultation with regard to the environmental Permit: http://seia.sea.gob.cl/documentos/documento.php?idDocumento=4137043	2009	Environmental analysis, stakeholder consultation for Calama Solar 1
23.	UNFCCC	Tool to calculate the emission factor for an electricity system; Version 02.2.1	29/09/2011	
24.	CONAMA Antofagasta	Environmental Qualification Resolution (RCA)	12/01/2010	Cross-check on technical lifetime
25.	SING	Data from the SING: http://cdec2.cdec-sing.cl/pls/portal/cdec.pck_inf_anuario_pub.sp_consu_central_buscar	various	EF calculation

Ref. No.	Author/Editor/ Issuer	Title/Type of Document. Publication place	Issuance and/or submission date (dd/mm/yyyy)	Additional Information (Relevance in CDM Context)
26.	CNE	National Energy Balances http://www.cne.cl/estadisticas/balances-energeticos	2008	EF calculation
27.	CDEC	Electricity generation: http://cdec2.cdec-sing.cl/pls/portal/cdec.pck_oper_real_pub.rpt_gen_centrales_sing_x_annos	2003 - 2012	
28.	Calama Solar 1 S.A.	Monitoring Manuals	n.a.	
29.	CDEC-SING	Generation Plants: http://cdec2.cdec-sing.cl/pls/portal/CDEC.MENU_INSTAL_GENE.show	2012	
30.	CDEC-SING 2011	Yearly Fuel Consumption: http://cdec2.cdec-sing.cl/pls/portal/cdec.pck_inf_anuario_pub.sp_consu_central_anual	2001 -2010	
31.	IPCC 2006	Guidelines for National Greenhouse Gas Inventories, Volume 2, Chapter 1, Table 1.4	2006	
32.	Energia Esencial (E.CL)	Press release: http://www.e-cl.cl/prontus_ecl/site/artic/20110805/pags/20110805152040.php	05/08/2011	
33.	Calama Solar 1 S.A.	Application for the concession of the terrain of the project	21/01/2009	
34.	Calama Solar 1 S.A.	Application for environmental permit through submitting an Environmental Impact Diagnosis (DIA); http://seia.sea.gob.cl/documentos/documento.php?idDocumento=4012352	01/09/2009	
35.	Ministry of National Assets Antofagasta	Communication of the Resolution of terrains: Concession for the land; (Negotiations between the Ministry and Calama Solar 1 S.A.on Down-payment for the concession of the land, start date of the CPA will be in the future)	17/01/2012	Cross-check on land lease rate

Ref. No.	Author/Editor/ Issuer	Title/Type of Document. Publication place	Issuance and/or submission date (dd/mm/yyyy)	Additional Information (Relevance in CDM Context)
36.	SEA/Solarpack	Environmental Impact Declaration; http://seia.sea.gob.cl/documentos/documento.php?idDocumento=4012352	August 2009	
37.	CNE	Historical electricity price comparison between the Central Interconnected System (SIC) and the Northern Interconnected System (SING); http://www.cne.cl/estadisticas/energia/electricidad	1982 - 2912	
38.	Bridge Builders, Solarpack Chile S.A.	Inclusion Manual (Excel File)	May 2012	
39.	CDEC-SING 2012	Fuel consumption per plant: http://cdec2.cdecsing.cl/pls/portal/cdec.pck_inf_anuario_pub.sp_consu_central_buscar		
40.	CDEC-SING 2012	Technical information: http://cdec2.cdecsing.cl/pls/portal/CDEC.MENU_INSTAL_GENE.show		
41.	Ministry of Energy 2011	Energy Balance 2010: http://antiguo.minenergia.cl/minwww/opencms/14_portal_informacion/06_Estadisticas/Balances_Energ.html,	2010	
42.	CDEC-SING 2012	Yearly electricity generation: http://cdec2.cdecsing.cl/pls/portal/cdec.pck_oper_real_pub.rpt_gen_centrales_sing_x_annos,		
43.	CDEC-SING 2012	“Procedure (DP): Energy Measurement Systems” (Spanish) http://cdec2.cdecsing.cl/pls/portal/cdec.pck_proc_dodp_pub.proced_hist_dodp_item?p_id=17&p_clasif_direcc=2&p_tipo_proc=DP&p_de_donde=W	2012	

Ref. No.	Author/Editor/ Issuer	Title/Type of Document. Publication place	Issuance and/or submission date (dd/mm/yyyy)	Additional Information (Relevance in CDM Context)
44.	Solarpack Chile S.A.	Constitution of Solarpack Chile S.A.	21/11/2008	
45.	UNFCCC	Guidelines on the assessment of investment analysis; Version 05	15/07/2011	
46.	Bridge Builders	Cash Flow IRR Calculation Model (Version 1.2) including tables with eligible ranges of the relevant economic and technical parameters	June 2012	
47.	National Environment Commission	Letter of approval (LoA) for “Programme for the promotion and development of grid-connected solar PV projects in Latin America”	27/07/2012	
48.	UNFCCC	Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities (Version 01.0)	25/11/2011	PoA Standard
49.	National Environment Commission	E-mail confirming the authenticity of the LoA	08/08/2012	
50.	Conservador de Bienes Raices de Santiago (CBRS)	Business license for Solarpack S.A. Chile (commercial registry)	12/04/2012	
51.	Conservador de Bienes Raices de Santiago (CBRS)	Business license for Calama Solar 1 S.A. (commercial registry)	12/04/2012	
52.	Calama Solar 1 S.A	Constitution of Calama Solar 1 S.A. , a contract, which substantiate that Calama Solar 1 S.A. can carry out the implementation of the CPA	17/12/2008	Cross-check on MoC
53.	Bridge Builders / Solarpack	PoA-DD (Version 1.1): “Programme for the promotion and development of grid-connected solar PV projects in Latin America”	04/05/2012	
54.	Bridge Builders /	CPA-DD (Version 1.1): “Calama Solar 1: 9MW Solar Photovoltaic Power Plant”	04/05/2012	

Ref. No.	Author/Editor/ Issuer	Title/Type of Document. Publication place	Issuance and/or submission date (dd/mm/yyyy)	Additional Information (Relevance in CDM Context)
	Solarpack	und the PoA “Programme for the promotion and development of grid-connected solar PV projects in Latin America”		
55.	Bridge Builders / Solarpack	PoA-DD (Version 1.2): “Programme for the promotion and development of grid-connected solar PV projects in Latin America”	04/06/2012	
56.	Bridge Builders / Solarpack	CPA-DD (Version 1.2): “Calama Solar 1: 9MW Solar Photovoltaic Power Plant” und the PoA “Programme for the promotion and development of grid-connected solar PV projects in Latin America”	04/06/2012	
57.	Solarpack Chile S.A.	Presentation of Solarpack Chile S.A.	n.a.	
58.	Solarpack Chile S.A.	Presentation of Calama Solar 1 S.A.	n.a.	
59.	Elecda; Solarpack Chile S.A.	Agreement of the connection point with the grid	28/03/2011	
60.	UNFCCC	Approved consolidated baseline and monitoring methodology ACM0002: “Consolidated baseline methodology for grid-connected electricity generation from renewable sources” (Version 13)	11/05/2012	
61.	Solarpack Chile S.A.	Letter sent to EB from Ms. Bruna Marghetto – Brazil, Re: Clarification Request: Additionality of first of its kind project activities under PoA. 27/01/2012	27/01/2012	
62.	Enertis Solar	Enertis Report regarding economic valuation	10/06/2011	
63.	Enertis Solar	Due diligence technical report of a 1MW PV Plant located in Calama Chile, page 96 out of 103	13/04/2011	Cross-check on O&M costs
64.	AON Insurance Company – Project Finance Division	Financial Considerations regarding the Project Calama Solar 3	(18/04/2012)	Cross-check on insurance rates

Ref. No.	Author/Editor/ Issuer	Title/Type of Document. Publication place	Issuance and/or submission date (dd/mm/yyyy)	Additional Information (Relevance in CDM Context)
65.	Government of Chile	Law regarding Tax on the Rent – art. 31 – page 37 – point 5; www.sii_cl/pagina/jurisprudencia/legislacion/basica/dl824.doc	06/02/2009	Cross-check on accounting residual value
66.	Synex – Consultant Engineer	Income Projection – Solar Project in the SIC – Preliminary Report (S2011/46B)	23/11/2011	Tariffs Projection
67.	Synex – Consultant Engineer	Income Projection for a Solar Plant in the SING – Preliminary Report (S2011/46)	02/11/2011	Tariffs Projection
68.	NREL	Data base from the National Renewable Energies Laboratory "callecsrsoamdata_232", which is available at: http://swera.unep.net/index.php?id=metainfo&rowid=232&metaid=337	14/06/2012	Data on Global Horizontal Radiation
69.	Solarpack Chile (Diego de Almagro)	PVSIST Software available at: (http://www.pvsyst.com/)	14/06/2012	Software used to calculate the production of a Plant in the SIC - Chile
70.	Government of Chile	Chilean standard equipment lifetime values for electricity generation projects (Resolution 43); http://www.sii.cl/documentos/resoluciones/2002/reso43.htm	26/12/2002	Lifetime
71.	TÜV SÜD	A) S 22°26,437'; W 68° 52,441' B) S 22° 26,437'; W 68° 51,971' C) S 22° 26,873'; W 68° 51,973' D) S 22° 26,206'; W 68° 52,010'	June 2012	GPS Coordinates, taken during the on-site audit
72.	Government of Chile	Regulation of the Environmental Impact Evaluation System. (SEIA) Art 54; http://www.ist.cl/acerca_ley/leyes/ds30.pdf	07/12/2002	

Ref. No.	Author/Editor/ Issuer	Title/Type of Document. Publication place	Issuance and/or submission date (dd/mm/yyyy)	Additional Information (Relevance in CDM Context)
73.	Bridge Builders / Solarpack	PoA-DD (Version 1.3): “Programme for the promotion and development of grid-connected solar PV projects in Latin America”	12/07/2012	
74.	Bridge Builders / Solarpack	CPA-DD (Version 1.3): “Calama Solar 1: 9MW Solar Photovoltaic Power Plant” und the PoA “Programme for the promotion and development of grid-connected solar PV projects in Latin America”	12/07/2012	
75.	Bridge Builders / Solarpack	Cash Flow IRR Calculation Model (Version 1.3) including tables with eligible ranges of the relevant economic and technical parameters	12/07/2012	
76.	Bridge Builders	Management System for the “Programme for the promotion and development of grid-connected solar PV projects in Latin America”; Solarpack Chile S.A.; Version 1.30	July 2012	
77.	Bridge Builders / Solarpack	Sworn Declaration by the Company xy (templates including two types: the first one for any CPAs that are developed by the CME, the second one for any CPAs that are not developed by the CME)	July 2012	
78.	Solarpack Chile S.A.	Modalities of Communication (MoC)	18/06/2012	
79.	Transmission System Operator (TSO) CDEC-Sing	“Procedure (DP): Energy Measurement Systems” (Procedimiento (DP) “Sistemas de Medida de Energía”)	28/02/2012	
80.	SEA	Information on how to participate in the evaluation of projects with respect to environmental impact: http://drupal.e-seia.cl/contenido/que-entendemos-por-participacion-ciudadana-en-el-sistema-de-evaluacion-de-impacto-ambienta	Accessed on 02/082012	
81.	Solarpack Chile S.A.	Presentation of the project activity in Antofagasta at an energy forum of the Northern Interconnected System (Foro SING 2009)	2009	

Ref. No.	Author/Editor/ Issuer	Title/Type of Document. Publication place	Issuance and/or submission date (dd/mm/yyyy)	Additional Information (Relevance in CDM Context)
82.	Calama Solar 1 S.A	Sworn declaration for Calama Solar 1	18/06/2012	Evidence for EC 3 testing and certification
83.	UNFCCC	Tool for the demonstration and assessment of additionality, Version 06	25/11/2011	
84.	Bridge Builders/ Solarpack Chile S.A.	Inclusion Manual (Excel File), version 1.3	n.a.	
85.	Konrad Mertens, Hanser Verlag	Photovoltaic Textbook	2011	Cross-check on degradation
86.	Bridge Builders, Solarpack Chile S.A.	Emission Reduction Calculations – Calama Solar, v1.3	July 2012	
87.	National Bank of Chile	http://www.bcentral.cl/eng/index.asp	Accessed on 08/07/2012	Cross-check on exchange rates
88.	Bridge Builders / Solarpack	PoA-DD (Version 1.4): “Programme for the promotion and development of grid-connected solar PV projects in Latin America”	12/09/2012	
89.	Bridge Builders / Solarpack	CPA-DD (Version 1.4): “Calama Solar 1: 9MW Solar Photovoltaic Power Plant” und the PoA “Programme for the promotion and development of grid-connected solar PV projects in Latin America”	12/09/2012	
90.	Synex – Consulting Engineers	Website of the company: www.synex.cl	Accessed on 12/09/2012	
91.	Enertis Solar Group	Website of the company: http://www.enertis.es/EN/home.html	Accessed on 12/09/2012	
92.	Bridge Builders, Solarpack Chile S.A.	Emission Reduction Calculations – Calama Solar, v1.4	September 2012	

Industrie Service

Annex 3
Appointment Certificates

ZERTIFIKAT ◆ CERTIFICATE ◆ 認証書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

CERTIFICATE OF APPOINTMENT

Industrie Service

Ms Hartmann, Katrin, fulfills the requirements of the Certification Body "climate and energy" of TÜV SÜD Industrie Service GmbH to participate in audits.

Qualification applicable to						
Standard	CDM	JI	GS	VCS	VER	Other
Date	23.03.11					

Qualification as						
Status	Trainee	Validator	Verifier	Team Leader	Technical Reviewer	Technical Expert
Date		23.03.11	23.03.11	23.03.11		

Other qualification					
Country Expertise					
Region	1	2	3	4	5
Date	23.03.11				
Financial Expertise					
Date	23.03.11				

Qualification in technical areas	
Technical Area	**Date**
1.2_Energy generation from renewable energy source	07.04.11

This appointment is valid for 1 year from its date of signature below and is bound by internal requirements of the Management System of the Certification Body "climate and energy" of TÜV SÜD Industrie Service GmbH.
In case of loss of validity of this certificate as per result of an assessment according internal procedures or due to any other reason, it will be properly communicated to you.
Your Certificate has the internal reference No. CMS-Z-0013/03.

Date	Signature
07.04.12 Extension of Validity	

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ZERTIFIKAT ◆ CERTIFICATE ◆ 認証書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

CERTIFICATE OF APPOINTMENT

Industrie Service

Ms Wagner, Karin, fulfills the requirements of the Certification Body "climate and energy" of TÜV SÜD Industrie Service GmbH to participate in audits.

Qualification applicable to						
Standard	CDM	JI	GS	VCS	VER	Other
Date	23.03.11					

Qualification as						
Status	Trainee	Validator	Verifier	Team Leader	Technical Reviewer	Technical Expert
Date		23.03.11	23.03.11	23.03.11	23.03.11	

Other qualification					
Country Expertise					
Region	1	2	3	4	5
Date	23.03.11				
Financial Expertise					
Date	23.03.11				

Qualification in technical areas	
Technical Area	**Date**
1.2_Energy generation from renewable energy source	23.03.11

This appointment is valid for 1 year from its date of signature below and is bound by internal requirements of the Management System of the Certification Body "climate and energy" of TÜV SÜD Industrie Service GmbH.
In case of loss of validity of this certificate as per result of an assessment according internal procedures or due to any other reason, it will be properly communicated to you.
Your Certificate has the internal reference No. CMS-Z-0015/02.

Date	Signature
23.03.12 Extension of Validity	

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ZERTIFIKAT ◆ CERTIFICATE ◆ 認証書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

CERTIFICATE OF APPOINTMENT

TÜV SÜD Industrie Service

Mrs Adriana_Amaro, fulfills the requirements of the Certification Body "climate and energy" of TÜV SÜD Industrie Service GmbH to participate in audits.

Qualification applicable to						
Standard	CDM	JI	GS	VCS	VER	Other
Date	22.07.11					

Qualification as						
Status	Trainee	Validator	Verifier	Team Leader	Technical Reviewer	Technical Expert
Date	22.07.11					

Other qualification					
Country Expertise					
Region	1	2	3	4	5
Date		22.07.11			
Further countries					
Financial Expertise					
Date					

Qualification in technical areas	
Technical Area	**Date**
15.1_Agriculture	22.07.11

This appointment is valid for 1 year from its date of signature below and is bound by internal requirements of the Management System of the Certification Body "climate and energy" of TÜV SÜD Industrie Service GmbH.
In case of loss of validity of this certificate as per result of an assessment according internal procedures or due to any other reason, it will be properly communicated to you.
Your Certificate has the internal reference No. CMS-Z-0065/02.

Date	Signature
23.07.2012 Extension of validity	

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ZERTIFIKAT ◆ CERTIFICATE ◆ 認証書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

CERTIFICATE OF APPOINTMENT

TÜV SÜD Industrie Service

Mr Agarwal, Nikunj, fulfills the requirements of the Certification Body "climate and energy" of TÜV SÜD Industrie Service GmbH to participate in audits.

Qualification applicable to						
Standard	CDM	JI	GS	VCS	VER	Other
Date	22.03.11					

Qualification as						
Status	Trainee	Validator	Verifier	Team Leader	Technical Reviewer	Technical Expert
Date		22.03.11	22.03.11	22.03.11	22.03.11	

Other qualification					
Country Expertise					
Region	1	2	3	4	5
Date	22.03.11				
Financial Expertise					
Date	29.03.11				

Qualification in technical areas	
Technical Area	**Date**
1.2_Energy generation from renewable energy source	22.03.11
13.1_Waste handling and disposal	12.04.11
3.1_Energy demand	27.04.11
13.2_15.2_Animal waste management	21.07.11

This appointment is valid for 1 year from its date of signature below and is bound by internal requirements of the Management System of the Certification Body "climate and energy" of TÜV SÜD Industrie Service GmbH.
In case of loss of validity of this certificate as per result of an assessment according internal procedures or due to any other reason, it will be properly communicated to you.
Your Certificate has the internal reference No. CMS-Z-0001/06.

Date	Signature
22.03.12 Extension of Validity	

TÜV®