



# VALIDATION REPORT BESALCO CONSTRUCCIONES S.A.

## VALIDATION OF THE RUN OF RIVER HYDRO POWER PLANTS IN CHILE

REPORT No.BVC/CHILE -VD/1059326/2011

REVISION No.02.1

### BUREAU VERITAS CERTIFICATION

62/71 Boulevard du Château  
92571 Neuilly Sur Seine Cdx - France



## VALIDATION REPORT

Date of first issue: <b>06/02/2012</b>	Organizational unit: <b>Bureau Veritas Certification Holding SAS</b>
Client: <b>Besalco Construcciones S.A.</b>	Client ref.: <b>Mr. Julio Espinoza</b>

## Summary:

Bureau Veritas Certification has conducted the validation of Run of River Hydro Power Plants in Chile, which is located in Chile, on the basis of UNFCCC criteria for the CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM rules and modalities and the subsequent decisions by the CDM Executive Board, as well as the host country criteria.

The validation scope is defined as an independent and objective review of the programme design document, the PoA's baseline study, monitoring plan and other relevant documents, and consisted of the following three phases: i) desk review of the programme design document and additional background documents; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final validation report and opinion. The overall validation, from Contract Review to Validation Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

The first output of the validation process is a list of Clarification Requests, Corrective Actions Requests, and Forward Actions Requests (CLs, CARs and FARs), presented in Appendix A. Taking into account this output, the coordinating/managing entity revised its programme design document.

In summary, it is Bureau Veritas Certification's opinion that the proposed PoA correctly applies the baseline and monitoring methodology ACM0002 version 14.0.0 and meets all relevant UNFCCC requirements for the CDM and the relevant host country criteria. Bureau Veritas Certification thus requests the registration of the proposed PoA as a CDM programme of activities.

The differences from Validation Report version 02 to Validation Report version 02.1 are regarding the status of incomplete from the Request for Registration according e-mail from CDM Team on 30/01/2014. These changes don't impact on the DOE validation opinion.

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Project title: <b>Run of River Hydro Power Plants in Chile</b>	
Work carried out by: <b>Ms. Cláudia Freitas – Team Leader Mr. Rubens S. Ferreira – Team Member Ms. Sylvia Bustos - Technical Local Specialist Mr. Antonio V. Gomes - Financial Specialist</b>	
Internal Technical Review carried out by: <b>Diego Serrano</b>	
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## Indexing terms

Work approved by:

Mr. Matthieu Martini

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## Abbreviations

BVCH	Bureau Veritas Certification Holding SAS
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reductions
CL	Clarification Request
CME	Coordinating/Managing Entity
CO <sub>2</sub>	Carbon Dioxide
CO <sub>2</sub> e	Carbon Dioxide Equivalent
CPA	Component Project Activity
DOE	Designated Operational Entity
FAR	Forward Action Request
GHG	Green House Gas(es)
MoV	Means of Verification
MP	Monitoring Plan
PLF	Plant Load Factor
PoA	Programme of Activities
PP	Project Participant
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation and Verification Standard



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## 1. INTRODUCTION

Besalco Construcciones S.A. has commissioned Bureau Veritas Certification to validate its CDM Programme of Activities Run of River Hydro Power Plants in Chile (hereafter called "the PoA") in Chile, in the following regions: Región de Antofagasta, Región de Atacama, Región de Coquimbo, Región de Valparaíso, Región Metropolitana, Región del Libertador General Bernardo O'Higgins, Región del Maule, Región del Bio Bio, Región de la Araucanía, Región de Los Ríos, Región de Los Lagos.

This report summarizes the findings of the validation of the PoA, performed on the basis of UNFCCC criteria, as well as criteria given to provide for consistent PoA operations, monitoring and reporting.

### 1.1. Objective

The objective of a validation is to provide a through and independent third party assessment of the PoA design. In particular, the PoA's baseline, the monitoring plan, and the PoA's compliance with relevant UNFCCC and host country criteria are validated in order to confirm that the PoA design, as documented, is sound and reasonable, and meets the applicable CDM requirements and the identified criteria. Validation is a requirement for all CDM programme of activities and is seen as necessary to provide assurance to stakeholders of the quality of the PoA and its intended generation of certified emission reductions (CERs).

### 1.2. Scope

The validation scope is defined as an independent and objective review of the programme design document, the PoA's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against the requirements of paragraph 37 of the CDM M&Ps, the applicability conditions of the selected methodology and guidance issued by the Board.

The validation is not meant to provide any consulting towards the coordinating/managing entity (CME)/project participants. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the PoA design.

### 1.3. Validation Team

The assessment team and internal technical reviewer team consist of the following personnel:

FUNCTION	NAME	TA 1.2	TA X.X	TASK PERFORMED*
<b>Team Leader</b>	Cláudia Freitas	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> DR <input type="checkbox"/> SV <input checked="" type="checkbox"/> RI <input type="checkbox"/> TR
<b>Team Member</b>	Rubens S. Ferreira	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> DR <input checked="" type="checkbox"/> SV <input type="checkbox"/> RI <input type="checkbox"/> TR
<b>Host Country Specialist (Local)</b>	Sylvia Bustos	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> DR <input checked="" type="checkbox"/> SV <input type="checkbox"/> RI <input type="checkbox"/> TR
<b>Financial Specialist</b>	Antonio V. P. Gomes	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> DR <input type="checkbox"/> SV <input checked="" type="checkbox"/> RI <input type="checkbox"/> TR



<b>Internal Technical Reviewer (ITR)</b>	Diego Serrano	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> DR <input type="checkbox"/> SV <input type="checkbox"/> RI <input checked="" type="checkbox"/> TR
<b>Specialist supporting ITR</b>	N.A.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> DR <input type="checkbox"/> SV <input type="checkbox"/> RI <input checked="" type="checkbox"/> TR

\*DR = Document Review; SV = Site Visit; RI = Report issuance; TR = Internal Technical Review

## 2. METHODOLOGY

The overall validation, from Contract Review to Validation Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

In order to ensure transparency, a validation protocol was customized for the PoA, according to the version 05.0 of the Clean Development Mechanism Validation and Verification Standard (Ref-20), dated 04/10/2013 and the version 03.0 of the Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities (Ref-22), issued by CDM Executive Board at its 74<sup>th</sup> meeting on 26/07/2013. The protocol shows, in a transparent manner, criteria (requirements), means of validation and the results from validating the identified criteria. The validation protocol serves the following purposes:

- It organizes, details and clarifies the requirements a CDM programme of activities is expected to meet;
- It ensures a transparent validation process where the validator will document how a particular requirement has been validated and the result of the validation.

The completed validation protocol is enclosed in Appendix A to this report.

### 2.1. Review of Documents

The Programme Design Document (PoA-DD) submitted by Besalco Construcciones S.A. and additional background documents related to the PoA design and baseline were reviewed.

Furthermore, cross checks were made between information provided in the PoA-DD and information from sources other than those used, as the DOE's sectoral and local expertise.

To address Bureau Veritas Certification corrective action and clarification requests, Besalco Construcciones S.A. revised the PoA-DD and resubmitted it on 12/02/2014.

The validation conclusions presented in this report relate to the PoA as described in the PoA-DD version 6.

### 2.2. Follow-up Interviews

On 28/02/2012 to 01/03/2012, Bureau Veritas Certification performed a site visit and interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of Coordinating or managing entity (CME) Besalco

Construcciones S.A. were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
Besalco Construcciones S.A. (CME)	<ul style="list-style-type: none"> <li>➤ PoA background information,</li> <li>➤ PoA technology, operation, maintenance and monitoring capability,</li> <li>➤ PoA monitoring and management plan,</li> <li>➤ Stakeholder consultation process,</li> <li>➤ Project status,</li> <li>➤ Environmental aspects / impacts and licenses,</li> <li>➤ Baseline methodology,</li> <li>➤ Additionality,</li> <li>➤ PoA monitoring methodology and plan,</li> <li>➤ Emission reduction calculation,</li> <li>➤ Emission factor calculation.</li> </ul>

## 2.3. Resolution of Clarification, Corrective and Forward Action Requests

The objective of this phase of the validation is to resolve issues that require further elaboration, research or expansion prior to Bureau Veritas Certification's positive conclusion on the PoA design.

A Corrective Action Request (CAR) is raised, if one of the following situations occurs:

- (a) The CME/project participants have made mistakes that will influence the ability of the PoA 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.

A Clarification Request (CL) is raised, if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

A Forward Action Request (FAR) may also be raised during validation, to identify issues related to implementation of the PoA that require review during the first verification of the PoA.

To guarantee the transparency of the validation process, the issues raised, the responses provided by the CME/project participants, the means of validation of such responses and references to any resulting changes in the PoA-DD or supporting annexes are documented in the Validation Protocol in Appendix A.

## 2.4. Internal Technical Review

The validation report underwent an Internal Technical Review (ITR) before requesting registration of the PoA.



The ITR is an independent process performed to examine thoroughly that the process of validation has been carried out in conformance with the requirements of the validation scheme as well as internal Bureau Veritas Certification procedures.

The Team Leader provides a copy of the validation report to the reviewer, including any necessary validation documentation. The reviewer reviews the submitted documentation for conformance with the validation scheme. This will be a comprehensive review of all documentation generated during the validation process.

When performing an Internal Technical Review, the reviewer ensures that:

- The validation activity has been performed by the team by exercising utmost diligence and complete adherence to the CDM rules and requirements.
- The review encompasses all aspects related to the PoA which includes PoA design, baseline, additionality, monitoring plans and emission reduction calculations, internal quality assurance systems of the CME/project participant as well as the PoA, review of the stakeholder comments and responses, closure of CARs and CLs during the validation exercise, review of sample documents.

The reviewer may raise Clarification Requests to the validation team and will discuss these matters with the Team Leader.

After the agreement of the responses to the Clarification Requests from the validation team as well as the CME/PP(s), the finalized validation report is accepted for further processing such as uploading via the UNFCCC interface.

### **3. VALIDATION CONCLUSIONS**

In the following sections, the conclusions of the validation are stated.

The findings from the desk review of the original programme design document and the findings from interviews during the follow up visit are described in the Validation Protocol in Appendix A.

The Clarification, Corrective and Forward Action Requests are stated, where applicable, in the following sections and are further documented in the Validation Protocol in Appendix A. The validation of the PoA resulted in 10CAR(s), 13CL(s) and 00FAR(s).

The CARs and CLs were closed out based on adequate responses from the CME/PP(s) which meet the applicable requirements. They have been reassessed before their formal acceptance and closure.

The number between brackets at the end of each section corresponds to the VVS paragraph.

#### **3.1. Approval (43-44)**

The letter of approval has been received and the following support documentation has been verified by Bureau Veritas Certification:





The DNA of Chile has issued a Letter of Approval (Ref-19) on 28/06/2013 authorizing Besalco Construcciones S.A. as the Coordinating/Managing Entity and confirms that the PoA contributes to Chile's Sustainable development. (Ref-19).

Bureau Veritas Certification received these letters of approval from the CME and does not doubt the letters' authenticity.

The letter of approval does not refer to a specific version of the validation report.

In accordance with para. 39 – 42/VVS, Bureau Veritas Certification considers that:

- (a) Each letter confirms the Party is a Party to the Kyoto Protocol;
- (b) Each letter confirms the participation is voluntary;
- (c) In the case of the host Party, the letter confirms that the proposed PoA contributes to the sustainable development of the country;
- (d) Each letter refers to the precise proposed PoA title in the PoA-DD being submitted for registration.
- (e) The letter(s) of approval is unconditional with respect to the items above.
- (f) The letter(s) of approval has been issued by the respective Party's DNA and is valid for the proposed PoA under validation.

### **3.2. Authorization (49)**

The participation for each project participant has been authorized by a Party of the Kyoto Protocol and the CME obtained from each host Party a letter of authorization of its coordination of the proposed PoA.

The validation team concluded this by the review of the letter of approval /Ref-19/ provided by the PP and the information in the UNFCCC website, i.e.:

<http://maindb.unfccc.int/public/country.pl?country=CL>

### **3.3. Sustainable Development (52)**

The host Party's DNA has confirmed the contribution of the PoA to the sustainable development of the host Party. Please refer to section 3.1 of this report.

### **3.4. Modalities of Communications (58, 61)**

The validation team has performed due diligence on the MoC statement and validated the corporate identity of CME, all project participants and focal points included in the Modalities of Communication (MoC) statement, as well as the personal identities, including specimen signatures and employment status, of their authorized signatories.



Bureau Veritas Certification confirms that the MoC statement complies with all relevant forms and requirements.

### **3.5. Programme Design Document (63)**

Bureau Veritas Certification hereby confirms that the PoA-DD complies with the latest form and the guidance document for completion of PoA-DD.

### **3.6. Changes in the PoA (17)**

During the site visit, no changes pertaining to the framework developed for the implementation of the PoA were observed as compared to details mentioned in the webhosted PoA-DD.

As was observed by the validation team through documentation analysis and during site visit the PoA is being implemented in accordance with the descriptions provided in the webhosted PoA-DD /Ref-01/.

All changes that have been made to the different versions of the PoA-DD during the validation process, from the webhosted PoA-DD version 1 to the final PoA-DD version 6 /Ref-17.1/, have been supported by CARs and CLs opened by the DOE and have already been discussed in the Validation Protocol. The same also applies for the changes that have been made to the different versions of the Generic CPA- DD (/Ref-05/ to /Ref-08/ and /Ref-18/ to /Ref-18.1/).

### **3.7. Description of the PoA and generic CPAs(69/189)**

According to the PoA-DD, the "Run of River Hydro Power Plants in Chile" aims to support the development of renewable energy projects, specifically new grid connected run of river power plants, by simplifying CDM access to those project that are economically or financially unattractive or that faces barriers for its implementation.

The geographical boundary of the PoA is the area covered by the Chilean Interconnected Central Electricity System (in Local language Sistema Interconectado Central, SIC), which corresponds to the following regions: Región de Antofagasta, Región de Atacama, Región de Coquimbo, Región de Valparaíso, Región Metropolitana, Región del Libertador General Bernardo O'Higgins, Región del Maule, Región del Bio Bio, Región de la Araucanía, Región de Los Ríos, Región de Los Lagos.

A typical CPA will comprises one or more greenfield run of river hydro power plants connected to the SIC. To be included in the PoA, a CPA must comply with the following conditions, among others: be a greenfield hydro-power plan of one of the following types (a) run of river power plant without reservoir, (b) run of river power plant with single or multiple reservoir and (c) power plant associated to an existing dam. Please refer to Section B.2. of the PoA-DD (version 6) for a description of all the eligibility criteria for inclusion of CPAs in the PoA. The length of the PoA will be 28 years.

The processes undertaken by the validation team to validate the accuracy and completeness of the description of the PoA include conducting a physical site inspection, sampling, reviewing available designs and feasibility studies, conducting comparison analysis with equivalent projects, as follows:



To validate the accuracy and completeness of the PoA description as presented in the PoA-DD, the DOE:

(1) Undertook a site visit (28/02/2012 - 01/03/2012) where CME staff and other stakeholders were interviewed (see References).

(2) Analysed the following third party evidences:

- Operation Statistics 2001-2010 (Estadísticas de Operación 2001-2010) from the Economic Dispatch Center of the SIC (CDEC-SIC), online available at <https://www.cdec-sic.cl/datos/anuario2011.pdf> (/Ref-09/).

- Electricity Services General Law (Ley General de Servicios Eléctricos), online available at <http://www.leychile.cl/Navegar?idNorma=258171> (/Ref-10/).

- Law 19.940 (known as "Short Law I"), online available at <http://www.leychile.cl/Navegar?idNorma=222380> (/Ref-11/).

- Law 20.018 (known as "Short Law II"), online available at <http://www.leychile.cl/Navegar?idNorma=238139> (/Ref-12/).

- Law 20.257, online available at <http://www.leychile.cl/Navegar?idNorma=270212> (/Ref-13/).

- Environmental General Basis Law (Ley de Bases Generales del Medio Ambiente), online available at <http://www.sinia.cl/1292/w3-article-51743.html> (/Ref-14/).

- Environmental Impact Assessment System Regulation (Reglamento del Sistema de Evaluación de Impacto Ambiental (SEIA)), online available at: <http://www.leychile.cl/Navegar?idNorma=205385&idVersion=2008-11-29> (/Ref-15/).

(3) Analysed the following evidences prepared by the CME:

- Operational Manual for the Coordinating Entity of "Run of River Hydro Power Plants in Chile" (Manual de Operación de la Entidad Coordinadora de "Run of River Hydro Power Plants in Chile"), version 01 of 11/06/2012 (/Ref-16/).

Bureau Veritas Certification hereby confirms that the description of the PoA and generic CPAs in the final PoA-DD is accurate and complete in all respects.

### **3.8. Management System (186)**

The validation team has assessed the management system described in the PoA-DD in accordance with the "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities".

Bureau Veritas Certification hereby confirms that the CME has developed and implemented a management system that includes required elements and thus has the competencies to check the features of potential CPAs and ensure that each CPA meets all requirements and eligibility criteria before inclusion in the registered PoA.

### **3.9. Eligibility criteria for inclusion of a CPA in the PoA (196)**

The validation team has assessed the eligibility criteria for inclusion of a CPA in the PoA in accordance with the "Standard: Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities".



The CME has developed eligibility criteria for inclusion of CPAs in the PoA and included these criteria in the PoA-DD and demonstrated their usability to assess the inclusion of CPAs in the generic CPA-DD.

The assessed eligibility criteria are presented as follows:

1. Be a greenfield hydro-power plan of one of the following types:
  - a. Run of river power plant without reservoir
  - b. Run of river power plant with single or multiple reservoir
  - c. Power plant associated to an existing dam.
2. Not involve switching from fossil fuels to renewable energy sources at the site of the project activity.
3. In the case of greenfield run of river power plants the project must: i) not have a storage reservoir; or ii) have daily limited pondage.
4. In the case of greenfield power plants associated to existing dams the project is eligible if despite the existence of a dam the power plant is operated as a run of river power plant because the project developer is not able of regulate the flows for electricity generation. This can be confirmed by the compliance of the following: (i) the main purpose of the reservoir is other than electricity generation (for example constructed to provide water to farmers for irrigating purposes), (ii) the volume of the existing reservoir is not changed as a consequence of the project activity, and (iii) the regulation of water flow is not defined only by the power plant requirements.
5. Have a power density greater than  $4 \text{ W/m}^2$ , if the power plant results in the creation of a new run of river reservoir (pondage). If multiple run of river reservoirs (pondage) are created, power density should be greater than  $4 \text{ W/m}^2$  for each of them.
6. In the case of power plants using multiple reservoirs where the power density of any of the reservoirs is lower than  $4 \text{ W/m}^2$ : multiple reservoirs and hydro power plants located at the same river and where are designed together to function as an integrated project that collectively constitute the generation capacity of the combined power plant. This requirement can be demonstrated, for example: (i) by the fact that water flow from upstream power units spilling directly to the downstream reservoir; or (ii) through the analysis of the water balance.
7. In the case of power plants using multiple reservoirs where the power density of any of the reservoirs is lower than  $4 \text{ W/m}^2$ : Water flow between multiple reservoirs is not used by any other hydropower unit which is not a part of the project activity.
8. In the case of power plants using multiple reservoirs where the power density of any of the reservoirs is lower than  $4 \text{ W/m}^2$ : Total installed capacity of the power units, which are driven using water from the reservoirs with power density lower than  $4 \text{ W/m}^2$ , is lower than 15 MW.
9. In the case of power plants using multiple reservoirs where the power density of any of the reservoirs is lower than  $4 \text{ W/m}^2$ : Total installed capacity of the power units, which are driven using water from reservoirs with power density lower than  $4 \text{ W/m}^2$ , is less than 10% of the total installed capacity of the project activity from multiple reservoirs.
10. Be located inside the Geographical Boundary of the PoA, as defined in section A.5 of the PoA-DD.



11. In order to avoid double counting the CPA cannot: (i) have been registered as a CDM project activity, or (ii) be included as a CPA under present PoA or another registered PoA. This must be confirmed as described in section C Part I of the PoA-DD.

12. Confirm with a writing statement that the CPA will not:

- a) Be registered as a CDM project activity.
- b) Be included as a CPA under another PoA.

13. Be connected to the Central Interconnected System (SIC).

14. Have a project starting date after 22/01/2012 (date on which the PoA-DD was uploaded for Global Stakeholder Consultation). The “starting date” of the Project Activity means the earliest date at which either the implementation or construction or real action of a Project Activity begins. The starting date of the project will be the earliest among:

- Legally binding contract between the Project Entity and a third party with a commitment by the Project Entity to expenditures related to the implementation or construction of the Project Activity; or
- Purchase order(s) for the electromechanical equipment; or
- Any other significant purchase order, contract or payment evidence related to the construction of the Project Activity;

If none of these real actions have occurred at the time of the CPA inclusion, the project developer must provide a writing statement confirming it.

15. Demonstrate the compliance with the additionality requirements stated on section B.5 (Part II) of the present PoA-DD.

16. Have conducted a stakeholder consultation process as described in section F (Part I) of the PoA-DD.

17. Have an installed capacity lower than 20 MW.

18. Have conducted an Environmental Impact Statement (“Declaración de Impacto Ambiental”, DIA) or through an Environmental Impact Assessment (“Evaluación de Impacto Ambiental”, EIA), based on the requirement of the Law 19,300 (see section E, Part I of the PoA-DD).

19. The CPA implementer must provide a statement confirming that funding from Annex I parties, if any, do not result in a diversion of official development assistance.

Bureau Veritas Certification hereby confirms that:

- (a) The eligibility criteria cover all therequiredelements;
- (b) The eligibility criteria are verifiable;
- (c) The eligibility criteria are sufficiently objective and comprehensive to permit the assessment of the inclusion of CPAs in the PoA;
- (d) For PoA that include combinations of technologies/measures and/or methodologies, distinct eligibility criteria are developed per combination.



### 3.10. Baseline and Monitoring Methodology

#### 3.10.1. Applicability of the selected Methodology (77/190)

The CPAs under the proposed PoA applies the approved consolidated baseline and monitoring methodology ACM0002 Version 14.0.0 – “Grid-connected electricity generation from renewable sources” (Ref-23).

The applicability of the selected methodology is justified and assessed as follows:

*(1) This methodology is applicable to grid-connected renewable power generation project activities that: (a) install a new power plant at a site where no renewable power plant was operated prior to the implementation of the project activity (greenfield plant); (b) involve a capacity addition; (c) involve a retrofit of (an) existing plant(s); or (d) involve a replacement of (an) existing plant(s).*

The PoA-DD correctly only includes new power plants in this specific PoA. The DOE was able to validate this by interviews conducted during site visit and by analyzing the PoA-DD.

*(2) 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.*

The PoA-DD, in Section B.2 correctly states that all the CPAs to be included in this PoA will be run of river hydro power plants. (Eligibility criteria number 1 in section B.2. of the PoA-DD). The DOE was able to validate this by interviews conducted during site visit and by analyzing the PoA-DD.

*(3) In the case of capacity additions, retrofits or replacements (except for wind, solar, wave or tidal power capacity addition projects which use Option 2 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.*

Not applicable. The PoA-DD, in Section B.2 correctly states that all CPAs to be included in the PoA will be greenfield power plants. (Eligibility criteria number 2 in section B.2. of the PoA-DD). The DOE was able to validate this by interviews conducted during site visit and by analyzing the PoA-DD.

*(4) In case of hydro power plants: one of the following conditions must apply:*

- The project activity is implemented in an existing single or multiple reservoirs, with no change in the volume of any of reservoirs; or*
- The project activity is implemented in an existing single or multiple reservoirs, where the volume of any of reservoirs is increased and the power density of each reservoir, as per the definitions given in the project emissions section, is greater than  $4 \text{ W/m}^2$ ; or*
- The project activity results in new single or multiple reservoirs and the power density of each reservoir, as per the definitions given in the project emissions section, is greater than  $4 \text{ W/m}^2$ .*





## VALIDATION REPORT

The PoA-DD in Section B.2 correctly states that if a CPA includes single or multiple pondage, the power density will be greater than  $4 \text{ W/m}^2$  for each run of river pondage reservoirs. (Eligibility criteria number 3 in section B.2. of the PoA-DD). The DOE was able to validate this by interviews conducted during site visit and by analyzing the PoA-DD.

*(5) In case of hydro power plants using multiple reservoirs where the power density of any of the reservoirs is lower than  $4 \text{ W/m}^2$  all the following conditions must apply:*

- The power density calculated for the entire project activity using equation 5 is greater than  $4 \text{ W/m}^2$ .*
- Multiple reservoirs and hydro power plants located at the same river and where are designed together to function as an integrated project that collectively constitute the generation capacity of the combined power plant;*
- Water flow between multiple reservoirs is not used by any other hydropower unit, which is not a part of the project activity;*
- Total installed capacity of the power units, which are driven using water from the reservoirs with power density lower than  $4 \text{ W/m}^2$ , is lower than 15MW;*
- Total installed capacity of the power units, which are driven using water from reservoirs with power density lower than  $4 \text{ W/m}^2$ , is less than 10% of the total installed capacity of the project activity from multiple reservoirs.*

The PoA-DD, in Section B.2 correctly states that if a CPA includes single or multiple pondage, the power density will be greater than  $4 \text{ W/m}^2$  for each run of river reservoirs. (Eligibility criteria number 4 in section B.2. of the PoA-DD). Then this condition is not applicable. The DOE was able to validate this by interviews conducted during site visit and by analyzing the PoA-DD.

*(6) The methodology is not applicable to the following:*

- a. Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity, since in this case the baseline may be the continued use of fossil fuels at the site;*
- b. Biomass fired power plants;*
- c. A hydro power plant that results in the creation of a new single reservoir or in the increase in an existing single reservoir where the power density of the power plant is less than  $4 \text{ W/m}^2$ .*

The PoA-DD in Section B.2 correctly states that there will be no fuel switching or biomass fired power plants, because all the CPAs to be included in the PoA will be Greenfield hydro power plants. Also, if a CPA includes single or multiple pondage, the power density will be greater than  $4 \text{ W/m}^2$  for each reservoir. (Eligibility criteria number 5 in section B.2. of the PoA-DD). The DOE was able to validate this by interviews conducted during site visit and by analyzing the PoA-DD.

Bureau Veritas Certification hereby confirms that the selected baseline and monitoring methodology, tool and other methodology component is previously approved by the CDM



Executive Board, and is applicable to each CPA under the proposed PoA, which, complies with all the applicability conditions therein.

### **3.10.2. Boundary of PoA and generic CPAs (86-87/191-192)**

The validation team has validated the boundary of PoA and generic CPAs by:

According to Section E.3. of the PoA-DD, the boundary for the PoA in terms of geographical area is defined as the area covered by the Interconnected Central Electricity System of Chile (Sistema Interconectado Central, SIC), which corresponds to the following regions: Región de Antofagasta, Región de Atacama, Región de Coquimbo, Región de Valparaíso, Región Metropolitana, Región del Libertador General Bernardo O'Higgins, Región del Maule, Región del Bio Bio, Región de la Araucanía, Región de Los Ríos, Región de Los Lagos.

The eligibility criteria of the CPA boundary are set as: "Be located inside the Geographical Boundary of the PoA, as defined in section A.5".

The validation of the PoA boundary has been performed by assessing the following documentation:

- Operation Statistics 2001-2010 (Estadísticas de Operación 2001-2010) from the Economic Dispatch Center of the SIC (CDEC-SIC), online available at <https://www.cdec-sic.cl/datos/anuario2011.pdf> (/Ref-09/).

Also, the following websites were accessed:

- [https://www.cdec-sic.cl/index\\_en.php](https://www.cdec-sic.cl/index_en.php)

In addition, information obtained from interviews held during site visit with CME staff was also used to validate the PoA boundary.

#### ***Physical/ Geographical boundary of the PoA***

The geographical boundary of the PoA is defined as the area covered by the Interconnected Central Electricity System of Chile (Sistema Interconectado Central, SIC), which corresponds to the following regions: Región de Antofagasta, Región de Atacama, Región de Coquimbo, Región de Valparaíso, Región Metropolitana, Región del Libertador General Bernardo O'Higgins, Región del Maule, Región del Bio Bio, Región de la Araucanía, Región de Los Ríos, Región de Los Lagos.

Bureau Veritas Certification hereby confirms that in establishing the boundary of the PoA, the CME/PPs have taken into consideration all applicable national and/or sectoral policies and regulations within that chosen boundary.

#### ***Boundary of generic CPAs***

The spatial extent of a generic CPA boundary is clearly defined in line with ACM0002 as "Be located inside the Geographical Boundary of the PoA, as defined in section A.5".



## VALIDATION REPORT

The greenhouse gases and emission sources included in a generic CPA boundary are CO<sub>2</sub> emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity and emissions of CH<sub>4</sub> from the hydro power plants reservoir.

Bureau Veritas Certification hereby confirms that the identified boundary and the selected sources and gases are justified for the generic CPA. The validation team did not identify any emission sources that will be affected by the implementation of the CPAs under the proposed PoA and which are expected to contribute more than 1% of the overall expected average annual emissions reductions, and are not addressed by the selected approved methodology.

### 3.10.3. Baseline Identification (94-95)

The procedure contained in the methodology to identify the most reasonable baseline scenario has been correctly applied.

Since CPAs to be included in the PoA will only consist of the installation of new grid-connected renewable power plant/units, the baseline is prescribed by the applicable methodology and no further analysis is required. The PoA-DD (version 6) correctly identifies the baseline, in accordance with ACM0002:

*“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”.*

Bureau Veritas Certification hereby confirms that:

- (a) All the assumptions and data used by the CME/PPs are listed in the PoA-DD, 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;
- (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;
- (e) The approved baseline methodology has been correctly applied to identify the most plausible baseline scenario and the identified baseline scenario reasonably represents what would occur in the absence of the proposed PoA.

### 3.10.4. Algorithms and/or Formulae used to determine Emission Reductions (99-100)

The steps taken and the equations and parameters applied in the PoA-DD to calculate project emissions, baseline emissions, leakage and emission reductions comply with the requirements of the selected methodology including applicable tool(s).

*Project emissions:*

Section B.6.1 of the PoA-DD correctly indicates that, as all CPAs to be included in the present PoA will be hydro power plants, the only project emission source to be accounted for is CH<sub>4</sub> emission from the potential reservoirs. This is in accordance with ACM0002 Section B.6.1 of the PoA-DD also determines that, in accordance with ACM0002, only for CPAs that result in new single or multiple reservoirs, project emissions (PE<sub>y</sub>) will be calculated.

Furthermore, project emission and power density equations provided in B.6.1. of the PoA-DD are presented in accordance with ACM0002.

*Baseline emissions:*

Section B.6.1 of the PoA-DD correctly indicates that, as all CPAs to be included in the present PoA will be new grid-connected power plants, in determining the quantity of net electricity generation that is produced and fed into the grid, only the equation for (a) "Greenfield renewable energy power plants" will be applied (equation 7 of ACM0002). Also, according to Section B.6.1 of the PoA-DD, the grid emission factor will be calculated applying the latest version of the "Tool to calculate the emission factor for an electricity system" (version 03.0). The methodological choices for the six steps included in this tool are also correctly presented in Sections B.6.1 of the PoA-DD.

Furthermore, Section B.6.1. of the PoA-DD presents the equations to calculate baseline emissions in accordance to equations 6 and 7 of ACM0002.

*Leakage:*

Section B.6.1. of the PoA-DD correctly indicates that no leakage needs to be determined/calculated. This is in accordance with ACM0002.

*Emission reductions:*

Section B.6.1 of the PoA-DD correctly indicates that emission reductions are the product of baseline emissions minus project emissions (since there is no leakage).

Furthermore, Section B.6.1. of the PoA-DD presents the equations to calculate emission reductions in accordance to equation 11 of ACM0002.

Bureau Veritas Certification hereby confirms that:

- (a) All assumptions and data used by the CME/PPs are listed in the PoA-DD, including their references and sources;
- (b) All documentation used by CME/PPs as the basis for assumptions and source of data is correctly quoted and interpreted in the PoA-DD;
- (c) All values used in the PoA-DD are considered reasonable in the context of the proposed PoA;



- (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 PoA-DD.

### **3.11. Additionality (193-195)**

#### **3.11.1. Prior consideration of the CDM (193-194)**

The validation team is able to verify that the CME has determined the start date of the proposed PoA as follows:

The date of publication of the PoA-DD for global stakeholder consultation i.e. 22/01/2012.

According to the PoA-DD, the PoA start date is 22/01/2012 (date on which the PoA-DD was uploaded for Global Stakeholder Consultation). This has been crosschecked by the DOE on the UNFCCC/CDM online project database:

<http://cdm.unfccc.int/ProgrammeOfActivities/Validation/index.html>.

The eligibility criteria of the start date for inclusion of CPA has been set as: "Have a project starting date after 22/01/2012 (date on which the PoA-DD was uploaded for Global Stakeholder Consultation)."

The duration of the proposed PoA is 28 years (from 22/01/2012 to 21/01/2040), which does not exceed 28 years, counting from the start date of the PoA.

It is confirmed that the start date of any proposed CPA is on or after the start date of the PoA.

Bureau Veritas Certification hereby confirms that the proposed PoA complies with the requirements related to the prior consideration of the CDM.

#### **3.11.2. Additionality of PoA (195)**

The validation team has assessed the additionality of the proposed PoA in accordance with the "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities".

To demonstrate the additionality of the PoA as a whole, the CME demonstrates in Section A.2 of the PoA-DD that: the PoA is a voluntary coordinated action, it would not be implemented in the absence of the PoA and that the PoA is not implemented under a mandatory Policy/regulation. The DOE was able to validate these statements by:

- (1) Undertaking a site visit where CME staff and other stakeholders were interviewed (see References).
- (2) Analyzing the following third party evidences:



- Operation Statistics 2001-2010 (Estadísticas de Operación 2001-2010) from the Economic Dispatch Center of the SIC (CDEC-SIC), online available at <https://www.cdec-sic.cl/datos/anuario2011.pdf> (/Ref-09/).

- Electricity Services General Law (Ley General de Servicios Eléctricos), online available at <http://www.leychile.cl/Navegar?idNorma=258171> (/Ref-10/).

- Law 19.940 (known as “Short Law I”), online available at <http://www.leychile.cl/Navegar?idNorma=222380> (/Ref-11/).

- Law 20.018 (known as “Short Law II”), online available at <http://www.leychile.cl/Navegar?idNorma=238139> (/Ref-12/).

- Law 20.257, online available at <http://www.leychile.cl/Navegar?idNorma=270212> (/Ref-13/).

In conclusion, the additionality of PoA has been demonstrated by establishing that in the absence of CDM, none of the implemented CPAs would occur.

### 3.11.3. Additionality of generic CPA

The proposed PoA consists of projects as CPAs until 20 MW of installed capacity, the eligibility criteria derived from all the relevant requirements contained in the additionality section of the large-scale methodology ACM0002 have been included in the PoA-DD.

The proposed PoA involves CPAs which will comprises one or more greenfield run of river hydro power plant connected to the Central Interconnected System (Sistema Interconectado Central, SIC).

Furthermore, the validation team has assessed the requirements included in the PoA-DD to demonstrate the additionality of CPAs. These requirements are in accordance with Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities (/Ref-22/).

The eligibility criteria of the additionality were set as: “Demonstrate the compliance with the additionality requirements stated on section B.5 of the present PoA-DD.”

As per section B.5 of the PoA-DD, “All CPAs to be included in the PoA will comply with the requirements of the “Tool for the demonstration and assessment of additionality”..

Within a benchmark analysis to be presented in each CPA-DD to be included under this PoA, the financial indicator for this analysis will be the project Internal Rate of Return (IRR), which is an indicator commonly used to determine investment decisions. A suitable benchmark value for power generation projects is 10% (before taxes).

The DOE was able to validate this (ex ante indicative) benchmark by analyzing the following third party official evidence (which is also publicly available): Electricity Services General Law (Ley General de Servicios Eléctricos), online available at <http://www.leychile.cl/Navegar?idNorma=258171> (/Ref-10/). In the Law, a suitable benchmark of 10% is defined in art. 165 (d).



Also, the DOE would like to point out that this value is only indicative and that, as described in the PoA-DD, if in the future this value is adjusted in the Law or if the benchmark cannot be considered valid due to other reasons, it will be adjusted and validated by a DOE during CPA validation.

Since the additionality of each CPA to be included in this particular PoA will be demonstrated at CPA level, no further analysis at PoA level is required.

Bureau Veritas Certification hereby confirms that compliance with the additionality-related eligibility criteria set in the PoA-DD will ensure that all the relevant additionality-related guidelines, tools or any requirements embedded in the methodologies are met.

### 3.12. Monitoring Plan (198)

The CPAs under the proposed PoA applies the approved consolidated monitoring methodology ACM0002.

Applicability of this methodology is justified in the PoA-DD as it is applicable to *grid-connected renewable power generation project activities that: (a) install a new power plant at a site where no renewable power plant was operated prior to the implementation of the project activity (greenfield plant); (b) involve a capacity addition; (c) involve a retrofit of (an) existing plant(s); or (d) involve a replacement of (an) existing plant(s).* As per eligibility criteria in section B.5 (Part I), all CPA will be grid-connected (eligibility criteria N°13) renewable power generation power plants at a site where no renewable power plant was operated prior to the implementation of the project activity (greenfield hydro-power plant, eligibility criteria N° 1).

Referring to the discussions on the applicability of the methodology in section 3.10.1 above, the validation team considers that the selected monitoring methodology is applicable to the CPAs under the proposed PoA.

#### **Data and Parameters Monitored**

Monitored parameters are:

$EG_{\text{facility},y}$ : quantity of net electricity generation supplied by the project plant/unit to the grid in year  $y$ .

$FC_{i,m,y}$ : amount of fuel type  $i$  consumed by power unit  $m$  in year  $y$

$NCV_{i,y}$ : net calorific value (energy content) of fuel type  $i$  in year  $y$

$EF_{CO_2,i,y}$  and  $EF_{CO_2,m,i,y}$ :  $CO_2$  emission factor of fuel type  $i$  in year  $y$

$EG_{m,y}$  and  $EG_{k,y}$ : net electricity generated by power plant/unit  $m$  or  $k$  in year  $y$

$\eta_{m,y}$ : average net energy conversion efficiency of power unit  $m$  in year  $y$

$A_{P,j}$ : single or multiple reservoirs measured in the surface of the water, after the implementation of the project activity, when the reservoir is full



TEGy: total electricity produced by the project activity, including the electricity supplied to the grid and the electricity supplied to internal loads, in year y

CapPJ: installed capacity of the hydro power plant after the implementation of the project activity

Bureau Veritas Certification crosschecked all the parameters against ACM0002 requirements.

The validation team considers that the description of the monitoring plan contains all necessary parameters, that they are described and that the means of monitoring described in the plan complies with the requirements of the methodology including applicable tool(s).

### ***Implementation of the Monitoring Plan***

The DOE has analyzed Section B.7.2 of the PoA-DD regarding: (1) management structure and responsibilities, (2) data quality control, (3) training and monitoring personnel, (4) emission factor calculation and (5) monitoring reports and verification.

The DOE was able to validate that the monitoring arrangements described in the monitoring plan are feasible by:

(1) Conducting a site visit where CME staff and other stakeholders were interviewed (see References).

(2) Analysed the following evidences prepared by the CME: Operational Manual for the Coordinating Entity of "Run of River Hydro Power Plants in Chile" (Manual de Operación de la Entidad Coordinadora de "Run of River Hydro Power Plants in Chile"), version 01 of 11/06/2012 (/Ref-16/).

The validation team considers that the means of implementation of the monitoring plan, including the data management and quality assurance and quality control procedures, are sufficient to ensure that the emission reductions achieved by/resulting from the CPAs under the proposed PoA can be reported ex post and verified.

Bureau Veritas Certification hereby confirms that the monitoring plan complies with the requirements of the methodology including applicable tool(s), the monitoring arrangements described in the monitoring plan are feasible within the programme design and the CME/PPs are able to implement the described monitoring plan.

## **3.13. Environmental Impacts (199)**

The environmental analysis is performed at the CPA level, the choice has been justified by the CME as not applicable at PoA level, as the environmental analysis will be done at CPA level.

In Chile, the assessment of the environmental impacts and the environmental approval of a specific project are regulated by the Law N° 19,304 and the Supreme Decree No 95 (S.D. No 95). Article 10 of Law 19,300 and Article 3 of the S.D. No 95 list the types of projects that require formally analyze their environmental impacts; the categories that might be applicable for a typical CPA are the following:





Letter (a). Aqueducts, reservoirs, dams and siphons listed in article 294 of the Water Code.

Letter (b). High voltage transmission lines (over 23 kV) and their substations.

Letter (c). Power plants with an installed capacity higher than 3MW.

If a CPA does not include the works or activities stated in letters (a), (b) or (c) it will not require a formal environmental impact assessment.

If a CPA includes the works or activities stated in letters (a), (b) or (c) above it must assess its environmental impacts by going through the SEIA ("Sistema de Evaluación de Impacto Ambiental", the Chilean environmental impact assessment system). According to the Law N° 19,300 the assessment might be done through an Environmental Impact Statement ("Declaración de Impacto Ambiental", DIA) or through an Environmental Impact Assessment ("Estudio de Impacto Ambiental", EIA), based on the effects, characteristics and circumstances of the project as described in Article 11 of Law 19,300 and Articles 4 to 11 of the S.D. No 95.

Bureau Veritas Certification hereby confirms that the CME has undertaken an analysis of environmental impacts and an environmental impact assessment in accordance with procedures as required by the host Party.

### **3.14. Local Stakeholder Consultation (201)**

The local stakeholder consultation process is performed at the CPA level, the choice has been justified by the CME due the fact that every CPA might present different circumstances and opinions of the relevant communities the local stakeholder comments will be invited separately for each CPA and not at PoA level.

In the case of projects which must analyze its environmental impacts through an Environmental Impact Assessment (EIA), a formal stakeholder consultation needs to be included as part of the assessment process by the environmental authority. This stakeholder consultation is defined in articles 26 to 30 of Law N° 19,300 and articles 49 to 53 of the Supreme Decree No 95. The coordination of the process is in charge of the Environmental Authority, who defined specific mechanisms to ensure an informed participation of the community based on the characteristics of the project. The project developer must publish a summary of the project in the Official Gazette and in a local or national newspaper; any person affected by the project can submit comments to the Environmental Authority during the following 60 days. These observations are to be weighted by the Environmental Authority and taken into account in the environmental approval process.

In the case of CPAs which assess its environmental impacts through an Environmental Impact Statement ("Declaración de Impacto Ambiental", DIA) and those which don't need to go through the Environmental Impact Assessment System (SEIA), the stakeholder consultation process before mentioned is not required. In these cases, the invitation and compilation of comments by local stakeholders will be defined by the CPA implementer, taking into account the CPA's local circumstances. The invitation for comments by local stakeholders shall be made in an open and transparent manner, in a way that facilitates comments to be received from local stakeholders.



Bureau Veritas Certification hereby confirms that the process of local stakeholder consultation is observed to be adequate, and no comments were received.

#### **4. COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS**

The PoA-DD using methodology ACM0002 Version 12 was webhosted on the UNFCCC for global stakeholders comments as per CDM requirements. The proposed PoA was webhosted from 22/01/2012 to 20/02/2012.

No comments were received during this period.





## 5. VALIDATION OPINION

Bureau Veritas Certification has performed a validation of the Run of River Hydro Power Plants in Chile, which is located in the area covered by the Interconnected Central Electricity System of Chile (Sistema Interconectado Central, SIC), which corresponds to the following regions: Región de Antofagasta, Región de Atacama, Región de Coquimbo, Región de Valparaíso, Región Metropolitana, Región del Libertador General Bernardo O'Higgins, Región del Maule, Región del Bío Bío, Región de la Araucanía, Región de Los Ríos, Región de Los Lagos. The validation was performed on the basis of UNFCCC criteria for the CDM, and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The validation consisted of the following three phases: i) desk review of the programme design document and additional background documents; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final validation report and opinion.

The CPAs under the proposed PoA correctly apply the approved consolidated baseline and monitoring methodology ACM0002 Version 14.0.0 and uses the latest tool for demonstration of the additionality.

By building new grid connected run of river power plants, the proposed PoA is likely to result in reductions of GHG emissions that are real, measurable and give long-term benefits to the mitigation of climate change. The eligibility criteria established for CPA inclusion will ensure that the CPAs under the proposed PoA is not a likely baseline scenario. Emission reductions attributable to the PoA are hence additional to any that would occur in the absence of the PoA.

The review of the programme design documentation and the subsequent follow-up interviews have provided Bureau Veritas Certification with sufficient evidence to determine the fulfillment of stated criteria. In our opinion, the proposed PoA meets all relevant UNFCCC requirements for the CDM and the relevant host country criteria. Bureau Veritas Certification thus requests registration of the proposed PoA as a CDM programme of activities.

Diego Serrano  
Internal Technical Reviewer  
12/03/2014

Cláudia Freitas  
Team Leader  
12/03/2014

## 6. REFERENCES

### Category 1 Documents:

Documents provided by CME/PPs that relate directly to the GHG components of the PoA.

- /1/ Run of River Hydro Power Plants in Chile – PoA-DD version 1 (10/01/2012)
- /2/ Run of River Hydro Power Plants in Chile – PoA-DD version 2 (11/06/2012)
- /3/ Run of River Hydro Power Plants in Chile – PoA-DD version 3 (26/10/2012)
- /4/ Run of River Hydro Power Plants in Chile – PoA-DD version 4 (23/11/2012)
- /5/ Run of River Hydro Power Plants in Chile – Generic CPA-DD version 1 (10/01/2012)
- /6/ Run of River Hydro Power Plants in Chile – Generic CPA-DD version 2 (11/06/2012)
- /7/ Run of River Hydro Power Plants in Chile – Generic CPA-DD version 3 (26/10/2012)
- /8/ Run of River Hydro Power Plants in Chile – Generic CPA-DD version 4 (23/11/2012)
- /9/ Operation Statistics 2001-2010 (Estadísticas de Operación 2001-2010) from the Economic Dispatch Center of the SIC (CDEC-SIC), online available at <https://www.cdec-sic.cl/datos/anuario2011.pdf>
- /10/ Electricity Services General Law (Ley General de Servicios Eléctricos), online available at <http://www.leychile.cl/Navegar?idNorma=258171>
- /11/ Law 19.940 (known as “Short Law I”), online available at <http://www.leychile.cl/Navegar?idNorma=222380>
- /12/ Law 20.018 (known as “Short Law II”), online available at <http://www.leychile.cl/Navegar?idNorma=238139>
- /13/ Law 20.257, online available at <http://www.leychile.cl/Navegar?idNorma=270212>
- /14/ Environmental General Basis Law (Ley de Bases Generales del Medio Ambiente), online available at <http://www.sinia.cl/1292/w3-article-51743.html>
- /15/ Environmental Impact Assessment System Regulation (Reglamento del Sistema de Evaluación de Impacto Ambiental (SEIA)), online available at: <http://www.leychile.cl/Navegar?idNorma=205385&idVersion=2008-11-29>
- /16/ Operational Manual for the Coordinating Entity of “Run of River Hydro Power Plants in Chile” (Manual de Operación de la Entidad Coordinadora de “Run of River Hydro Power Plants in Chile”), version 01 of 11/06/2012
- /17/ Run of River Hydro Power Plants in Chile – PoA-DD version 5 (22/10/2013)
- /17.1/ Run of River Hydro Power Plants in Chile – PoA-DD version 6 (12/02/2014)
- /18/ Run of River Hydro Power Plants in Chile – Generic CPA-DD version 5 (22/10/2013)
- /18.1/ Run of River Hydro Power Plants in Chile – Generic CPA-DD version 6 (12/02/2014)
- /19/ DNA of Chile - Letter of Approval # 132448, issued on 28/06/2013.

### Category 2 Documents:



Background documents related to the design and/or methodologies employed in the design or other reference documents used for cross-check.

- /20/ Clean Development Mechanism Validation and Verification Standard – version 05.0 - dated 04/10/2013
- /21/ Procedures for registration of a programme of activities as a single CDM project activity and issuance of CERs for a PoA (version 04.1)
- /22/ Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities (version 03.0).
- /23/ ACM0002: Grid-connected electricity generation from renewable sources (Version 14.0.0
- /24/ Tool to calculate the emission factor for an electricity system (Version 03.0)
- /25/ Tool for the demonstration and assessment of additionality” (Version 7.0.0)

**Persons interviewed:**

Persons interviewed during the validation or persons that contributed with other information that are not included in the documents listed above.

- |     |                            |                           |
|-----|----------------------------|---------------------------|
|     | Besalco Construcciones S.A |                           |
| /1/ | Ms. Carmen Gloria Villagra | Environmental Manager     |
| /2/ | Ms. Claudia Reyes          | Environmental Coordinator |



## 7. CURRICULA VITAE OF THE DOE'S VALIDATION TEAM MEMBERS

Ms. Cláudia Freitas	Bureau Veritas Certification, Brazil	<p>Team Leader, Climate Change Lead Verifier</p> <p>Graduated in Chemical Engineering and post graduate in Environmental Management System and in MBA Management with experience in environmental management, energy and Clean Development Mechanism projects. She is ISO 14001:2004 Lead Auditor and qualified as lead verifier GHG – Greenhouse Gases. She has validated/verified several CDM projects in Latin America and Asia. She also has worked as external expert for Brazilian DNA and UNFCCC.</p>
Mr. Rubens S. Ferreira	Bureau Veritas Certification, Brazil	<p>Team Member, Climate Change Verifier.</p> <p>Graduated in Chemical Engineering with experience in Quality and Environmental management in glass industries. He is ISO 9001:2008, ISO 14001:2004 and OHSAS 18001:2007 Lead Auditor and has also experience in the implementation of Quality and Environmental Management Systems. Rubens is qualified as Verifier GHG – Greenhouse Gases.</p>
Ms. Sylvia Bustos	Bureau Veritas Certification, Chile	<p>Technical Specialist (Local)</p> <p>Graduated in Chemical Engineering with a Diploma in Systems Management - has worked in metallurgical companies, environmental projects associated with the bond market in coal and certification of management systems, among others. Has training and experience as Lead Auditor in Quality Management Systems (ISO 9001), Environment (ISO 14001), Occupational Health and Safety (OHSAS 18001) and Ethical Trading Protocol (SEDEX).</p>

## VALIDATION REPORT



Mr. Antonio V. P. Gomes	Bureau Veritas Certification, Brazil	Financial Specialist, Climate Change Lead Verifier  Graduated in Industrial Engineering and holds a MBA from Coppead/UFRJ School of Business with previous experience in economic assessment of greenfield projects in electrical sector, as well as projects related to renewable energy and energy conservation.
Mr. Diego Serrano	Bureau Veritas Certification, Brazil	Technical Reviewer, Climate Change Lead Verifier  Forest engineer graduated at ESALQ/USP, with master degree in Energetic System Planning by UNICAMP (State University of Campinas). His abilities include coordination, elaboration, validation and verification of PDD's in the scopes 1, 4, 13 and 14. ISO 14001:2004 lead auditor and qualified as lead verifier for GHG – Greenhouse Gases.

## APPENDIX A: CDM PROGRAMME OF ACTIVITIES VALIDATION PROTOCOL

**Table 1 Validation requirements based on VVS version 05.0 (EB 75 Annex 5), PS version 04.0 (EB 75 Annex 4), PCP version 5 (EB 75 Annex 6), PoA Standard version 03.0 (EB 74 Annex 5) and Guidelines for completing the PoA-DD form version 04.0 (EB 74 Annex 7)**

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
<b>Part I Programme of activities (PoA)</b>					
<b>A. General description of PoA</b>					
<b>A.1 Title of the PoA</b>					
A.1.1 Is the title of the proposed PoA provided?	PoA DD PS	31	Yes. Run of River Hydro Power Plants in Chile.	OK	OK
A.1.2 Is the current version number of the PoA-DD indicated?	PoA DD		Yes.	OK	OK
A.1.3 Is the completion date of the PoA-DD provided in DD/MM/YYYY format?	PoA DD		Yes.	OK	OK
<b>A.2 Purpose and general description of the PoA</b>					
A.2.1 Is policy/measure or stated goal that the PoA seeks to promote described?	PoA DD PS	139	Yes.	OK	OK
A.2.2 Is a framework developed for the implementation of the proposed PoA and inclusion of CPAs under the PoA?	PoA DD PS	138	<b>CL 02:</b> Please provide evidences related to all the information presented on the first paragraph from the Section A.2., as well as the Table 1.	CL02	OK

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
A.2.3 Is it confirmed that the proposed PoA is a voluntary action by the coordinating/managing entity?	PoA DD PS	140	Yes.	OK	OK
A.2.4 Is it explained how the PoA will reduce GHG emissions or increase GHG removals?	PS	31	Yes.	OK	OK
A.2.5 Are sectoral scope(s) and type of the PoA indicated?	PS	31	Yes.	OK	OK
A.2.6 Is the contribution of PoA to sustainable development explained?	PoA DD PS	31	Yes.	OK	OK
<b>A.3 CMEs and participants of PoA</b>					
A.3.1 Is CME of the PoA identified, as the entity which communicates with the Board?	PoA DD PS	141	The coordinating/managing entity (CME) of the PoA is BESALCO CONSTRUCCIONES S.A.	OK	OK
A.3.2 Are project participants to the PoA indicated?	PoA DD PS	141	The project participants are involved in the CPA "Tunel Melado Run of River Hydro Power Plant, Chile".	OK	OK
<b>A.4 Party(ies)</b>					
A.4.1 Are Party(ies) and CMEs involved in the proposed PoA listed in the table?	PoA DD PS	141	The host party of the PoA is Chile.	OK	OK
A.4.2 Is contact information on entity/individual responsible for the PoA provided in Appendix 1?	PoA DD		Yes.	OK	OK
<b>A.5 Physical/Geographical boundary of the PoA</b>					
A.5.1 Are details of the defined boundary of the PoA provided, in terms of a geographical area(e.g., municipality, region within a country, country or	PoA DD PS	142	The geographical boundary of the PoA is the area covered by the Interconnected Central System (Sistema Interconectado Central,	CL03	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
several countries) within which all CPAs included in the PoA will be implemented?			<p>SIC), which corresponds to the following regions: Región de Antofagasta, Región de Atacama, Region de Coquimbo, Region de Valparaíso, region Metropolitana, Región del Libertador General Bernardo O'Higgins, Region del Maule, Region del Bio Bio, Región de la Araucanía, Región de Los Rios, Region de Los Lagos.</p> <p><b>CL 03:</b> Please provide a evidence related to the definition of the area covered by the Interconnected Central System.</p>		
A.5.2 In establishing the boundary, if the project participants have taken into consideration all applicable national and/or sectoral policies and regulations within that chosen boundary?	VVS PS	192 142	Yes,	OK	OK
<b>A.6 Technologies/measures</b>					
A.6.1 Are the technologies and/or measures to be employed and/or implemented by the CPAs in the PoA described, to enable the identification of the project's scale and type, demonstration of additionality, application of the selected methodology and calculations of GHG emission reductions or net GHG removals?	PoA DD PS	148	Yes.	OK	OK
A.6.2 Are the technologies to be employed by the CPAs in the PoA described including a description of how environmentally safe and sound technology(ies)	PS	31	Yes.	OK	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
applied in the CPAs and know-how to be used are transferred to the host Party(ies)?					
<b>A.7 Public funding of PoA</b>					
A.7.1 Is it indicated whether the PoA receives public funding from Annex I Parties?	PoA DD		Yes. There will be no public funding.	OK	OK
A.7.2 In case where public funding from Annex I Parties is involved, are followings provided? (a) Information on Parties providing public funding (b) Attached in Appendix 2: the affirmation obtained from such Parties that such funding does not result in a diversion of official development assistance, is separate from, and is not counted towards the financial obligations of those Parties	PoA DD PS	34	N.A.	OK	OK
<b>B. Demonstration of additionality and development of eligibility criteria</b>					
<b>B.1 Demonstration of additionality for PoA</b>					
B.1.1 Is it described that how in the absence of CDM, none of the implemented CPAs would occur?	PoA DD PoA- Stand	7	Yes. Additionality is demonstrated by financial analysis, in a CPA level.	OK	OK
B.1.2 Is the prior consideration of the CDM for the PoA assessed?	VVS PCP	194 11	Yes.	OK	OK
<b>B.2 Eligibility criteria for inclusion of a CPA in the PoA</b>					

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
B.2.1 Do the eligibility criteria cover the geographical boundary of the CPA including any time-induced boundary consistent with the geographical boundary set in the PoA?	PoA- Stand	16(a)	Yes.	OK	OK
B.2.2 Do the eligibility criteria cover conditions that avoid double counting of emission reductions like unique identification of product and end-user locations (e.g. programme logo)?	PoA- Stand	16(b)	<b>CL 05:</b> Please clarify what is the CDE ID number.	CL05	OK
B.2.3 Do the eligibility criteria cover the specifications of technology/measure including the level and type of service, performance specifications including compliance with testing/certifications?	PoA- Stand	16(c)	Yes.	OK	OK
B.2.4 Do the eligibility criteria cover conditions to check the start date of the CPA through documentary evidence?	PoA- Stand	16(d)	Yes,	OK	OK
B.2.5 Do the eligibility criteria cover conditions that ensure compliance with applicability and other requirements of single or multiple methodologies applied by CPAs?	PoA- Stand	16(e)	Yes.	OK	OK
B.2.6 Do the eligibility criteria cover the conditions that ensure that the CPA meets the requirements pertaining to the demonstration of additionality as specified below:	PoA- Stand	16(f)			
B.2.6.1 PoAs that consist of one or more large-scale projects as CPAs shall include eligibility criteria derived from all the relevant requirements	PoA- Stand	10	Yes.	OK	OK

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contained in the additionality section of the large-scale methodologies applied to the CPAs					
B.2.6.2 The “Guidelines for demonstrating additionality of microscale project activities” may be applied to a large-scale CPA if all of the units in the CPA are below the microscale thresholds.	PoA- Stand	11	N.A.	OK	OK
B.2.6.3 The CME shall demonstrate that compliance with the additionality-related eligibility criteria set in the PoA-DD will ensure that all the relevant additionality-related guidelines, tools or any requirements embedded in the methodologies are met.	PoA- Stand	13	Refer to table 2.	OK	OK
B.2.6.4 For PoAs involving combinations of technologies/measures and/or methodologies, the eligibility criteria relative to each of them shall be proposed to demonstrate additionality.	PoA- Stand	14	N.A.	OK	OK
B.2.7 Do the eligibility criteria cover the PoA-specific requirements stipulated by the CME including any conditions related to undertaking local stakeholder consultations and environmental impact analysis?	PoA- Stand	16(g)	Yes.	OK	OK
B.2.8 Do the eligibility criteria cover conditions to provide an affirmation that funding from Annex I parties, if any, does not result in a diversion of official development assistance?	PoA- Stand	16(h)	Yes.	OK	OK
B.2.9 Do the eligibility criteria cover, where applicable, target group (e.g. domestic/commercial/industrial,	PoA- Stand	16(i)	N.A.	OK	OK

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
rural/urban, grid-connected/off-grid) and distribution mechanisms (e.g. direct installation)?					
B.2.10 Do the eligibility criteria cover, where applicable, the conditions related to sampling requirements for the PoA in accordance with the "Standard for sampling and surveys for CDM project activities and programme of activities"?	PoA- Stand	16(j)	N.A.	OK	OK
B.2.11 Are the eligibility criteria verifiable?	PoA- Stand	17	Yes.	OK	OK
B.2.12 Are the eligibility criteria sufficiently objective and comprehensive to permit the assessment of the inclusion of CPAs in the PoA?	PoA- Stand	18	Yes.	OK	OK
B.2.13 For PoAs that include combinations of technologies/measures and/or methodologies, are distinct eligibility criteria developed separately for each of the combinations?	PoA- Stand	22&29	N.A.	OK	OK
B.2.14 If a CPA uses technologies/measures from several methodologies, are the eligibility criteria derived from the requirements of all the methodologies?	PoA- Stand	29	N.A.	OK	OK
<b>B.3 Application of methodologies</b>					
B.3.1 Are the technology/measures described and is the methodology chosen indicated?	PoA DD		Yes.	OK	OK
B.3.2 In cases where multiple technologies/measures or multiple methodologies are being applied, are all the combinations of technologies/measures and	PoA DD PoA- Stand	28	Not applicable.	OK	OK

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
methodologies that will be used in the PoA listed?					
B.3.3 If applicable, is a description of the sampling plan provided and is it demonstrated how it meets applicable provisions in the “Standard for sampling and surveys for CDM project activities and programme of activities”?	PoA DD		N.A.	OK	OK
B.3.4 Has CME defined, where applicable, sampling plans for each of the combinations separately in accordance with the requirements in section 3.2 of PoA Standard as well as any guidelines/standard approved by the Board pertaining to sampling and surveys?	PoA- Stand	29	N.A.	OK	OK
B.3.5 For PoAs applying multiple large scale and small-scale CDM methodologies, only combinations explicitly permitted in the methodologies can be applied without prior-approval by the Board, is the proposed PoA in compliance with this?	PoA- Stand	34&35	N.A.	OK	OK
B.3.6 In case combinations are not explicitly permitted in the methodologies, has CME submit a request for clarification to the secretariat by following the latest applicable procedure for the eligibility of the proposed combination?	PoA- Stand	34&35	N.A.	OK	OK
<b>C. Management system</b>					
C.1.1 Is a clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their	PoA- Stand	19(a)	<b>CL 06:</b> Please provide a clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs,	CL06	OK

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
competencies provided?			including a review of their competencies.		
C.1.2 Are records of arrangements for training and capacity development for personnel provided?	PoA- Stand	19(b)	<b>CL 07:</b> Please provide records of arrangements for training and capacity development for personnel.	CL07	OK
C.1.3 Is a procedure for technical review of inclusion of CPAs described?	PoA- Stand	19(c)	<b>CL 08:</b> Please provide the procedures for technical review of inclusion of CPAs.	CL08	OK
C.1.4 Is a procedure to avoid double counting described?	PoA- Stand	19(d)	Yes.	OK	OK
C.1.5 Are records and documentation control process for each CPA under the PoA described?	PoA- Stand	19(e)	<b>CL 09:</b> Please provide records and documentation control process for each CPA under the PoA.	CL09	OK
C.1.6 Are measures for continuous improvements of the PoA management system described?	PoA- Stand	19(f)	<b>CL 10:</b> Please provide measures for continuous improvements of the PoA management system.	CL10	OK
C.1.7 Is there any other relevant elements indicated?	PoA- Stand	19(g)	N.A.	OK	OK
<b>D. Duration of PoA</b>					
<b>D.1 Start date of PoA</b>					
D.1.1 Is there a description of how the start date was determined?	PoA DD		Yes. 16/01/2012.  <b>CAR 02:</b> The starting date provided on the PoA version 01 is not the same date from the uploading in the UNFCCC website.	CAR02	OK
D.1.2 Is it ensured that the start date of a PoA is either of the two dates below? (a) The date of notification of the intention to seek	PS	159	Yes.	OK	OK

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the CDM status by the coordinating/managing entity to the secretariat and the DNA; or (b) The date of publication of the PoA-DD for global stakeholder consultation.					
<b>D.2 Duration of the PoA</b>					
D.2.1 Is the duration of the PoA stated with a maximum total length of 28 years, counting from the start date of the PoA?	PoA DD VVS PS	197 160	Yes.	OK	OK
<b>E. Environmental impacts</b>					
<b>E.1 Level at which environmental analysis is undertaken</b>					
E.1.1 Is it indicated whether the environmental analysis is performed at the PoA and/or the CPA level?	PoA DD VVS PS	199 166	The environmental analysis is done at CPA level.	OK	OK
E.1.2 Is the choice of level at which the environmental analysis is undertaken justified?	PoA DD		Yes.	OK	OK
<b>E.2 Analysis of the environmental impacts</b>					
E.2.1 Is a summary of the analysis of the environmental impacts, including transboundary impacts and references to all related documentation provided?	PoA DD		N.A.	OK	OK
<b>E.3 Environmental impact assessment</b>					
E.3.1 If an environmental impact assessment is required, are conclusions and references to all	PoA DD		Yes.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
related documentation provided?					
<b>F. Local stakeholder comments</b>					
<b>F.1 Solicitation of comments from local stakeholders</b>	VVS	201			
F.1.1 Is it indicated whether the local stakeholder consultation process is performed at the PoA and/or the CPA level?	PoA DD PS	167	The local stakeholder consultation is done at CPA level.	OK	OK
F.1.2 Is the choice of level at which the local stakeholder consultation is undertaken justified?	PoA DD		Yes.	OK	OK
F.1.3 Is there a description of the process by which comments from local stakeholders were invited and compiled?	PoA DD		Yes.	OK	OK
<b>F.2 Summary of comments received</b>	VVS	201			
F.2.1 Are stakeholders that have made comments identified?	PoA DD		Not applicable at PoA level.	OK	OK
F.2.2 Is a summary of these comments provided?	PoA DD		Not applicable at PoA level.	OK	OK
<b>F.3 Report on consideration of comments received</b>	VVS	201			
F.3.1 Is information demonstrating that all comments received have been considered provided?	PoA DD		Not applicable at PoA level.	OK	OK
<b>G. Approval and authorization</b>					
<b>G.1 General</b>					
G.1.1 Is it indicated whether the letter(s) of approval from	PoA DD		Refer to CL01	CL01	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS		Draft Concl	Final Concl
Party(ies) which wishes to be involved in the PoA, is available at the time of submitting the PoA-DD to the validating DOE?						
<b>G.2 Approval</b>			Chile	COUNTRY B		
G.2.1 Has the coordinating/managing entity obtained a letter of approval from the DNA of each Party involved in the proposed PoA confirming that: (a) The Party is a Party of the Kyoto Protocol (b) Participation in the proposed PoA is voluntary (c) In case of the host Party, the proposed PoA assists the host Party in achieving sustainable development	VVS  PS	39&51  170&172	<b>CL01</b> – Please, inform the present situation of the approval by The Chile..  <b>CL 04</b> - Please provide the electronic address related to the three laws cited on the footnote 1.	N.A.	CL01 CL04	OK
G.2.2 Is(are) the letter(s) of approval unconditional with respect to (G.2.1) above?	VVS	40	Refer to CL01	N.A.	CL 01	OK
G.2.3 Has(ve) the letter(s) of approval been issued by the respective Party's DNA? If there is doubt with respect to (G.2.1) above, was it verified with the DNA that the letter of approval is valid for the proposed PoA under validation?	VVS	41,42	Refer to CL01	N.A.	CL 01	OK
<b>G.3 Authorization</b>						
G.3.1 Has each project participant been authorized by at least one Party involved in a letter of approval?	VVS PS	45 174	Refer to CL01		OK	OK
G.3.2 Is the information in tabular form in the PoA-DD consistent with the contact information for project	VVS	46	Refer to CL01		OK	OK

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participants provided?					
G.3.3 Are any entities other than those approved as project participants included in the PoA-DD?	VVS	47	Refer to CL01	OK	OK
G.3.4 Has the approval of participation issued from the relevant DNA? And if in doubt, was it verified with the DNA that the approval of participation is valid for the proposed CDM project participants?	VVS	48	Refer to CL01	OK	OK
G.3.5 Has the coordinating/managing entity obtained letters of authorization of its coordination of the PoA from each host Party?	PS	173	Refer to CL01	OK	OK
G.3.6 Is CDM project participation recorded only at the PoA level while the operators of individual CPAs are not required to be project participants?	PS	175	Yes. CDM project participant is only recorded at the PoA level while the operators of individual CPAs are not considered as project participants.	CL01	OK
<b>Part II. Generic component project activity (CPA)</b>					
<b>A. General description of a generic CPA</b>					
<b>A.1 Purpose and general description of generic CPAs</b>					
A.1.1 Is a description of each generic CPA within the PoA provided?	PoA DD		Yes.	OK	OK
A.1.2 Is a specific case CPA-DD provided for each generic CPA at the time of request for registration?	PS PCP	144 14(h)	Yes.	OK	OK
<b>B. Application of a baseline and monitoring</b>					

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
<b>methodology</b>					
<b>B.1 Reference of the approved baseline and monitoring methodology(ies) selected</b>					
B.1.1 Is exact reference (number, title, version) of the selected methodology or multiple methodologies indicated?	PoA DD VVS PS	74 37	<b>CL 11:</b> Please clarify the use of version 12.2.0 of ACM0002, seeing that the latest version of ACM0002 is version 12.3.0.	CL11	OK
B.1.2 Are there any tools and other methodologies to which the selected methodology refers?	PoA DD VVS PS	74 37	Yes.	OK	OK
<b>B.2 Application of methodology(ies)</b>					
B.2.1 Is the choice of the selected methodology(ies) justified by showing that each generic CPA meets each applicability condition of the methodology(ies)?	PoA DD VVS PS	76 38	Yes.	OK	OK
B.2.2 If applicable, is a general description of the sampling plan provided?	PoA DD		No sampling plan is adopted.	OK	OK
B.2.3 Is documentation that has been used as a basis of justification explained or include in Appendix 3? Are references provided?	PoA DD		N.A.	OK	OK
<b>B.3 Sources and GHGs</b>					
B.3.1 Are the sources and GHGs included in each generic CPA boundary described?	PoA DD VVS PS	82 39	The geographical boundary of the PoA is the area covered by the Interconnected Central System (Sistema Interconectado Central, SIC), which corresponds to the following regions: Región de Antofagasta, Región de	CL03	OK

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			Atacama, Region de Coquimbo, Region de Valparaíso, region Metropolitana, Región del Libertador General Bernardo O'Higgins, Region del Maule, Region del Bio Bio, Región de la Araucanía, Región de Los Rios, Region de Los Lagos.  <b>CL 03:</b> Please provide a evidence related to the definition of the area covered by the Interconnected Central System.		
B.3.2 Is the table in PoA-DD used to describe emission sources and GHGs included in the CPA boundary for the purpose of calculating project emissions and baseline emissions?	PoA DD		Yes.	OK	OK
B.3.3 In cases where the selected methodology(ies) allows project participants to choose whether a source or gas is to be included in the CPA boundary, is the choice explained and justified?	VVS PS	84 40	Yes.	OK	OK
B.3.4 Where possible, is a flow diagram physically delineating each generic CPA presented?	PoA DD		Yes.	OK	OK
B.3.5 Are all the equipment, systems and flows of mass and energy included in the flow diagram?	PoA DD		Yes.	OK	OK
B.3.6 Are emissions sources and GHGs which included in the project boundary and the data and parameters to be monitored indicated in the diagram?	PoA DD		Yes.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
<b>B.4 Description of baseline scenario</b>					
B.4.1 Is it described how the baseline scenario is identified for each generic CPA?	PoA DD		Yes.	OK	OK
B.4.2 Is it explained how the baseline scenario is established in accordance with the selected methodology(ies) and applicable provisions for establishment and description of baseline scenarios in the Project standard?	PoA DDVVS PS	88 41	Yes. 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..	OK	OK
B.4.3 Does the selected methodology require use of tools (such as the “Tool for the demonstration and assessment of additionality” or the “Combined tool to identify the baseline scenario and demonstrate additionality”) to establish the baseline scenario?	VVS	89	No.	OK	OK
B.4.4 Do the project participants follow the “Guidelines on the consideration of suppressed demand in CDM methodologies” when establishing the baseline scenario, where future anthropogenic emissions by sources are projected to rise above current levels due to the specific circumstances of the host Party?	PS	42	Not applicable	OK	OK
B.4.5 Do the project participants take into account national and/or sectoral policies including E+/E- policies when establishing the baseline scenario?	VVS PS	93 43-45	<b>CL 12:</b> Please clarify if “relevant national and/or sectoral policies and circumstances” have been taken into account in the identification of the baseline scenario.	CL12	OK

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B.4.6 Where the procedure in the selected methodology(ies) involves several steps, is it described how each step is applied and the outcome of each step transparently documented?	PoA DD		N.A.	OK	OK
B.4.7 Are key assumptions and rationales explained and justified?	PoA DD		Yes.	OK	OK
B.4.8 Are all data used to establish the baseline scenario (variables, parameters, data sources, etc.) provided and explained?	PoA DD		Yes.	OK	OK
B.4.9 Are all relevant documentation and/or references provided?	PoA DD		Yes.	OK	OK
B.4.10 Is a transparent description of the baseline scenario provided?	PoA DDVVS PS	92 46	Yes.	OK	OK
<b>B.5 Demonstration of eligibility for a generic CPA</b>					
B.5.1 Is it demonstrated how each generic CPA meets the eligibility criteria of the PoA including confirmation of additionality of the generic CPA for its inclusion into the PoA?	PoA DD		<b>CAR 01:</b> The eligibility criteria specified on the Section A.4.2.2 from the PoA-DD are not in accordance with the Annex 3 of the 65 <sup>th</sup> EB Meeting Report.	CAR01	OK
<b>B.6 Estimation of emission reductions of a generic CPA</b>					
B.6.1 Explanation of methodological choices					
B.6.1.1 Is it explained how the methods or methodological steps, in the selected methodology, for calculating baseline	PoA DDVVS PS	97 51	Yes.	OK	OK

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emissions, project emissions, leakage emissions and emission reductions are applied to each generic CPA?					
B.6.1.2 Is it clearly stated which equations will be used in calculating emission reductions?	PoA DDVVS PS	97 50-51	Yes.	OK	OK
B.6.2 Data and parameters that are to be reported ex-ante					
B.6.2.1 Is a compilation of information on the data and parameters that are not monitored during the crediting period but are determined before the validation and remain fixed throughout the crediting period included?	PoA DDVVS PS	98 52	Yes.	OK	OK
B.6.2.2 Is it ensured that data that become available only after the registration/inclusion of the CPAs in the PoA (e.g. measurements after the implementation of the CPAs in the PoA) should not be included here but in the table in section B.7?	PoA DD		Yes.	OK	OK
B.6.2.3 The compilation of information may include data that are measured or sampled, and data that are collected from other sources (e.g. official statistics, expert judgment, proprietary data, IPCC, commercial and scientific literature, etc.), is the compilation in compliance with this?	PoA DD		Yes.	OK	OK

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B.6.2.4 Data that are calculated with equations provided in theselected methodology(ies) or default values specified in the methodology(ies) should not be includedin the compilation, is the compilation in compliance with this?	PoA DD		Yes.	OK	OK
B.6.2.5 For each piece of data or parameter, is the table in PoA-DD completed, following these instructions below:					
B.6.2.5.1 “Value(s) applied”: Provide the value applied. Where a time series of data is used, where several measurements are undertaken or where surveys have been conducted, provide detailed information in Appendix 4. To report multiple values referring to the same data or parameter, use one table. If necessary, reference(s) to electronic spreadsheets may be used	PoA DD		Yes.	OK	OK
B.6.2.5.2 “Choice of data”: Indicate and justify the choice of data source. Provide clear and valid references and, where applicable, additional documentation in Appendix 4	PoA DD		Yes.	OK	OK
B.6.2.5.3 “Measurement methods and procedures”: Where values are based on measurement,include a description of the measurement methods and procedures applied (e.g. whichstandards have been	PoA DD		Yes.	OK	OK



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used), indicate the responsible person/entity that undertook the measurement, the date of the measurement and the measurement results. More detailed information can be provided in Appendix 4					
B.6.2.5.4 "Purpose of data": Choose one of the following: (i) Calculation of baseline emissions; (ii) Calculation of project emissions; (iii) Calculation of leakage	PoA DD		Yes.	OK	OK
<b>B.6.3 Ex-ante calculations of emission reductions</b>					
B.6.3.1 Is a transparent ex ante calculation of project emissions, baseline emissions (or, where applicable, direct calculation of emission reductions) and leakage emissions expected during the crediting period, applying all relevant equations provided in the selected methodology provided?	PoA DD		Yes.	OK	OK
B.6.3.2 For data or parameters available before validation, are values contained in the table in section B.6.2 of PoA-DD used?	PoA DD		Yes.	OK	OK
B.6.3.3 For data/parameters not available before validation and monitored during the crediting period, are estimates for parameters contained in the table in section B.7.1 of PoA-DD used?	PoA DD		Yes.	OK	OK
B.6.3.4 If any of these estimates has been determined	PoA DD		N.A.	OK	OK

## VALIDATION REPORT



CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
by a sampling approach, is a description of the sampling efforts provided in accordance with the "Standard for sampling and surveys for CDM project activities and programme of activities"?					
B.6.3.5 Is it documented how each equation is applied, in a manner that enables the reader to reproduce the calculation?	PoA DD		Yes.	OK	OK
B.6.3.6 Where relevant, are additional background information and/or data in Appendix 4, including relevant electronic spreadsheets provided?	PoA DD		N.A.	OK	OK
B.6.3.7 Is a sample calculation for each equation used provided, substituting the values used in the equations?	PoA DD		Yes.	OK	OK
<b>B.7 Application of the monitoring methodology and description of the monitoring plan</b>					
B.7.1 Data and parameters to be monitored by each generic CPA					
B.7.1.1 Is specific information on how the data and parameters that need to be monitored would actually be collected during monitoring included?	PoA DD		Yes.	OK	OK
B.7.1.2 In case of data that are determined only once for the crediting period but that will become available only after registration/inclusion of the	PoA DD		Yes.	OK	OK

## VALIDATION REPORT



CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
CPAs in the PoA, are they included here?					
B.7.1.3 For each piece of data or parameter, is the table in PoA-DD completed, following these instructions below:	PoA DD				
B.7.1.3.1 "Source of data": Indicate the source(s) of data that will be used for the CPAs in the PoA (e.g. which exact national statistics). Where several sources may be used, justify which data sources should be preferred	PoA DD		Yes.	OK	OK
B.7.1.3.2 "Value(s) applied": The value applied is an estimate of the data/parameter that will be monitored during the crediting period, but is used for the purpose of calculating estimated emission reductions. To report multiple values referring to the same data or parameter, use one table. If necessary, reference(s) to electronic spreadsheets may be used	PoA DD		Yes.	OK	OK
B.7.1.3.3 "Measurement methods and procedures": Where data or parameters are to be monitored, specify the measurement methods and procedures, standards to be applied, accuracy of the measurements, person/entity responsible for the measurements, and, in case of periodic measurements, the measurement intervals	PoA DD		<b>CAR 03:</b> The monitoring frequency, established on the ACM0002, was not mentioned on the CPA-DD or in the PoA-DD.	CAR 03	OK

## VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
B.7.1.3.4 "QA/QC procedures": Describe the Quality Assurance (QA)/Quality Control (QC) procedures to be applied, including the calibration procedures, where applicable	PoA DD		Yes.	OK	OK
B.7.1.3.5 "Purpose of data": Choose one of the following: (i) Calculation of baseline emissions; (ii) Calculation of project emissions; (iii) Calculation of leakage.	PoA DD		Yes.	OK	OK
B.7.1.4 Is there any relevant further background documentation provided in Appendix 5?	PoA DD		Not necessary.	OK	OK
B.7.2 Description of the monitoring plan for a generic CPA					
B.7.2.1 Is the monitoring plan for a generic CPA developed in accordance with the approved monitoring methodology(ies), including applicable tool(s)?	PoA DDVVS PS	198 157	Yes.	OK	OK
B.7.2.2 If data and parameters monitored in section B.7.1 of the PoA-DD are determined by a sampling approach, is a description of the sampling plan provided in accordance with the recommended outline for a sampling plan in the "Standard for sampling and surveys for CDM project activities and programme of activities"?	PoA DDPS	53	N.A..	OK	OK
B.7.2.3 Is there any relevant further background	PoA DD		Not necessary.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
information provided in Appendix 5?					
<b>Part III Others</b>					
<b>A. Appendix</b>					
<b>A.1 Appendix 1: Contact information on entity/individual responsible for the PoA</b>					
A.1.1 For each organization listed in section A.4 of the PoA-DD, is the table in PoA-DD completed, with the following mandatory fields: Organization, Street/P.O. Box, City, Postcode, Country, Telephone, Fax and E-mail, and Name of contact person?	PoA DD		Yes.	OK	OK
<b>A.2 Appendix 2: Affirmation regarding public funding</b>					
A.2.1 If applicable, is the affirmation obtained from Annex I Parties providing public funding to the PoA attached?	PoA DD		N.A.	OK	OK
<b>A.3 Appendix 3: Application of methodology(ies)</b>					
A.3.1 Is there any further background information on the applicability of the selected methodology(ies) provided?	PoA DD		N.A.	OK	OK
<b>A.4 Appendix 4: Further background information on ex ante calculation of emission reductions</b>					
A.4.1 Is there any further background information on the ex-ante calculation of emission	PoA DD		N.A.	OK	OK

## VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
reductions provided? This may include data, measurement results, data sources, etc.					
<b>A.5 Appendix 5: Further background information on the monitoring plan</b>					
A.5.1 Is there any further background information used in the development of the monitoring plan? This may include tables with time series data, additional documentation of measurement equipment, procedures etc.	PoA DD		N.A.	OK	OK
<b>B. Global Stakeholder Consultation</b>					
B.1.1 Is there any comment on the PoA-DD of the proposed project activity received during Global Stakeholder Consultation process?	VVS	34	No.	OK	OK
B.1.2 If yes, have all comments been taken into account during the validation of the proposed project activity?	VVS	35	No comments were received..	OK	OK
B.1.3 If comments indicate that the proposed project activity does not comply with the CDM requirements and are not substantiated, is there any further clarification from the entity providing the comment?	VVS	36	No comments were received..	OK	OK
B.1.4 If yes, how comments received have been taken due account?	VVS	36	No comments were received..	OK	OK
B.1.5 If no, are the comments as originally provided proceeded to assess?	VVS	36	No comments were received..	OK	OK

## VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
<b>C. Modalities of Communications (MoC)</b>					
C.1.1 Has the corporate identity of all project participants and focal points included in MoC statement, as well as the personal identities, including specimen signatures and employment status, of their authorized signatories been validated by:	VVS	53			
C.1.1.1 Directly checking evidence for corporate, personal identity and other relevant documentation; or	VVS	54(a)	Yes.	OK	OK
C.1.1.2 Notarized documentation; or	VVS	54(b)	Yes.	OK	OK
C.1.1.3 Written confirmation from the project participant or the coordinating/managing entity that all corporate and personal details, including specimen signatures, are valid and accurate.	VVS	54(c)	Yes.	OK	OK
C.1.2 If (C.1.1.3) above was chosen, is it ensured that the MoC statement is received from the Coordinating/ managing entity?	VVS	55	Yes.	OK	OK
C.1.3 If (C.1.1.3) above was chosen, is it ensured that the official who submits the MoC statement to the DOE and the official who signed the written confirmation (if a different person) is/are duly authorized to do so on behalf of the respective project participant?	VVS	56	Yes.	OK	OK
C.1.4 If it is unable to validate the requirements by applying C.1.1.1 to C.1.1.3 above, are any further	VVS	57	N.A.	OK	OK



## VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
validation activities performed?					
C.1.5 Has the latest version of the form “Modalities of Communication statement” (F-CDM-MOC) been used?	VVS PS	60(a) 72	Yes.	OK	OK
C.1.6 Is the information required as per F-CDM-MOC, including its annex 1, correctly completed?	VVS PS	60(b) 72	Yes.	OK	OK
C.1.7 Does the coordinating/managing entity’s authorized signatory signing the F-CDM-MOC correspond to the authorized signatory included in F-CDM-MOC, annex 1?	VVS PS	60(c) 176	Yes.	OK	OK
C.1.8 Is it confirmed that the CME is either the sole or a joint focal point for each scope of authority?	PCP	30	Yes.	OK	OK
C.1.9 Is it confirmed that the number of joint focal points is limited to five, or equal to the number of host parties if greater than five?	PCP	30	Yes.	OK	OK



**Table 2 Validation requirements based on ACM0002 version 14.0.0 (EB 75)**

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
<b>I. SOURCE, DEFINITIONS AND APPLICABILITY</b>					
<b>D. Applicability</b>					
<b>D.1 Applicable types</b>					
D.1.1 Is the project activity a grid-connected renewable power generation project activity that: (d) install a new power plant at a site where no renewable power plant was operated prior to the implementation of the project activity (greenfield plant); (e) involve a capacity addition; (f) involve a retrofit of (an) existing plant(s) (g) involve a replacement of (an) existing plant(s)	ACM00 02	Ver 14	Yes. It has been defined in Section E.2 of PoA-DD that all CPAs to be included in the PoA will be Greenfield power plants. Refer to <b>CL 11</b> .	CL 11	OK
<b>D.2 Applicable conditions</b>					
D.2.1 Is project activity the installation, capacity addition, retrofit or replacement of a power plant/unit of one of the following types: (a) hydro power plant/unit (either with a run-of-river reservoir or an accumulation reservoir), (b) wind power plant/unit, (c) geothermal power plant/unit,	ACM00 02	Ver 14	The CPA consists in the installation of a river hydro power plant.	OK	OK

## VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
(d) solar power plant/unit, (e) wave power plant/unit or (f) tidal power plant/unit?					
D.2.2 In the case of capacity additions, retrofits or replacements:					
D.2.2.1 Did the existing plant start commercial operation prior to the start of a minimum historical reference period of five years?	ACM00 02	Ver 14	N.A.	OK	OK
D.2.2.2 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?	ACM00 02	Ver 14	N.A.	OK	OK
D.2.3 In case of hydro power plants, does one of the following conditions apply?					
D.2.3.1 The project activity is implemented in an existing single or multiple reservoirs, with no change in the volume of reservoir; or	ACM00 02	Ver 14	N.A	OK	OK
D.2.3.2 The project activity is implemented in an existing single or multiple reservoirs, where the volume of any of reservoirs is increased and the power density of the each reservoir, as per definitions given in the Project Emissions section, is greater than 4 W/m <sup>2</sup> ; or	ACM00 02	Ver 14	N.A	OK	OK
D.2.3.3 The project activity results in new single or multiple reservoirs and the power density of	ACM00 02	Ver 14	In accordance with the Section B.5.2 from the CPA version 1 the Power Density is 909	CL 13	OK

## VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
each reservoir, as per definitions given in the Project Emissions section, is greater than 4 W/m <sup>2</sup>			W/m <sup>2</sup> , greater than 4 W/m <sup>2</sup> .  <b>CL 13:</b> Please provide the references related to the values of Cap <sub>PJ</sub> and A <sub>PJ</sub> .		
D.2.4 In case of hydro power plants using multiple reservoirs where the power density of any of the reservoirs is lower than 4 W/m <sup>2</sup> , are all the following conditions satisfied?					
D.2.4.1 The power density calculated for the entire project activity using equation 5 is greater than 4W/m <sup>2</sup> ;	ACM00 02	Ver 14	N.A	OK	OK
D.2.4.2 Multiple reservoirs and hydro power plants located at the same river and where are designed together to function as an integrated project that collectively constitute the generation capacity of the combined power plant;	ACM00 02	Ver 14	N.A	OK	OK
D.2.4.3 Water flow between multiple reservoirs is not used by any other hydropower unit which is not a part of the project activity;	ACM00 02	Ver 14	N.A	OK	OK
D.2.4.4 Total installed capacity of the power units, which are driven using water from the reservoirs with power density lower than 4 W/m <sup>2</sup> , is lower than 15MW;	ACM00 02	Ver 14	N.A	OK	OK
D.2.4.5 Total installed capacity of the power units,	ACM00	Ver 14	N.A	OK	OK

## VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
which are driven using water from reservoirs with power density lower than 4 W/m <sup>2</sup> , is less than 10% of the total installed capacity of the project activity from multiple reservoirs.	02				
D.2.5 Is it confirmed by the design document that the methodology is not applicable to the following conditions? <ul style="list-style-type: none"> <li>- Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity</li> <li>- Biomass fired power plants;</li> <li>- A hydro power plant that result in new single reservoirs or in the increase in existing single reservoir where the power density of the power plant is less than 4 W/m<sup>2</sup></li> </ul>	ACM00 02	Ver 14	N.A	OK	OK
D.2.6 In the case of retrofits, replacements, or capacity additions, is the continuation of the current situation identified as the most plausible baseline scenario?	ACM00 02	Ver 14	N.A	OK	OK
<b>II. BASELINE METHODOLOGY</b>					
<b>E. Baseline scenario</b>					
<b>E.1 Greenfield</b>					
E.1.1 Is the baseline scenario identified as: Electricity delivered to the grid by the project activity would have otherwise been generated by the operation of	ACM00 02	Ver 14	Yes.	OK	OK

## VALIDATION REPORT



CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
grid-connected power plants and by the addition of new generationsources, as reflected in the combined margin (CM) calculations described in the “Tool tocalculate the emission factor for an electricity system”?					
<b>E.2 Capacity addition</b>					
E.2.1 Is the baseline scenario identified as: In the absence of the CDM project activity, the existing facility would continue to supplyelectricity to the grid at historical levels, until the time at which the generation facility wouldlikely be replaced or retrofitted (DATE <sub>BaselineRetrofit</sub> ). From that point of time onwards, thebaseline scenario is assumed to correspond to the project activity, and no emissionreductions are assumed to occur?	ACM00 02	Ver 14	N.A	OK	OK
<b>E.3 Retrofit or replacement</b>					
E.3.1 Are following steps applied to identify the baseline scenario?					
E.3.1.1 Step 1: Identify realistic and credible alternative baseline scenarios for power generation	ACM00 02	Ver 14	The project activity is not related to the retrofit or replacement of existing grid-connected renewable power plant/unit(s) at the project site, so Step 1 is not applicable.	OK	OK
E.3.1.2 Step 2: Barrier analysis	ACM00 02	Ver 14	The project activity is not related to the retrofit or replacement of existing grid-connected renewable power plant/unit(s) at the project site, so Step 2 is not applicable.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
E.3.1.3 Step 3: Investment analysis	ACM00 02	Ver 14	The project activity is not related to the retrofit or replacement of existing grid-connected renewable power plant/unit(s) at the project site, so Step 3 is not applicable.	OK	OK
<b>F. Additionality</b>					
F.1.1 Is the additionality of the project activity demonstrated and assessed using the latest version of the "Tool for the demonstration and assessment of additionality"?	ACM00 02	Ver 14	Yes.	OK	OK
<b>G. Project boundary</b>					
<b>G.1 Spatial extent</b>					
G.1.1 Is the spatial extent of the project boundary defined as the project power plant and all power plants connected physically to the electricity system that the CDM project power plant is connected to?	ACM00 02	Ver 14	Yes.	OK	OK
<b>G.2 Emission sources</b>					
G.2.1 Are the greenhouse gases and emission sources included in or excluded from the project boundary justified appropriately as shown in the methodology?	ACM00 02	Ver 14	Yes.	OK	OK
<b>H. Emission reductions</b>					
<b>H.1 Project emissions</b>					
H.1.1 For geothermal and solar thermal projects, which	ACM00 02	Ver 14	N.A.	OK	OK

## VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
also use fossil fuels for electricity generation, are CO2 emissions from the combustion of fossil fuels ( $PE_{FF,y}$ ) accounted for as project emissions and calculated as per latest version of the "Tool to calculate project or leakage CO2 emissions from fossil fuel combustion"?					
H.1.2 For geothermal project activities, are fugitive emissions of carbon dioxide and methane due to release of non-condensable gases from produced steam calculated as follows? $PE_{GP,y} = (W_{steam,CO2,y} + W_{steam,CH4,y} * GWP_{CH4}) * M_{steam,y}$	ACM00 02	Ver 14	N.A.	OK	OK
H.1.3 For hydro power project activities that result in new single or multiple reservoirs and hydro powerproject activities that result in the increase of single or multiple existing reservoirs, are the project emissions calculated as follows? $PD = (Cap_{PJ} - Cap_{BL}) / (A_{PJ} - A_{BL})$ If $10 \text{ W/m}^2 > PD > 4 \text{ W/m}^2$ $PE_{HP,y} = (EF_{Res} * TEG_y) / 1000$ If $PD > 10 \text{ W/m}^2$ $PE_{HP,y} = 0$	ACM00 02	Ver 14	Yes.	OK	OK
H.1.4 For project activities that may involve significant project emissions, are these emissions accounted for by using the following equation? $PE_y = PE_{FF,y} + PE_{GP,y} + PE_{HP,y}$	ACM00 02	Ver 14	N.A.	OK	OK

## VALIDATION REPORT



CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
H.1.5 For other renewable power generation project activities, are the project emissions considered as follows? $PE_y=0$	ACM00 02	Ver 14	Yes.	OK	OK
<b>H.2 Baseline emissions</b>					
H.2.1 Are the baseline emissions calculated as: $BE_y=EG_{PJ,y} * EF_{Grid,CM,y}$ ?	ACM00 02	Ver 14	Yes.	OK	OK
H.2.2 Greenfield renewable energy power plants					
H.2.2.1 If the project activity is the installation of a new grid-connected renewable power plant/unit at a sitewhere no renewable power plant was operated prior to the implementation of the project activity, is $EG_{PJ,y}$ calculated as follows? $EG_{PJ,y} = EG_{facility,y}$	ACM00 02	Ver 14	Yes.	OK	OK
H.2.3 Retrofit or replacement of an existing renewable energy power plant					
H.2.3.1 If the project activity is the retrofit or replacement of an existing grid-connected renewable power plant, the baseline scenario is the continuation of the operation of the existing plant, is $EG_{PJ,y}$ calculated as follows? $EG_{PJ,y} = EG_{facility,y} - (EG_{historical} + \sigma_{historical})$ ; until $DATE_{BaselineRetrofit}$ and $EG_{PJ,y} = 0$ ; on/after $DATE_{BaselineRetrofit}$	ACM00 02	Ver 14	N.A.	OK	OK



## VALIDATION REPORT



CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
H.2.3.2 To determine $EG_{historical}$ , have project participants chosen among the following two time spans of historical data?					
H.2.3.2.1 (a) The five last calendar years prior to the implementation of the project activity; or	ACM00 02	Ver 14	N.A.	OK	OK
H.2.3.2.2 (b) The time period from the calendar year following $DATE_{hist}$ , up to the last calendar year prior to the implementation of the project, as long as this time span includes at least five calendar years, where $DATE_{hist}$ is latest point in time between: (i) The commercial commissioning of the plant/unit; (ii) If applicable: the last capacity addition to the plant/unit; or (iii) If applicable: the last retrofit of the plant/unit.	ACM00 02	Ver 14	N.A.	OK	OK
H.2.3.3 To determine $DATE_{BaselineRetrofit}$ , have project participants taken the following approaches into account?					
H.2.3.3.1 (a) The typical average technical lifetime of the type equipment may be determined and documented, taking into account common practices in the sector and country	ACM00 02	Ver 14	N.A.	OK	OK
H.2.3.3.2 (b) The common practices of the responsible	ACM00 02	Ver 14	N.A.	OK	OK

## VALIDATION REPORT



CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
company regarding replacement/retrofitting schedules may be evaluated and documented					
H.2.3.3.3 Is it confirmed that the point in time when the existing equipment would need to be replaced/retrofitted in the absence of the project activity has been chosen in a conservative manner?	ACM00 02	Ver 14	N.A.	OK	OK
H.2.4 For capacity addition project activity, have project participants used one of the following two options to determine $EG_{PJ,y}$ ?					
H.2.4.1 Option 1: Use the approach applied to retrofits and replacements above. $EG_{facility,y}$ corresponds to the total electricity generation of the existing plant(s) or unit(s) and the added plant(s) or unit(s). A separate metering of electricity fed into the grid by the added plant(s) or unit(s) is not necessary under this option. This option may be applied to all renewable power projects.	ACM00 02	Ver 14	N.A.	OK	OK
H.2.4.2 Option 2: For wind, solar, wave or tidal power plant(s) or unit(s), the following approach can be used provided that the electricity fed into the grid by the added power plant(s) or unit(s) addition is separately metered: $EG_{PJ,y} = EG_{PJ\_Add,y}$	ACM00 02	Ver 14	N.A.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
<b>H.3 Leakage</b>					
H.3.1 Is it confirmed that no leakage emissions are needed to be considered?	ACM00 02	Ver 14	Yes.	OK	OK
<b>H.4 Emission reductions</b>					
H.4.1 Are emission reductions calculated as follows? $ER_y = BE_y - PE_y$	ACM00 02	Ver 14	Yes.	OK	OK
<b>I. Project activity under a PoA</b>					
<b>I.1 Type of CPA</b>					
I.1.1 Does the PoA consist of one or several types of CPAs?	ACM00 02	Ver 14	The PoA consist of one type of CPA.	OK	OK
I.1.2 Does the CME describe in the CDM-PoA-DD the eligibility criteria for CPA inclusion used for each type of CPAs separately?	ACM00 02	Ver 14	N.A..	OK	OK
I.1.3 Does the CME describe in the CDM-PoA-DD the emission reduction calculations for each type of CPAs separately?	ACM00 02	Ver 14	N.A..	OK	OK
I.1.4 Does the CME describe in the CDM-PoA-DD the monitoring provisions for each type of CPAs separately?	ACM00 02	Ver 14	N.A..	OK	OK
I.1.5 Does the CME describe transparently and justify in the CDM-PoA-DD which CPAs are regarded to be of the same type?	ACM00 02	Ver 14	N.A..	OK	OK

## VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
I.1.6 Is it ensured that CPAs have not been regarded to be of the same type if one of the conditions listed in the methodology is different?	ACM00 02	Ver 14	N.A..	OK	OK
I.1.7 In case the PoA contains several types of CPAs, if the actual CPA-DD submitted contains all information required as per the latest "Guidelines for completing the CPA-DD" for each type of actual CPA?	ACM00 02	Ver 14	N.A..	OK	OK
<b>I.2 Eligibility criteria</b>					
I.2.1 When defining eligibility criteria for CPA inclusion for a distinct type of CPAs, whether the CME considers relevant technical and economic parameters?	ACM00 02	Ver 14	N.A..	OK	OK
I.2.2 Is it ensured that the eligibility criteria related to costs, revenues and investment climate will be updated every two years in order to correctly reflect the technical and market circumstances of a CPA implementation?	ACM00 02	Ver 14	N.A..	OK	OK
<b>J. Data and parameter not monitored</b>					
<b>J.1 Parameters listed in the methodology</b>					
J.1.1 Parameter X	ACM00 02	Ver 14	EFRes- Default value	OK	OK
J.1.2 Parameter Y	ACM00 02	Ver 14	CapBL	OK	OK

## VALIDATION REPORT



CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
J.1.3 Parameter Z	ACM00 02	Ver 14	ABL	OK	OK
<b>J.2 Data and parameters in the tools referred to in the methodology</b>					
J.2.1 Parameter X			N.A.	OK	OK
J.2.2 Parameter Y					
<b>III. MONITORING METHODOLOGY</b>					
<b>K. General requirement of monitoring activity</b>					
<b>K.1 Archive and measurement equipment</b>					
K.1.1 Is it indicated in the monitoring plan that all data collected as part of monitoring should be archived electronically and be kept at least for two years after the end of the last crediting period?	ACM00 02	Ver 14	Yes.	OK	OK
K.1.2 Is it ensured that all measurements should be conducted with calibrated measurement equipment according to relevant industry standards?	ACM00 02	Ver 14	Yes.	OK	OK
<b>L. Data and parameters monitored</b>					
<b>L.1 Parameters listed in the methodology</b>					
L.1.1 Parameter A	ACM00 02	Ver 14	$EG_{\text{facility},y}$ : Quantity of net electricity generation supplied by the project plant/unit to the grid in year $y$ .	OK	OK

## VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
L.1.2 Parameter B			$EG_{m,y}$ and $EG_{k,y}$ : Net electricity generated by power plant/unit $m$ or $k$ in year $y$	OK	OK
L.1.3 Parameter C			$\eta_{m,y}$ : Average net energy conversion efficiency of power unit $m$ in year $y$	OK	OK
L.1.4 Parameter D			TEG $_y$ : Total electricity produced by the project activity, including the electricity supplied to the grid and the electricity supplied to internal loads, in year $y$	OK	OK
<b>L.2 Data and parameters in the tools referred to in the methodology</b>					
L.2.1 Parameter X			$FC_{i,m,y}$ : Amount of fuel type $i$ consumed by power unit $m$ in year $y$	OK	OK
L.2.2 Parameter Y			NCV $_{i,y}$ : Net calorific value (energy content) of fuel type $i$ in year $y$	OK	OK
L.2.3 Parameter Z			$EF_{CO_2,i,y}$ and $EF_{CO_2,m,i,y}$ : CO <sub>2</sub> emission factor of fuel type $i$ in year $y$	OK	OK

**Table 2-1 Validation requirements based on Methodological Tool "Demonstration and Assessment of Additionality" Ver 07.0.0 (EB 70 Annex 8)**

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
<b>M. Step 1: Identification of alternatives</b>					
<b>M.1 Sub-step 1a: Define alternatives to the project activity</b>					
M.1.1 Are realistic and credible alternative(s) identified, include following:	EB 70 Ann 8	16			
M.1.1.1 (a) The proposed project activity undertaken without being registered as a CDM project activity?	EB 70 Ann 8	16 (a)	Yes.	OK	OK
M.1.1.2 (b) Other realistic and credible alternative scenario(s) to the proposed CDM project activity scenario that deliver outputs services or services with comparable quality, properties and application areas, taking into account, where relevant, examples of scenarios identified in the underlying methodology?	EB 70 Ann 8	16 (b)	<b>CAR 04:</b> Other realistic and credible alternative scenario(s) to the proposed CDM project activity scenario that deliver outputs services or services with comparable quality, properties and application areas, taking into account, where relevant, examples of scenarios identified in the underlying methodology were not identified in the PoA – DD and CPA-DD.	CAR04	OK
M.1.1.3 (c) If applicable, continuation of the current situation (no project activity or other alternatives undertaken)?	EB 70 Ann 8	16 (c)	Yes.	OK	OK

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
M.1.2 If the proposed CDM project activity includes several different facilities, technologies, outputs or services, are alternative scenarios for each of them identified separately? Are realistic combinations of these considered as possible alternative scenarios to the proposed project activity?	EB 70 Ann 8	17	N.A.	OK	OK
M.1.3 Does the project participant include the technologies or practices that provide outputs or services with comparable quality, properties and application areas as the proposed CDM project activity and that have been implemented previously or are currently being introduced in the relevant country/region?	EB 70 Ann 8	18	Refer to CAR 04	CAR 04	OK
M.1.4 Outcome of Step 1a: Is realistic and credible alternative scenario(s) to the project activity identified appropriately?	EB 70 Ann 8		<b>CAR 05:</b> The outcome of Step 1a was not listed.	CAR05	OK
<b>M.2 Sub-step 1b: Consistency with mandatory laws and regulations</b>					
M.2.1 Is the alternative(s) in compliance with all mandatory applicable legal and regulatory requirements, even if these laws and regulations have objectives other than GHG reductions, e.g. to mitigate local air pollution?	EB 70 Ann 8	19	Yes, but refer to CAR 04.	CAR04	OK
M.2.2 If an alternative does not comply with all mandatory applicable legislation and regulations, is it shown that, based on an examination of current practice in	EB 70 Ann 8	20	N.A.	OK	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
the country or region in which the law or regulation applies, those applicable legal or regulatory requirements are systematically not enforced and that noncompliance with those requirements is widespread in the country?					
M.2.3 Outcome of Step 1b: Is realistic and credible alternative scenario(s) to the project activity that are in compliance with mandatory legislation and regulations taking into account the enforcement in the region or country and EB decisions on national and/or sectoral policies and regulations identified appropriately?	EB 70 Ann 8		<b>CAR 06:</b> The outcome of Step 1b was not listed.	CAR06	OK
<b>N. Step 2: Investment analysis</b>					
<b>N.1 Sub-step 2a: Determine appropriate analysis method</b>					
N.1.1 Is the simple cost analysis applied, if the CDM project activity and the alternatives identified in Step 1 generate no financial or economic benefits other than CDM related income (Option I)?	EB 70 Ann 8	25	N.A.	OK	OK
N.1.2 Is the investment comparison analysis (Option II) or the benchmark analysis (Option III) used?	EB 70 Ann 8	25	Option III is used.	OK	OK
<b>N.2 Sub-step 2b: Apply investment analysis</b>					
N.2.1 Option I - simple cost analysis: Are the costs associated with the CDM project activity and the alternatives identified in Step 1	EB 70 Ann 8	26	N.A.	OK	OK

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correctly documented and is it demonstrated that there is at least one alternative which is less costly than the project activity?					
N.2.2 Option II - investment comparison analysis: Is the financial indicator, such as IRR, NPV, cost benefit ratio, or unit cost of service most suitable for the project type and decision-making context correctly identified?	EB 70 Ann 8	27	N.A.	OK	OK
N.2.3 Option III- benchmark analysis: Is the financial/economic indicator, such as IRR, most suitable for the project type and decision context correctly identified?	EB 70 Ann 8	28	The additionality analysis is based on the benchmark analysis (Option III), through the assessment of the attractiveness of the project, using a government rate of return as a benchmark	OK	OK
N.2.4 When applying Option II or Option III, is financial/economic analysis based on parameters that are standard in the market, considering the specific characteristics of the project type, but not linked to the subjective profitability expectation or risk profile of a particular project developer?	EB 70 Ann 8	29	To be verified at CPA level.	OK	OK
N.2.5 Is the discount rate and benchmark derived from the following options:					
N.2.5.1 (a) Government bond rates, increased by a suitable risk premium to reflect private investment and/or the project type, as substantiated by an independent (financial) expert or documented by official publicly	EB 70 Ann 8	30 (a)	The benchmark is derived from an official and public benchmark, determined by the government of the project country for the assessment of generation projects (option d).	OK	OK

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
available financial data?					
N.2.5.2 (b) Estimates of the cost of financing and required return on capital (e.g. commercial lending rates and guarantees required for the country and the type of project activity concerned), based on bankers views and private equity investors/funds' required return on comparable projects?	EB 70Ann 8	30 (b)	The benchmark is derived from an official and public benchmark, determined by the government of the project country for the assessment of generation projects (option d).	OK	OK
N.2.5.3 (c) A company internal benchmark (weighted average capital cost of the company)?(The project developers shall demonstrate that this benchmark has been consistently used in the past, i.e. that project activities under similar conditions developed by the same company used the same benchmark)	EB 70 Ann 8	30 (c)	The benchmark is derived from an official and public benchmark, determined by the government of the project country for the assessment of generation projects (option d).	OK	OK
N.2.5.4 (d) Government/official approved benchmark where such benchmarks are used for investment decisions?	EB 70 Ann 8	30 (d)	The benchmark is derived from an official and public benchmark, determined by the government of the project country for the assessment of generation projects (option d).	OK	OK
N.2.5.5 (e) Any other indicators, if the project participants can demonstrate that the above Options are not applicable and their indicator is appropriately justified?	EB 70 Ann 8	30 (e)	The benchmark is derived from an official and public benchmark, determined by the government of the project country for the assessment of generation projects (option d).	OK	OK
<b>N.3 Sub-step 2c: Calculation and comparison of</b>					

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
<b>financial indicators (only applicable to Options II and III)</b>					
N.3.1 Is the suitable financial indicator for the proposed CDM project activity and, in the case of Option II, for the other alternatives calculated?	EB 70 Ann 8	31	To be verified at CPA level.	OK	OK
N.3.2 Are all relevant costs (including, for example, the investment cost, the operations and maintenance costs), and revenues (excluding CER revenues, but possibly including inter alia subsidies/fiscal incentives, ODA, etc, where applicable), and, as appropriate, non-market cost and benefits in the case of public investors if this is standard practice for the selection of public investments in the host country included?	EB 70 Ann 8	31	To be verified at CPA level.	OK	OK
N.3.3 Is the investment analysis presented in a transparent manner and are all the relevant assumptions provided, preferably in the PDD, or in separate annexes to the PDD, so that a reader can reproduce the analysis and obtain the same results?	EB 70 Ann 8	32	To be verified at CPA level.	OK	OK
N.3.4 Are all critical techno-economic parameters and assumptions referred to? (such as capital costs, fuel prices, lifetimes, and discount rate or cost of capital)	EB 70 Ann 8	32	To be verified at CPA level.	OK	OK
N.3.5 Are assumptions justified and/or cited in a manner that can be validated by the DOE?	EB 70 Ann 8	32	To be verified at CPA level.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
N.3.6 In calculating the financial/economic indicator, are the project's risks included through the cash flow pattern, subject to project-specific expectations and assumptions?	EB 70 Ann 8	32	To be verified at CPA level.	OK	OK
N.3.7 Is it ensured that assumptions and input data for the investment analysis do not differ across the project activity and its alternatives, unless differences can be well substantiated?	EB 70 Ann 8	33	To be verified at CPA level.	OK	OK
N.3.8 Is a clear comparison of the financial indicator for the proposed CDM activity presented in the PDD?	EB 70 Ann 8	34	To be verified at CPA level.	OK	OK
<b>N.4 Sub-step 2d: Sensitivity analysis (only applicable to Options II and III)</b>					
N.4.1 Is a sensitivity analysis that shows whether the conclusion regarding the financial/economic attractiveness is robust to reasonable variations in the critical assumptions included?	EB 70 Ann 8	35	To be verified at CPA level.	OK	OK
<b>N.5 Is the latest approved version of the "Guidelines on the assessment of investment analysis" taken into account when applying Step 2?</b>	EB 70 Ann 8	23	Yes. Applicable to the CPA DD.	OK	OK
<b>N.6 Outcome of Step 2: Is it concluded that: the proposed CDM project activity is more costly than at least one alternative (Option I), or the proposed CDM project activity is unlikely to be the most financially/economically attractive (Option II), or is unlikely to be</b>	EB 70 Ann 8		Yes, the outcome has been clearly mentioned with justification	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
financially/economically attractive (Option III)?					
<b>O. Step 3: Barrier analysis</b>					
<b>O.1 Sub-step 3a: Identify barriers that would prevent the implementation of the proposed CDM project activity</b>					
O.1.1 Are investment barriers identified, include following:					
O.1.1.1 (a) For alternatives undertaken and operated by private entities: Similar activities have only been implemented with grants or other non-commercial finance terms?	EB 70 Ann 8	40.1	As per PoA: "In general terms this step will not be applied. Nevertheless if particular CPA faces exceptional barriers that prevent its implementations, the Step 3 (Barrier Analysis) can be applied instead of Step 2 (Investment Analysis). In this case, the specific requirements stated on the latest versions of the "Tool for the demonstration and assessment of additionality" (Sub-step 3a and Sub-step 3b) and "Guidelines for objective Demonstration and Assessment of Barriers" must to be complied."	OK	OK
O.1.1.2 (b) No private capital is available from domestic or international capital markets due to real or perceived risks associated with investment in the country where the proposed CDM project activity is to be implemented, as demonstrated by the credit rating of the	EB 70 Ann 8	40.1	Not applicable. Refer to 3.1.1.1. above.	OK	OK

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
country or othercountry investments reports of reputed origin?					
O.1.2 Are technological barriers identified, include following:					
O.1.2.1 (a) Skilled and/or properly trained labour to operate and maintain the technology is not availablein the relevant country/region, which leads to an unacceptably high risk of equipment disrepairand malfunctioning or other underperformance?	EB 70 Ann 8	40.2	Not applicable. Refer to 3.1.1.1. above.	OK	OK
O.1.2.2 (b) Lack of infrastructure for implementation and logistics for maintenance of the technology (e.g.natural gas cannot be used because of the lack of a gas transmission and distribution network)?	EB 70 Ann 8	40.2	Not applicable. Refer to 3.1.1.1. above.	OK	OK
O.1.2.3 (c) Risk of technological failure: the process/technology failure risk in the local circumstances issignificantly greater than for other technologies that provide services or outputs comparable tothose of the proposed CDM project activity, as demonstrated by relevant scientific literature ortechnology manufacturer information?	EB 70 Ann 8	40.2	Not applicable. Refer to 3.1.1.1. above.	OK	OK
O.1.2.4 (d) The particular technology used in the proposed project activity is not available in the relevantregion?	EB 70 Ann 8	40.2	Not applicable. Refer to 3.1.1.1. above.	OK	OK

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
O.1.3 Barriers due to prevailing practice (Folk)					
O.1.3.1 For measures listed in paragraph 6 of the additionality tool:					
O.1.3.1.1 (i) Is it ensured that 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?	EB 70 Ann 8	40.3	Not applicable. Refer to 3.1.1.1. above.	OK	OK
O.1.3.1.2 (ii) Is it ensured that project participants selected a crediting period for the project activity that is "a maximum of 10 years with no option of renewal"?	EB 70 Ann 8	40.3	Not applicable. Refer to 3.1.1.1. above.	OK	OK
O.1.3.1.3 Is it concluded that the proposed project activity that was identified as the First-of-its-kind project activity is additional and Sub-step 3b does not apply?	EB 70 Ann 8	40.3	Not applicable. Refer to 3.1.1.1. above.	OK	OK
O.1.3.2 For measures different from those listed in paragraph 6 of the additionality tool:					
O.1.3.2.1 Is it ensured that the project proponents propose approach for demonstrating that a project is a "first-of-its-kind" and Sub-step 3b applies?	EB 70 Ann 8	40.3	Not applicable. Refer to 3.1.1.1. above.	OK	OK
O.1.4 Other barriers					



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
O.1.4.1 Are other barriers identified, preferably specified in the underlying methodology as examples?	EB 70Ann 8	40.4	Not applicable. Refer to 3.1.1.1. above.	OK	OK
O.1.5 Outcome of Step 3a: Are barriers that may prevent one or more alternative scenarios to occur identified or is it concluded that the project is additional (Folk)?	EB 70 Ann 8		Not applicable. Refer to 3.1.1.1. above.	OK	OK
<b>O.2 Sub-step 3b: Show that the identified barriers would not prevent the implementation of at least one of the alternatives (except the proposed project activity)</b>					
O.2.1 If the identified barriers also affect other alternatives, is it explained how they are affected less strongly than they affect the proposed CDM project activity?	EB 70 Ann 8	41	Not applicable. Refer to 3.1.1.1. above.	OK	OK
O.2.2 Is it ensured that any alternative that would be prevented by the barriers identified in Sub-step 3a is not a viable alternative, and is eliminated from consideration?	EB 70 Ann 8	41	Not applicable. Refer to 3.1.1.1. above.	OK	OK
<b>O.3 General requirements for applying Steps 3</b>					
O.3.1 Is the latest approved version of the “Guidelines for objective demonstration and assessment of barriers” taken into account when applying this step?	EB 70 Ann 8	36	Not applicable. Refer to 3.1.1.1. above.	OK	OK
O.3.2 For barriers other than Folk, is it ensured that the	EB 70	38	Not applicable.	OK	OK

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
identified barriers would prevent potential project proponents from carrying out the proposed project activity undertaken without being registered as a CDM project activity?	Ann 8		Refer to 3.1.1.1. above.		
O.3.3 For barriers other than Folk, is it ensured that the CDM alleviates the identified barriers that prevent the proposed project activity from occurring?	EB 70 Ann 8	39	Not applicable. Refer to 3.1.1.1. above.	OK	OK
O.3.4 Is transparent and documented evidence provided?	EB 70 Ann 8	42	Not applicable. Refer to 3.1.1.1. above.	OK	OK
O.3.5 Are conservative interpretations of the documented evidence, as to how it demonstrates the existence and significance of the identified barriers and whether alternatives are prevented by these barriers offered?	EB 70 Ann 8	42	Not applicable. Refer to 3.1.1.1. above.	OK	OK
O.3.6 In case of anecdotal evidence, is it ensured that it is not used alone as proof of barriers?	EB 70 Ann 8	42	Not applicable. Refer to 3.1.1.1. above.	OK	OK
O.3.7 Is it ensured that the type of evidence includes at least one of the following:	EB 70 Ann 8	42	Not applicable. Refer to 3.1.1.1. above.	OK	OK
O.3.7.1 (a) Relevant legislation, regulatory information or industry norms;	EB 70 Ann 8	42	Not applicable. Refer to 3.1.1.1. above.	OK	OK
O.3.7.2 (b) Relevant (sectoral) studies or surveys (e.g. market surveys, technology studies, etc) undertaken by universities, research institutions, industry associations, companies, bilateral/multilateral institutions, etc;	EB 70 Ann 8	42	Not applicable. Refer to 3.1.1.1. above.	OK	OK

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
O.3.7.3 (c) Relevant statistical data from national or international statistics;	EB 70Ann 8	42	Not applicable. Refer to 3.1.1.1. above.	OK	OK
O.3.7.4 (d) Documentation of relevant market data (e.g. market prices, tariffs, rules);	EB 70 Ann 8	42	Not applicable. Refer to 3.1.1.1. above.	OK	OK
O.3.7.5 (e) Written documentation of independent expert judgments from industry, educational institutions (e.g. universities, technical schools, training centres), industry associations and others.	EB 70 Ann 8	42	Not applicable. Refer to 3.1.1.1. above.	OK	OK
<b>P. Step 4: Common practice analysis</b>					
<b>P.1 For measures different from those listed in paragraph 6 of the additionality tool:</b>					
P.1.1 Sub-step 4a: Analyze other activities similar to the proposed project activity					
P.1.1.1 Does project proponent provide an analysis of any other activities that are operational and that are similar to the proposed project activity?	EB 70 Ann 8	44	Yes. This is discussed at CPA level	OK	OK
P.1.1.2 Does project proponent provide documented evidence and, where relevant, quantitative information and describe whether and to which extent similar activities have already diffused in the relevant region?	EB 70 Ann 8	44	Yes. <i>This is discussed at CPA level</i>	OK	OK
P.1.2 Sub-step 4b: Discuss any similar Options that are					

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
occurring					
P.1.2.1 If similar activities are identified, is it demonstrated why the existence of these activities does not contradict the claim that the proposed project activity is financially/economically unattractive or subject to barriers?	EB 70 Ann 8	45	Yes. <i>This is discussed at CPA level</i>	OK	OK
P.1.2.2 If the demonstration is done by comparing the proposed project activity to the other similar activities, are essential distinctions between them pointed out and explained?	EB 70 Ann 8	45	Yes. <i>This is discussed at CPA level</i>	OK	OK
P.1.2.3 If the essential distinctions include a serious change in circumstances, is the change fundamental and verifiable?	EB 70 Ann 8	46	<b>CAR 07:</b> The outcome of Step 4 was not listed.	CAR07	OK
<b>P.2 For measures listed in paragraph 6 of the additionality tool:</b>					
P.2.1 Step 1: Does project proponent calculate applicable output range as +/-50% of the design output or capacity of the proposed project activity?	EB 70 Ann 8	47	Yes. This is done at CPA level.	OK	OK
P.2.2 Step 2: In the applicable geographical area, does project proponent identify all plants that deliver the same output or capacity, within the applicable output range calculated in Step 1, as the proposed project activity and have started commercial operation before the start date of the project? And note their number $N_{all}$ ?	EB 70 Ann 8	47	Yes. This is done at CPA level.	OK	OK

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P.2.3 Step 3: Within plants identified in Step 2, does project proponent identify those that apply technologies different from that applied in the proposed project activity? And note their number $N_{diff}$ ?	EB 70Ann 8	47	Yes. This is done at CPA level.	OK	OK
P.2.4 Step 4: Does project proponent calculate factor $F=1-N_{diff}/N_{all}$ representing the share of plants using technology similar to the technology used in the proposed project activity in all plants that deliver the same output or capacity as the proposed project activity?	EB 70 Ann 8	47	Yes. This is done at CPA level.	OK	OK
P.2.5 Is it concluded that the proposed project activity is a “common practice” within a sector in the applicable geographical area as both the following conditions are fulfilled? (a) the factor F is greater than 0.2, and (b) $N_{all}-N_{diff}$ is greater than 3.	EB 70 Ann 8	47	Yes.	OK	OK

**Table 3 Resolution of Corrective Action /Clarification / Forward Action Requests**

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question	Summary of project owner response	Validation team conclusion
<b>CAR 01:</b> The eligibility criteria specified on the Section A.4.2.2 from the PoA-DD are not in accordance with the Annex 3 of the 65 <sup>th</sup> EB Meeting Report.	Table 1	<p>PP FIRST RESPONSE:</p> <p>The eligibility criteria specified on the Section A.4.2.2 have been complemented in the new version of the PoA-DD to be in accordance with the Annex 3 of the 65<sup>th</sup> EB Meeting Report. The new version of the generic CPA-DD and the new version of the CPA-DD have been modified accordingly.</p>	<p>THIS CAR IS STILL OPEN:</p> <p>Please describe in Section A.4.2.2 of the PoA-DD version 2:</p> <ul style="list-style-type: none"> <li>- Conditions that avoid double counting of emission reductions” More specifically, how will the CME avoid double counting of ERs <u>from the CPAs included</u> in this specific PoA.</li> </ul>
		<p>PP SECOND RESPONSE:</p> <p>Conditions that avoid double counting of emission reductions, Conditions to check the start date of the CPA and all the applicability conditions of the methodology ACM0002 are included in the new version of the PoA-DD. The applicability conditions of the relevant Tool are also covered by the eligibility conditions stated in section A.4.2.2. The new version of the generic CPA-DD and the new version of the CPA-DD have been modified accordingly.</p>	<ul style="list-style-type: none"> <li>- Conditions to check the start date of the CPA <u>through documentary evidence</u></li> </ul> <p>Conditions that ensure compliance with <u>(all)</u> applicability and <u>other requirements</u> of the methodology that applies.</p> <p>PP has made the necessary corrections / inclusions as requested above, Seeing the above, the DOE was able to close CAR 01.</p>

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<b>CAR 02:</b> The starting date provided on the PoA version 01 is not the same date from the uploading in the UNFCCC website.	Table 1	<p>The starting date has been corrected in the new version of the PoA-DD.</p>	<p>The starting date in version 2 of the PoA-DD was corrected to: 22/01/2012.</p> <p>Crosschecked on:</p> <p><a href="http://cdm.unfccc.int/ProgrammeOfActivities/Validation/DB/XDI0HGFWE4BQ3NMQDAJ85EBGCWO9LH/view.html">http://cdm.unfccc.int/ProgrammeOfActivities/Validation/DB/XDI0HGFWE4BQ3NMQDAJ85EBGCWO9LH/view.html</a></p> <p>Seeing the above, the CAR was closed.</p>
<b>CAR 03:</b> The monitoring frequency, established on the ACM0002, was not mentioned on the CPA-DD or in the PoA-DD.	Table 2	<p>The monitoring frequency is now mentioned in the new version of the PoA-DD, the new version of the generic CPA-DD and the new version of the CPA-DD.</p>	<p>Monitoring frequency for EG<sub>facility,y</sub> now in version 2 of the PoA-DD:</p> <p><i>“Data will be continuously measured and will be electronically recorded every 15 minutes and aggregated on a monthly basis.”</i></p> <p>Since this is in accordance with the applicable methodology (ACM0002), the CAR was closed.</p>

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<b>CAR 04:</b> Other realistic and credible alternative scenario(s) to the proposed CDM project activity scenario that deliver outputs services or services with comparable quality, properties and application areas, taking into account, where relevant, examples of scenarios identified in the underlying methodology were not identified in the PoA – DD and CPA-DD.	Table 2.1	No other alternative scenarios other than “the proposed project activity undertaken without being registered as a CDM project activity” and “the continuation of the current situation” had been included taking into account that ACM0002 does not includes other “alternative scenarios” if the project activity is the installation of a new grid-connected renewable power plant/unit such as any CPA to be included in the PoA. (ACM0002 only requires the analysis of other alternatives in the case of retrofit or replacement, which is an alternative not allowed for a CPA to be included in the PoA). Nevertheless, the alternatives of “The construction and operation of other type of renewable energy power plant, such as solar or wind power plants” and “construction and operation of a new fossil fuel power plant” have been included in the new version of the PoA-DD (the new version of the generic CPA-DD and the new version of the CPA-DD were properly adjusted)	<p>The following alternative scenarios were included to 1.a in the PoA-DD version 2:</p> <p>c) <i>The construction and operation of other type of renewable energy power plant, such as solar or wind power plants.</i></p> <p>d) <i>The construction and operation of a new fossil fuel power plant, such as diesel, natural gas or coal fired power plants.</i></p> <p>The CAR was attended and, therefore, closed.</p>
<b>CAR 05:</b> The outcome of Step 1a was not listed.	Table 2.1	The outcome of Step 1a is included in in the new version of the PoA-DD (the new version of the generic CPA-DD and the new version of the CPA-DD were properly adjusted).	<p>The outcomes were listed in version 2 of the PoA.</p> <p>The CAR is closed.</p>
<b>CAR 06:</b> The outcome of Step 1b was not listed.	Table 2.1	The outcome of Step 1b is included in in the new version of the PoA-DD (the new version of the generic CPA-DD and the new version of the CPA-DD were properly adjusted).	<p>The outcomes were listed in version 2 of the PoA.</p> <p>The CAR is closed.</p>



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<b>CAR 07:</b> The outcome of Step 4 was not listed.	Table 2.1	As the stepwise approach for common practice analysis has been changed (see CAR 09) this no longer applies.	<p>A stepwise approach was included in version 2 of the PoA. Please refer to CAR 09.</p> <p>This CAR is closed, since the same issue is addressed in CAR 9. Please refer to CAR 09.</p>
<b>CAR 08:</b> The PoA-DD makes no reference to the the "Combined Tool to Identify the Baseline Scenario and Demonstrate Additionality"	Table 2.1	The "Combined Tool to Identify the Baseline Scenario and Demonstrate Additionality" is not included in the PoA because, as defined in ACM0002, it is to be applied if the project activity is the retrofit or replacement of existing grid-connected renewable power plant/unit(s). All CPA will be Greenfield projects (it is an eligibility criteria).	<p>PP's explanation is in line with ACM0002 and, therefore, the CAR was closed.</p>

## VALIDATION REPORT

<p><b>CAR 09:</b> The stepwise approach for common practice analysis does not comply with the S Step 4: Common practice analysis, from the Methodological tool “Tool for the demonstration and assessment of additionality”</p>	<p>EB65 Ann21</p>	<p>The stepwise approach for common practice analysis has been changed in the new version of the PoA-DD, and properly adjusted in the new version of the generic CPA-DD and new version of the CPA-DD (see file “COMMON PRACTICE.xlsx”).</p> <p>In this analysis, for the applicable geographical area only SIC-connected power plants have been included: The applicable geographical area for the common practice analysis is smaller than the host country because the existing conditions to develop hydropower projects varies significantly between the SIC (Sistema Interconectado Central) and the other 3 Chilean electricity systems:</p> <p>The “Sistema Eléctrico de Aysén” and the “Sistema Eléctrico de Magallanes” are not comparable with the SIC for several reasons: in terms of size (installed capacity) they only have 42.2 MW and 98.8 MW installed capacity (respectively) compared with 12,147.1 MW installed capacity for the SIC; they supply electricity only to the 0.61% and 0.93% of the Chilean populations whereas the SIC supply electricity to the 92.23% of the Chilean population. (for evidence see “Estadísticas de Operación 2001-2010” CDEC-SIC, page 10, available at <a href="https://www.cdec-sic.cl/datos/anuario2011.pdf">https://www.cdec-sic.cl/datos/anuario2011.pdf</a>). Furthermore both systems are located in regions with low population density: 0.9 hab/km<sup>2</sup> and 1.2 hab/km<sup>2</sup> (total density in Chile is 21.7 hab/km<sup>2</sup>. For evidence see <a href="http://www.ine.cl/canales/elemento_persistente/preguntas_frecuentes/pdf/p42.pdf">http://www.ine.cl/canales/elemento_persistente/preguntas_frecuentes/pdf/p42.pdf</a>),</p>	<p><u>Regarding “different technology”:</u></p> <p><i>“Legal regulations: power plants constructed before 1982, when the Decree with Law Force No 1: Electricity Services General Law was enacted, which privatized the electric sector, changing the conditions for the investment in energy projects”.</i></p> <p><u>Regarding the applicable geographical area geographical scope:</u></p> <p>The DOE was able to validate the SIC system as the applicable geographical area with the following crosschecks:</p> <p>Size difference between SIC (12,147. 1MW – 92% of population), SEA (42.2 MW – 0.61% of population) and SEM (98.8 MW – 093% of population). Crosschecked on: <a href="https://www.cdec-sic.cl/datos/anuario2011.pdf">https://www.cdec-sic.cl/datos/anuario2011.pdf</a></p>
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## VALIDATION REPORT

		<p>The "Sistema Interconectado del Norte Grande" (SING) has deep differences with SIC in relation to the hydropower generation and hydropower potential because it is located in a desert. For evidence see</p> <p><a href="http://siit2.bcn.cl/nuestropais/region15/clima.htm">http://siit2.bcn.cl/nuestropais/region15/clima.htm</a><a href="http://siit2.bcn.cl/nuestropais/region1/clima.htm">http://siit2.bcn.cl/nuestropais/region1/clima.htm</a></p> <p><a href="http://siit2.bcn.cl/nuestropais/region2/clima.htm">http://siit2.bcn.cl/nuestropais/region2/clima.htm</a></p>	<p>Low population capacity of SEA and SEM was crosschecked at:</p> <p><a href="http://www.ine.cl/canales/elemento_persistente/preguntas_frecuentes/pdf/p42.pdf">http://www.ine.cl/canales/elemento_persistente/preguntas_frecuentes/pdf/p42.pdf</a></p> <p>Characteristics of the SING crosschecked with:</p> <p><a href="https://www.cdec-sic.cl/datos/anuario2011.pdf">https://www.cdec-sic.cl/datos/anuario2011.pdf</a></p> <p>In addition, the stepwise approach for common practice analysis has been presented in accordance with para 47 of the Tool.</p> <p>Seeing the above, the CAR was closed.</p>
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## VALIDATION REPORT

<p><b>CAR 10:</b> <b>Additional</b> <b>CAR:(version 3 PoA-DD)</b></p> <p>1. <u>Benchmark of 10%:</u> The benchmark shall be valid at the moment of investment decision of each CPA to be included to the PoA in the future. Since the PoA has a duration of 28 years, it is possible that the government decides to change the expected return in the next 28 years. PP shall included a statement in the PoA-DD that, if in the future the Benchmark is adjusted by the government or if the Benchmark cannot be considered valid due to other reasons, PP shall adjust the Benchmark at CPA level and this will need to be validated by the DOE at CPA level.</p> <p>2. It is not clear in the PoA-DD if power plants that result in new reservoir(s) are included in the PoA. Moreover, section A.4.2.2 now includes option 1.b. Power plant associated to an existing dam. However, Sections E.6.1, E.6.2, E.6.3 and others describe that new reservoirs are also possible. Please revise the PoA-DD to clarify which types of reservoir can be included in the PoA.</p>		<p>1. A statement has been included in the new version of the PoA-DD.</p> <p>2. Eligibility criteria N°1 has been improved to better reflect what types of project are eligible in the Programme of Activities. It is now clearly stated that the alternatives are: (a) run of river projects without reservoir, (b) run of river projects with single or multiple reservoirs, and (c) power plants associated to an existing dam. Eligibility criteria N° 3 further develops the requirements for alternatives (a) and (b) (run of river projects with and without reservoir respectively); Eligibility criteria N° 4 further develops the requirements for projects associated with existing dams (alternative (b)). Eligibility criteria N° 5, 6, 7, 8 and 9 further develop the requirements for run of river projects with single or multiple reservoirs (alternative (b)). CPA-DDs have been properly adjusted. Section E.6.1 of the PoA-DD has also been improved to reflect the new structure of the project type eligibility; sections E.6.2 and E.6.3 have been properly adjusted.</p>	<p>1. OK: PP has included information on: <i>"If in the future this value is adjusted in the Law or if the benchmark cannot be considered valid due to other reasons, it will be adjusted and validated by a DOE."</i></p> <p>2. PP has adjusted the PoA-DD in Sections A.4.2.2, B.6.1, B.6.2 and B.6.3. Adjustments were made in concordance with the request.</p> <p>Seeing the above, the CAR was closed.</p>
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## VALIDATION REPORT

<b>CL01</b> – Please, inform the present situation of the approval by The Chile.	VVS	The approval by the host country (Chile) is not yet obtained. It will be provided to the audit team as soon as obtained.	PP has provided the requested clarification. The validation report will not be finalized until the approval by Chilean DNA is received.  This CL is closed.
<b>CL 02:</b> Please provide evidences related to all the information presented on the first paragraph from the Section A.2., as well as the Table 1.	Table 1	It has been clarified in the new version of the PoA-DD that the statistical information is based on "Estadísticas de Operación 2001-2010" CDEC-SIC, page 30-32, available at <a href="https://www.cdec-sic.cl/datos/anuario2011.pdf">https://www.cdec-sic.cl/datos/anuario2011.pdf</a> . The spreadsheet with calculations is provided to the audit team (see file "Capacity additions SIC 2001-2010.xlsx")  Also a note clarifying that the 20 MW limit for non conventional renewable sources is set in the "Ley General de Servicios Eléctricos" (Electricity Services General Law) has been included (Article Artículo 225°, subparagraph (aa), available at <a href="http://www.leychile.cl/Navegar?idNorma=258171">http://www.leychile.cl/Navegar?idNorma=258171</a> ).	Information provided in A.2 of the PoA-DD version 2 was crosscheck with:  <a href="http://www.leychile.cl/Navegar?idNorma=258171">http://www.leychile.cl/Navegar?idNorma=258171</a>  <a href="https://www.cdec-sic.cl/datos/anuario2011.pdf">https://www.cdec-sic.cl/datos/anuario2011.pdf</a>  Seeing the above, the CL was closed.

## VALIDATION REPORT

<b>CL 03:</b> Please provide a evidence related to the definition of the area covered by the Interconnected Central System.	Table 1	<p>The definition of the area covered by the SIC can be found in the CDEC-SIC yearbook (available at <a href="https://www.cdec-sic.cl/datos/anuario2011.pdf">https://www.cdec-sic.cl/datos/anuario2011.pdf</a>), page 8 and 10. In that document the colloquial name of the regions are used, which corresponds to numbers from "Region I" to "Region XV"; the equivalence can be seen in the interactive map found at <a href="http://www.luventicus.org/mapas/chile.html">http://www.luventicus.org/mapas/chile.html</a>.</p> <p>(Note that the regions were originally ordered from "Region I" in the north to "Region XII" in the south, being the Metropolitan Region –were the capital is located- referred as "Region XIII" despite it is located in the middle of the country. Recently two new regions were created by dividing "Region I" and "Region X": the original "Region I" now corresponds to "Region I" plus "Region XV", and the original "Region X" now corresponds "Region XIV" plus "Region X". Then, when the CDEC-SIC yearbook states "from Region II to Region to Region X" it also includes the Metropolitan Region and Region XIV), as listed in section A.4.1.2 of the PoA-DD.</p> <p>A diagram of the system can be downloaded from <a href="https://www.cdec-sic.cl/imagenes/contenidos/File/documentos/mapa_sic.zip">https://www.cdec-sic.cl/imagenes/contenidos/File/documentos/mapa_sic.zip</a></p>	<p>Information regarding the area covered by the SIC was crosschecked on page 10 of:</p> <p><a href="https://www.cdec-sic.cl/datos/anuario2011.pdf">https://www.cdec-sic.cl/datos/anuario2011.pdf</a></p> <p>Seeing the above, the CL was closed.</p>
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## VALIDATION REPORT

<b>CL 04:</b> Please provide the electronic address related to the three laws cited on the footnote 1.	Table 1	<p>Electronic address were provided in the footnote (currently footnote 3) in the new version of the PoA-DD.</p>	<p>Electronic addresses were provided in footnote 3 of PoA-DD version 2:</p> <p>Law 19.940:  <a href="http://www.leychile.cl/Navegar?idNorma=222380">http://www.leychile.cl/Navegar?idNorma=222380</a></p> <p>Law 20.018  <a href="http://www.leychile.cl/Navegar?idNorma=238139">http://www.leychile.cl/Navegar?idNorma=238139</a></p> <p>Law 20.257  <a href="http://www.leychile.cl/Navegar?idNorma=270212">http://www.leychile.cl/Navegar?idNorma=270212</a></p> <p>Seeing the above, the CL was closed.</p>
<b>CL 05:</b> Please clarify what is the CDE ID number.	Table 1	<p>There was a typing mistake. In the new version of the PoA-DD “CDE” has been corrected to “CDM”.</p>	<p>Typing mistake was corrected in PoA-DD version 2 and this CL is closed.</p>

## VALIDATION REPORT

<b>CL 06:</b> Please provide a clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies.	Table 1	The definitions of roles and responsibilities of the of personnel involved in the process of inclusion of CPAs are included in the CME's Operational Manual (see file "MANUAL CME Version 1.pdf")	A clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs (including a review of their competencies) is provided in:  "MANUAL CME Version 1.pdf"  Document was analyzed by DOE and the CL was closed.
<b>CL 07:</b> Please provide records of arrangements for training and capacity development for personnel.	Table 1	The arrangements for training and capacity development for personnel are included in the CME's Operational Manual (see file "MANUAL CME Version 1.pdf").	A clear description of arrangements for training and capacity development for personnel is provided in:  "MANUAL CME Version 1.pdf"  Document was analyzed by DOE and the CL was closed.





## VALIDATION REPORT

<b>CL 08:</b> Please provide the procedures for technical review of inclusion of CPAs.	E Table 1	The procedures for technical review of inclusion of CPAs are included in the CME's Operational Manual (see file "MANUAL CME Version 1.pdf").	<p>A description of procedures for technical review of inclusion of CPAs is provided in:</p> <p>"MANUAL CME Version 1.pdf"</p> <p>Document was analyzed by DOE and the CL was closed.</p>
<b>CL 09:</b> Please provide records and documentation control process for each CPA under the PoA.	Table 1	The records and documentation control process for each CPA under the PoA are included in the CME's Operational Manual (see file "MANUAL CME Version 1.pdf").	<p>A description of the records and documentation control process procedures for technical review of inclusion of CPAs is provided in:</p> <p>"MANUAL CME Version 1.pdf"</p> <p>Document was analyzed by DOE and the CL was closed.</p>

## VALIDATION REPORT

<b>CL 10:</b> Please provide measures for continuous improvements of the PoA management system.	Table 1	Measures for continuous improvements of the PoA management system are included in the CME's Operational Manual (see file "MANUAL CME Version 1.pdf").	<p>A description of the measures for continuous improvements of the PoA management system is provided in:</p> <p>"MANUAL CME Version 1.pdf"</p> <p>Document was analyzed by DOE and the CL was closed.</p>
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## VALIDATION REPORT



<p><b>CL 11:</b> Please clarify the use of version 12.2.0 of ACM0002, seeing that there is updated version.</p>	<p>Table 1</p>	<p><b>FIRST PP RESPONSE:</b></p> <p>Version 12.2.0 of the ACM0002 is used because that was the last version available at the moment when the documents were uploaded in the UNFCCC website for global stakeholders consultation.</p> <p><b>SECOND PP REPSONSE:</b></p> <ol style="list-style-type: none"> <li>1. The methodology has been updated to the latest version available (version 14.0.0).</li> <li>2. The applicable standard for the demonstration of additionality has been updated in Section A.4.3 OF THE PoA-DD.</li> <li>3. The applicability condition (currently item 3 of Section A.4.2.2) has been rewrote in order to clarify that power plants with daily limited pondage are also eligible.</li> </ol>	<p>THIS CL IS STILL OPEN.</p> <ol style="list-style-type: none"> <li>1. Please adjust to the latest version available.</li> <li>2. Also, in Section A.4.3 OF THE PoA-DD version 2, PP mentions:  <i>"Standard for Demonstration of Additionality of GHG Emission Reductions Achieved by a Programme of Activities"</i>.  However, this Standard has been replaced by:  <i>"Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities"</i></li> <li>3. In Section A.4.2.2, in item 1, please rewrite the following phrase: <i>"Be a greenfield run of river power plant with no storage reservoir or daily limited pondage"</i>. Moreover, please make it clear if power plants with daily limited pondage are included or excluded of CPAs of this PoA.</li> </ol> <p>DOEs second analysis:</p> <ol style="list-style-type: none"> <li>1. Methodology was updated to version 14.0.0 of ACM0002.</li> <li>2. This Section was adjusted and now mentions the current Standard.</li> <li>3. The phrase was re-written and it is now clear that project with daily limited pondage are included.</li> </ol> <p>Seeing the above, the CL 11 was closed.</p>
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## VALIDATION REPORT



<b>CL 12:</b> Please clarify if “relevant national and/or sectoral policies and circumstances” have been taken into account in the identification of the baseline scenario.	VVS	No specific analysis was made to define the baseline scenario since in the case of greenfield projects the baseline is directly prescribed in the methodology ACM0002. Nevertheless it must be noted that the baseline scenario ( <i>“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”</i> ) does not contradict the current mandatory Chilean regulations.	<p>PP`s explanation has been accepted, since it is in accordance with ACM0002.</p> <p>Seeing this, the CL was closed.</p>
<b>CL 13:</b> Please provide the references related to the values of $Cap_{PJ}$ and $A_{PJ}$ .	Table 2	<p>The value of <math>Cap_{PJ}</math> has been corrected in the new version of the CPA-DD.</p> <p>The value for <math>Cap_{PJ}</math> is taken from the document “Generación de la Central Hidroeléctrica Túnel Melado” (See file “Informe Generación CH Túnel Melado.pdf” table 10, page 12). The value applied (3.34 MW) corresponds to the maximum monthly average power capacity (December- January).</p> <p>The values for <math>A_{PJ}</math> (3,300 m<sup>2</sup>) corresponds to the sum of the surfaces of the two reservoirs (2,560 and 740 m<sup>2</sup>) which are taken from table N°1.5 of EIA Chapter 1 (Project Description), available at <a href="http://seia.sea.gob.cl/archivos/Capitulo_1._Descripcion_Proyecto_rev._10.pdf">http://seia.sea.gob.cl/archivos/Capitulo_1._Descripcion_Proyecto_rev._10.pdf</a></p>	<p>Values of 3.34 MW (<math>Cap_{pj}</math>) validated with:</p> <p>file “Informe Generación CH Túnel Melado.pdf” table 10, page 12).</p> <p>Value of reservoir (3,300 m<sup>2</sup>) validated with EIA (environmental impact analysis):</p> <p><a href="http://seia.sea.gob.cl/archivos/Capitulo_1._Descripcion_Proyecto_rev._10.pdf">http://seia.sea.gob.cl/archivos/Capitulo_1._Descripcion_Proyecto_rev._10.pdf</a></p> <p>Seeing the above, the CL was closed.</p>



## APPENDIX B: COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

No comments are received by parties, stakeholders or NGOs.