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Validation Report

VALIDATION OF THE CDM-PoA:
CHILEAN SMALL HYDROELECTRIC POWER PLANTS PRO-
GRAMME OF ACTIVITIES

REPORT NO. 600500726

19 July 2012

TÜV SÜD Industrie Service GmbH
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Subject: Validation of CDM PoA

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Project Participant:

Client: Asociación Chilena de Pequeñas y Medianas Centrales Hidroeléctricas A.G. (APEMEC A.G.) (**Managing Entity**)
El Gobernador # 020 Office N° 403, Santiago, Chile

PoA Title: Chilean Small Hydroelectric Power Plants Programme of Activities

Project Site(s): Chile

Applied Methodology / Version:

AMS.I. D / Version 17

Scope(s):

1

Technical Area(s):

1.2

First PoA-DD Version (GSP):

Date of issuance: 09-08-2011
Version No.: 01
Starting Date of GSP 12-08-2011

Re-GSP

Date of issuance: 13-12-2011
Version No.: 02
Starting Date of GSP 15-12-2011

Final PoA-DD version:

Date of issuance: 18-07-2012
Version No.: 06

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Responsible Certification Body:

Thomas Kleiser

Summary of the PoA Validation Opinion:

- ☒ The review of the project design documentation and the subsequent follow-up interviews have provided TÜV SÜD with sufficient evidence for the determination of the PoA's fulfillment of all stated criteria. In our opinion, the PoA meets all relevant UNFCCC requirements for the CDM. Therefore, TÜV SÜD recommends the PoA for registration by the CDM Executive Board if the letters of approval of all Parties involved will be available before the expiring date of the applied methodology or the applied methodology version respectively.
- ☐ The review of the project design documentation and the subsequent follow-up interviews have not provided TÜV SÜD with sufficient evidence for the determination of the PoA's fulfillment of all stated criteria. Therefore, TÜV SÜD will not recommend the PoA for registration by the CDM Executive Board and will inform the project participants and the CDM Executive Board of this decision.

ABBREVIATIONS

| | |
|--------------------|---------------------------------------------------------------------------------------|
| AMS | Approved Methodology Small scale |
| APEMEC A.G. | Asociación Chilena de Pequeñas y Medianas Centrales Hidroeléctricas A.G. |
| CAR | Corrective Action Request |
| CDM | Clean Development Mechanism |
| CDM EB | CDM Executive Board |
| CER | Certified Emission Reduction |
| CMP | Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol |
| CORFO | Chilean Economic Development Agency |
| CPA | CDM Programme activity |
| CPA-DD | CDM Programme Activity Design Document |
| CR | Clarification Request |
| DNA | Designated National Authority |
| DOE | Designated Operational Entity |
| EF | Emission Factor |
| EIA / EA | Environmental Impact Assessment / Environmental Assessment |
| ER | Emission Reduction |
| FAR | Forward Action Request |
| GHG | GreenHouse Gas(es) |
| IPCC | Intergovernmental Panel on Climate Change |
| IRL | Information Reference List |
| KP | Kyoto Protocol |
| MP | Monitoring Plan |
| NCRE | Non Conventional Renewable Energy projects |
| PoA | Programme of Activities |
| PoA-DD | Programme of activities design document |
| PP | Project Participant |
| SIC | Central Interconnected System |
| TÜV SÜD | TÜV SÜD Industrie Service GmbH |
| UNFCCC | United Nations Framework Convention on Climate Change |
| VVM | Validation and Verification Manual |

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1 INTRODUCTION

1.1 Objective

The objective of the validation process is to provide an independent assessment by a third party, a Designated Operational Entity (DOE), of the proposed Programme of Activities (PoA) and the CDM Programme Activity (CPA) template with generic information applicable to all CPAs under that PoA and the associated real case CPA-DD.

The assessment involves the evaluation of the PoA basis and design identified in the PoA Design Document (PoA-DD), template CPA design document (CPA-DD) and the associated real case CPA-DD using the defined criteria outlined by the registration under the Clean Development Mechanism (CDM). Validation is part of the CDM project cycle and results in a conclusion by the executing DOE on whether or not a PoA is valid to be submitted for registration to the CDM Executive Board (CDM-EB). The ultimate decision on the registration of a proposed PoA rests with the CDM-EB and the Parties involved.

The PoA addressed in this validation report has been submitted under the following title:

Chilean Small Hydroelectric Power Plants Programme of Activities

1.2 Scope

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

- The Kyoto Protocol, in particular § 12 and modalities and procedures for the CDM
- Decision 2/CMP1 and Decision 3/CMP.1 (Marrakech Accords)
- Further COP/MOP decisions with reference to the CDM (e.g. decisions 4 – 8/CMP.1)
- Decisions and specific guidance outlined by the EB which are published under <http://cdm.unfccc.int>
- Guidelines for Completing the PoA Design Document (PoA-PDD), CDM programme of activities template and design document (CPA-DD) and the applied CDM methodology including the sections especially dedicated to PoA
- Management systems and auditing methods
- Environmental issues relevant to the applicable sectoral scope
- Applicable environmental and social impacts and aspects of CDM project activity
- Sector specific technologies and their applications
- Current technical and operational knowledge of the specific sectoral scope and information on best practice

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

Once TÜV SÜD receives the PoA-DD, Generic CPA-DD and completed CPA-DD of the real case, it is made publicly available on the UNFCCC website and on TÜV SÜD's website, which initiates a 30 day global stakeholder consultation process (GSP). In special circumstances, such as when a PoA

design changes, the GSP may need to be repeated. Information on the PoA-DD is presented on page 1 of this report.

The purpose of validation is to demonstrate compliance or non-compliance of the PoA with all stated and valid UNFCCC and host party requirements. Additionally, the purpose of validation is to enable the registration of PoA, which is only a part of the total CDM project cycle.

2 VALIDATION METHODOLOGY

The PoA assessment is based on the “Clean Development Mechanism Validation and Verification Manual” and is conducted using standard auditing techniques to assess the correctness of the information provided by the project participants. Before the assessment begins, members of the team covering the technical scope(s), sectoral scope(s), and relevant host country experience for evaluating the CDM PoA are appointed. Once the PoA documents are made available for the stakeholder consultation process, members of the team carry out the desk review, follow-up actions, resolution of issues identified, and the preparation of the validation report. The prepared validation report and other supporting documents then undergo an internal quality control by the CB “Climate and Energy” before being submitted to the CDM-EB.

In order to ensure transparency, assumptions must be clear and stated explicitly and background material must also be referenced. TÜV SÜD has developed a methodology-specific protocol customized for the PoA. The protocol demonstrates, in a transparent manner, the PoA criteria (requirements), discussion on each criterion by the assessment team, and the results from validating the identified criteria.

The validation protocol serves the following purposes:

- To organize the details and provision of clarifications on the requirements of which a CDM-PoA and its CPA-DD are expected to meet; and
- To elucidate how a particular requirement has been validated as well as to document the results of the validation and any adjustments made to the PoA-DD.

The validation protocol consists of three tables. The different columns in these tables are described in the tables below.

| Validation Protocol Table 1: Conformity of CDM Programme of Activities | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Checklist Topic / Question | Reference | Comments | GSP | Final |
| <i>The checklist is organized in sections following the arrangement of the applied PoA-DD version. Each section is then subdivided. The lowest level constitutes a checklist question / criterion.</i> | <i>The section gives reference to documents in which the answer to the checklist question or item is found in case the comment refers to documents other than the PoA-DD.</i> | <i>The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is used to explain the conclusions reached. In some cases sub-checklists are applied indicating yes/no decisions on the compliance with the stated criterion. Any Request has to be substantiated within this column.</i> | <i>The section is used to present conclusions based on the assessment of the first PoA-DD version. The PoA-DD is either acceptable based on evidence provided (✓) or a Corrective Action Request (CAR) is issued due to non-compliance with the checklist question (See below). Clarification Request (CR) is used when the validation team has identified a need for further clarification. Forward Action Request is issued to highlight issues related to project implementation that require review during the first verification.</i> | <i>Conclusions are presented in the same manner based on the assessment of the final PoA-DD version and further documents including assumptions presented in the documentation.</i> |

Validation Protocol Table 2: Resolution of Clarification and Corrective Action Requests

| Clarifications and corrective action requests | Ref. to table 1 | Summary of project owner response | Validation team conclusion |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>If the conclusions from table 1 are either a Corrective Action, a Clarification or a Forward action Request, these should be listed in this section.</i> | <i>Reference to the checklist question number in Table 1 where the issue is explained.</i> | <i>The responses given by the managing entity and/or other project participants during the communications with the validation team should be summarized in this section.</i> | <i>This section should summarize the discussion on and revision to PoA documentation together with the validation team's responses and final conclusions. The conclusions should be reflected in Table 1, under "Final".</i> |

In case it is found that the project activity does not meet CDM requirements, more detailed information on this decision is presented in Table 3.

| Validation Protocol Table 3: Unresolved Corrective Action and Clarification Requests | | |
|--------------------------------------------------------------------------------------|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Clarifications and corrective action requests | Id. of CAR/CR | Explanation of the Conclusion for Denial |
| <i>Referenced request if final conclusions from table 2 resulted in a denial.</i> | <i>Identifier of the Request.</i> | <i>Detailed explanation of why the PoA is considered non-compliant with a criterion and a clear reference to the criterion</i> |

The completed validation protocol is enclosed in Annex 1.

2.1 Appointment of the Assessment Team

According to the technical scopes and experiences in the sectoral or national business environment, TÜV SÜD has composed a project team in accordance with the appointment rules of the TÜV SÜD certification body "Climate and Energy".

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

- Assessment Team Leader (ATL)
- Validator (V)
- Validator Trainee (T)
- Technical Expert (TE)
- Expert (PoA)

It is required that the sectoral scope(s) and the technical area(s) linked to the methodology and project have to be covered by the assessment team.

Assessment team:

| Name | Qualification | Coverage of sectoral scope | Coverage of technical area | Coverage of financial aspect | Host country experience |
|-----------------------|---------------|----------------------------|----------------------------|------------------------------|-------------------------|
| Katrin Hartmann | ATL | ☑ | ☑ | ☑ | |
| Karin Wagner | V | ☑ | ☑ | ☑ | |
| Lester Saldías Kiefer | V | ☑ | ☑ | -- | ☑ |
| Stephan Hild | E | -- | -- | -- | -- |

Technical Reviewer: Nikunj Agarwal

2.2 Review of Documents

The PoA-DD and completed CPA-DD for validation was submitted to the DOE in August 2011^{*}. The PoA-DD and additional background documents related to the PoA design and baseline have been reviewed to verify the correctness, credibility, and interpretation of the presented information. Furthermore, a cross-check between information provided and information from other sources has been done as an initial step of the validation process. A complete list of all documents and evidence material reviewed is attached as Annex 2 to this report.

2.3 Follow-up Interviews

During the period 28-08-2011 to 31-08-2011 and on 18 May 2012 TÜV SÜD performed site interviews and physical site inspections with project stakeholders as well as further phone interviews to confirm the relevant information, and to resolve issues identified in the document review. The following table provides a list of all key persons interviewed in this process.

Persons Interviewed:

| Name | Organisation |
|------------------|---------------------------------------------------------------------|
| Juan Tapia | Ecotourism Futrono |
| Luis Nahuelpan | Futrono Inhabitant |
| Jorge Wachholtz | Project Manager (HYDROWAC y COMPAÑIA) |
| Carlos Wachholtz | Project Manager (HYDROWAC y COMPAÑIA) |
| Barbara Alcaíno | APEMEC A.G. PoA (Coordinator) |
| Ole Meier-Hahn | BridgeBuilders, Consultant |
| Giovanna Correa | Secretary of the Director of SEA (Environmental Assessment Service) |
| Sergio Gonzalez | Director and Broadcaster (Radio Lago Ranco) |

2.4 Cross-check

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

2.5 Resolution of Clarification and Corrective Action Requests

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

^{*} The first GSP was started in August 2011, a second GSP was started in December 2011, due to significant changes in the project design of the Las Flores Hydroelectric Project (i.e. capacity increase.; see also Page 1 for detailed dates and version numbers of the PoA-DDs published for the GSPs).

The final PoA-DD version-06 that was submitted in July 2012 serves as the basis for the final assessment presented herewith. Additional changes to the project during the validation process are not considered to be significant with respect to the main CDM objectives. The two CDM main objectives are the reduction of anthropogenic GHG emissions and the contribution of sustainable development to the host country.

2.6 Internal Quality Control

Internal quality control is the final step of the validation process and is conducted by the CB “Climate and Energy” who checks the final documentation, which includes the validation report and annexes. The completion of the quality control indicates that each report submitted has been approved either by the head of the CB or the deputy. In projects where either the Head of the CB or the deputy is part of the assessment team, the approval is given by the one not serving on the project team.

3 SUMMARY

The assessment work and the main results are described below in accordance with the VVM reporting requirements. The reference documents indicated in this section and Annex 1 are stated in Annex 2 of this report.

3.1 Approval

The project participant and managing entity of the PoA is APEMEC A.G. The involved party meets the requirements to participate in the CDM*.

The Chilean DNA has issued a letter of approval (LoA) dated 20 April 2012 authorizing APEMEC A.G.[†] as a project participant and as the coordinating and managing entity (IRL 60). TÜV SÜD received the letter from the project participant directly and considers the provided letter as authentic.

Furthermore, after checking the provided LoA, TÜV SÜD confirms that the letter refers to the precise proposed PoA title in line with the title in the PoA-DD: Chilean Small Hydroelectric Power Plants Programme of Activities.

The letter also indicates that the participating Party is a Party to the Kyoto Protocol, and that the participation in the PoA is voluntary. The Chilean LoA also confirms that the proposed PoA contributes to the sustainable development of Chile (host country). Based on the information given in the letter, TÜV SÜD considers the approval as unconditional with respect to these items.

The LoA has been issued by the respective Party's DNA – the Ministry of Environment of Chile (Ministerio del Medio Ambiente), and does not refer to a specific version of the PoA-DD or validation report.

TÜV SÜD considers that the requirements of VVM (§§ 45-48) have been met.

3.2 Participation

The participant of the programme of activities has been approved by the corresponding Party, which is confirmed by the issued LoA.

The means of validation used are similar to the ones described in Section 3.1, specifically in regard to the approval process of the programme of activities.

3.3 Programme of Activities Design Documents

The PoA-DD and the Generic CPA-DD are in compliance with relevant form and guidance as provided by UNFCCC. The most recent version of the forms (under VVM) is used.

TÜV SÜD considers that the guidelines for the completion of the PoA documents in their most recent version (under VVM) have been followed. Relevant information was provided by the Managing

* It may be noted that in the re-GSC KfW was mentioned as a project participant being registered in relation to the PoA. However, KfW decided to be removed as a PP as of own wish during the validation process.

† It may be noted that the name of APEMEC A.G. changed from Asociación Gremial de Pequeñas y Medianas Centrales Hidroeléctricas to Asociación Chilena de Pequeñas y Medianas Centrales Hidroeléctricas A.G. during the validation process. The correct final name was confirmed with the LoA, MoC and various documents between KfW and APEMEC A.G. (IRL 49, 50, 60, 101).

entity and/ or project participants in the applicable PoA sections. Completeness was assessed through the protocol included in Annex 1.

3.4 Programme Description

The following description of the programme as per the PoA-DD was verified:

The PoA intends to integrate various small scale (<15MW) hydro power projects in Chile into his programmatic activity. The Association of Small and Medium Scale Hydroelectric Power Plants (APEMEC A.G.) will be the coordinating and managing entity of the PoA. APEMEC A.G. will promote non-conventional renewable energy generation and support small hydropower projects in Chile by providing a standardized and streamlined access to CDM services. The CDM programme activities (CPAs) under the PoA will be implemented in Chile. The SSC PoA involves hydropower plants delivering energy connected to the Central Interconnected System. The typical CPA under this PoA would involve the installation of a weir and head ponds, adduction channels and penstocks, tailraces, sand traps, powerhouses, including turbines & generators for power generation.

There are no mandatory Chilean laws, regulations or normatives applicable to the energy sector for the adoption of Non Conventional Renewable Energy projects (NCRE). The proposed PoA is a voluntary action by the coordinating/managing entity – APEMEC A.G. This can be confirmed by three laws, the Law 19.940 (Short Law I), Law 20.018 (Short Law II) and Law 20.25716 (IRL 11-13). Only law 20.25716 fosters the implementation of NCRE; however they are not an obligation to the managing entity to implement small-scale hydroelectric projects under a PoA.

The small scale PoA was originally conceived by ProChile and CORFO (Corporación de Fomento de la Producción). A tender regarding the finalization of the CDM documentation of a CDM PoA was launched by CORFO in 2009 which was won by POCH, who delivered the final draft of the PoA DD and the generic CPA DD in October 2009 (IRL 62). However, at the same time CORFO identified and approached the Chilean small hydropower association APEMEC A.G. as a more suitable managing entity. From now on APEMEC A.G. took over the responsibility to further develop and manage the small hydropower PoA as its managing entity in late 2009 (IRL 61).

The initial development of the PoA and CPA documents were financed by CORFO, however it has been verified that there is no diversion of ODA involved (IRL 62). The starting date of the PoA is 17/05/2011 based on the date when the Emission Reduction Purchase Agreement for the PoA was signed between KfW and APEMEC A.G. and the financing of the PoA was secured (IRL 54). The length of the PoA is taken as 28 years.

The information presented in the PoA documents on the technical design is consistent with the actual planning and implementation of the project activity confirmed in the following ways:

- A review of data and information (see annex 2);
- An on-site visit to the place where the associated real case CPA is being implemented and interview with relevant stakeholder and personnel with knowledge of the project in attendance; and
- A review of information related to similar projects or technologies which have been used to validate the accuracy and completeness of the project description.

In conclusion, TÜV SÜD confirms that the PoA project description, as included in the PoA-DD, is sufficiently accurate and complete in order to comply with the requirements of the CDM and therefore in compliance with VVM para. 59-64.

3.5 Eligibility Criteria for CPA Inclusion

The managing entity employs clear and unambiguous criteria for the inclusion of the CPA. The eligibility criteria are verifiable with regards to the applicability of the applied methodology AMS I.D/ version 17 including the following:

- CPA shall be either newly built run- of- river hydro power plant with/without a reservoir below 15 MW or an addition of renewable energy generation units at an existing respective hydro power generation facility. If the hydropower plant comprises a reservoir, the power density of the power plant shall be determined through the approach defined in ACM0002.
- CPA shall be connected to the SIC and located in one of the regions of Chile that are covered by the grid
- CPA implementer shall provide evidence that he is indeed the owner of the project
- CPA shall have an agreement in place between the hydro power plant project owner (CPA operator) and the Coordinating and Managing Entity (CME), authorizing the CME to include the CPA into the PoA and therefore ceding the carbon rights to the CME.
- CPA implementer shall confirm with a written statement that no double-counting will occur, which is included in the CPA contract. The CPA contract will be signed on the CPA level between the CPA implementer and APEMC.
- In order to determine the starting date of a CPA, the CME will obtain either a purchase order, minutes of board meeting, or a contractual agreement between the CPA implementer and the CME.
- Stakeholder consultation shall be conducted as per the CDM requirements, according to the approach defined in section D.2 of the Generic CPA-DD (VVM, version 1.2, para. 128-130.)
- CPA implementer shall provide a sworn declaration that he will obtain all environmental approvals in line with Chilean environmental regulations before the start date of operation of the project.
- CPA shall demonstrate the compliance with the EB 54 Annex 13 "Guidelines on assessment of de-bundling for SSC project activities" (<http://cdm.unfccc.int/Reference/Guidclarif/index.html#reg>).
- CPA shall demonstrate that it is in compliance with the additionality criteria as described in section E.5.2 of the PoA-DD.
- CPA implementer shall provide APEMEC A.G. with an affirmation that funding from Annex 1 does not result in a diversion of ODA.
- CPA implementer shall warrant to APEMEC A.G. via contractual agreement that he will implement, operate and maintain the project in compliance with applicable laws, regulations and standards in conformity with Chilean laws.

The eligibility criteria can be checked at the CPA level by the managing entity and can be confirmed by the DOE during inclusion.

TÜV-SÜD considers that each applicability criteria was included in a conservative way and can be implemented without any further conditions.

3.6 Operational and Management Plan

A clear and transparent description of the operational and management arrangement has been established by APEMEC A.G. and stated in the PoA-DD. This has been verified during site audit from the following:

- PoA management Plan (IRL 47)
- PoA Management and Monitoring System (Excel file) (IRL 89)
- Chilean small hydroelectric power plants programme of activities – end user agreement between APEMEC A.G. and CPA implementer (a template has been prepared by APEMEC A.G., which will be used and signed on the CPA level) (IRL 84)

There is a record keeping system for each CPA under the PoA. Each CPA will be kept in the record keeping system and each CPA under the PoA will identify each hydropower plant under a serial numbering system to uniquely identify each location in addition to its technical details, address and GPS co-ordinates.

The system to avoid double counting has been indicated in the PoA-DD and the concerned database has been validated by the audit team to be sufficient. The CPA implementer shall enter into a contractual agreement (IRL 84) with APEMEC A.G. that the CPA has not and will not be registered as a CDM project activity or as CPA of another PoA, that the implementing entity is aware that the CPA will be subscribed to the present PoA and the implementing entity cedes its rights to claim and own emission reductions under the CDM to the managing entity of the present PoA.

In order to ensure that all included SSC-CPAs are not de-bundled components of another CDM project or CPA, the coordinating entity will follow the procedures stated under “Guidance for determining the occurrence of de-bundling under a Programme of Activities (PoA)” of the “Guidelines on Assessment of Debundling for SSC Project Activities”, Version 3.

3.7 Monitoring Plan

The monitoring of electricity supplied to the grid will be carried out per each CPA. Primary data will be stored by the implementing entities, and the managing entity will store the data in an electronic database. The monitoring plan provides a transparent system to ensure that no double accounting occurs. Furthermore, the set-up of the monitoring plan and the underlying system (i.e. database; IRL 89) allows the exact determination of the status of each CPA with respect to its verification and CER issuance, monitoring periods, etc. This system to identify the status of verification of each CPA has also been clearly indicated in the PoA-DD and the underlying documents (IRL 89). The monitoring process and the verification status of each CPA will be done by APEMEC A.G. through the review of information provided by the CPA implementer. Also, as each CPA will have a unique title and further required information, which is contained in the PoA management & monitoring system, thus double counting can be avoided.

The description provided in the PoA-DD on the operational and management arrangements were confirmed based on document review and on-site interviews.

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

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

3.8 Baseline and Monitoring Methodology

3.8.1 Applicability of the selected methodology

Compliance with each applicability condition as listed in the chosen baseline and monitoring methodology AMS-I.D Version 17 has been demonstrated.

The assessment was carried out for each applicability criterion and included, among other checks, a compliance check of the PoA with the applicability conditions in regard to baseline setting and eligible project measures. This assessment also included the review of secondary sources to demonstrate the compliance with applicability conditions.

The methodology-specific protocol, included in Annex 1, documents the assessment process. The results of the compliance check as well as relevant evidence are detailed in the protocol and the information reference list.

TÜV SÜD confirms that the chosen baseline and monitoring methodology is applicable to the PoA. Emission sources, not addressed by the applied methodology and expected to contribute more than 1% of the overall expected average annual emission reductions, have not been identified.

3.8.2 CPA boundary

The CPA boundary was assessed considering information gathered from the physical site inspection, interviews, and secondary evidence received on the design of the PoA.

The project boundary of a typical CPA includes the project power plant and all power plants connected physically to the Central Interconnected System (SIC). The sources and gases within the boundary have been considered in a clear manner. Emissions of CH₄ have been included only in the case of CPAs that involve new or increased reservoirs.

TÜV SÜD confirms that the identified boundary, the selected sources, and gases as documented in the PoA-DD are justified for the project activity and are fully in line with the requirements set by the applied methodology.

3.8.3 Baseline identification

The PoA is a voluntary coordinated action as evident from the fact (IRL 11-13), that there is no mandatory regulation which mandates use of NCRE in Chile, which can be further confirmed with the host country experience.

According to the applied methodology, in the absence of the programme, the baseline scenario is that the 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 into the grid. This has been verified during the on-site visit and can be further confirmed with the host country expertise of the assessment team.

The information presented in the PoA-DD has been verified during the on-site visit.

Based on the validated assumptions used for project activity calculations, TÜV SÜD considers that the identified baseline scenario is reasonable.

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

A verifiable description of the baseline scenario has been included in the PoA-DD.

TÜV SÜD confirms the following statements:

- (a) All the assumptions and data used by the project participants 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 reasonable baseline scenario, and the identified baseline scenario reasonably represents what would occur in the absence of the proposed CDM project activity.

3.9 Additionality

3.9.1 Prior consideration of the clean development mechanism

The starting date of the PoA is determined by the date on which the Emission Reduction Purchase Agreement for the PoA was signed between KfW and APEMEC A.G. and the financing of the PoA was secured, which was on 17 May 2011 (IRL 54).

However, according to EB 60, annex 26 the demonstration and assessment of prior consideration of the CDM does not apply to PoAs.

3.9.2 Additionality of PoA

The additionality of the programme has been presented in section A.4.3 of the PoA-DD. The approach used in the PoA-DD has been assessed initially through the document review followed by on-site discussions. Finally, the data, rationales, assumptions, justifications, and documentation provided have been verified using local knowledge as well as sectoral and financial expertise.

As per paragraph 73 of the 47th EB meeting report “additionality is to be demonstrated either at the PoA level or at CPA level” and as prescribed in the Simplified modalities and procedures of small scale project activities, additionality shall be demonstrated as per Attachment A to Appendix B of the “Simplified modalities and procedures for small-scale CDM project activities”, version 08 (EB 63, Annex 24). Hence, the CME choose to demonstrate the additionality at CPA level by showing that the SSC-CPAs cannot be implemented in the absence of this PoA because of Investment barriers. CME has also decided to incorporate “Guidelines for Demonstrating Additionality of Microscale Project Activities” (Version 03). Thus additionality would be proven at the CPA level.

3.9.3 Approach for demonstrating CPA additionality

A. Microscale Project (up to 5 MW):

According to the “Guidelines for Demonstrating Additionality of Microscale Project Activities” Version 03 a project activity is additional if one of the conditions is satisfied. With regard to literal (d), the DNA of Chile, the Ministry of Environment, submitted a recommendation on specific renewable energy technologies to be considered additional in Chile to the Executive Board of the CDM, which was accepted and approved on 16/04/2012 (<http://cdm.unfccc.int/DNA/submissions/index.html>).

Hence, the assessment team considers any CPA with an installed capacity below/equal 5 MW, which is connected and supplying electricity to the SIC in Chile to be additional without any further analysis.

B. Non-Microscale Projects:

Approach B.1. Investment Barrier:

If the installed capacity of the CPA is more than 5 MW, then the additionality would be determined based on the assessment of financial indicators of projects against a benchmark, because the project generates financial benefits other than CDM-related income.

The Project IRR will be the approach as the basis for a benchmark analysis. The benchmark will be the pre-tax Weighted Average Cost of Capital (WACC).

Pre-tax project IRR has been chosen as the financial indicator for the analysis. As per the EB 62, Annex 5 “Guidelines on the Assessment of Investment Analysis (version 05)”, paragraph 12, WACC is an appropriate benchmark for the project IRR.

The pre-tax WACC calculation is based on the estimation of three parameters as follows:

- the debt/equity ratio
- the cost of debt and
- the cost of equity

The debt/equity ratio used in the WACC calculation is project specific. A typical debt/equity ratio for small scale hydro power projects in Chile is 70%/30%, which is based on personal communication by the PP with Chilean banks on August 2011. If the debt/equity finance structure for a CPA is not available, 50% debt and 50% equity financing may be assumed as a default, which is in line with EB 62, annex 5, para 18.

The cost of debt is based on parameters that are standard in the market, i.e. calculated as the cost of financing in the capital markets (based on Chilean (government) bonding lending rates and/or typical interests for comparable loans in the same sector in Chile commercial lending rates, which could be 8% according to personal communication by the PP with Chilean banks in August 2011). Based on the financial and local expertise of the validation team, the cost of debt seems to be appropriate for this kind of project and can be accepted by TÜV SÜD.

To determine the cost of equity of an investment the Capital Asset Pricing Model (CAPM) is used. The CAPM approach to risk analysis calculates the risk premium associated with the project. The CAPM assesses risks at a market level and not by looking at an individual's risk preferences and therefore sufficient to analyze the appropriate rate of return necessary to compensate investors for the risk faced in the proposed project activity.

The assumptions used in this model to arrive at the cost of equity have been validated as follows:

- Risk free rate: the risk free rate of treasury bills or treasury bonds of a mature market (e.g. risk free rate for US Market, 2011) will be used in the cost of equity calculation, which is in line with EB 61, annex 5, appendix. The value has been checked and can be accepted by TÜV SÜD (IRL 22).
- β : A beta (unlevered) value will be used and is taken from rating agencies, independent financial experts and/or official publicly available data. If no sufficient information on beta is available the value of beta equals 1, which can be accepted by TÜV SÜD as this is a conservative approach. As an example a total beta (unlevered) for power industries in emerging markets will be taken and will be based on the beta from the Damodaran Database, August 2011 (IRL 23). The source has been checked by the validation team and seems to be appropriate; hence the beta value can be accepted by TÜV SÜD.
- Mature Market Equity Premium (MMEP): for the MMEP the data will be based on long-term historical returns on equity in the US market based on the data from the Damodaran Database (IRL 18), which is also in line with EB 61, annex 5, appendix. The data may also be taken from rating agencies, independent financial experts and other official publicly available data.
- Country Risk Premium (CRP): the country risk premium Chile is sourced with the data from the Damodaran Database 2011 (IRL 102) as an example, which seems to be appropriate and can be accepted by TÜV SÜD.
- Size Premium (SP): the size premium is particularly relevant for small hydro projects. It is based on historical data of the capital markets in the US, which are published by Duff & Phelps (IRL 21). The source of the SP is deemed to be appropriate and can be accepted by the assessment team.

As a summary based on its local, sectoral and financial expertise, the audit team confirms that the calculation of the applied benchmark as well as the parameters used within the applied benchmark is appropriate and applicable to the programme of activities and is suitable to be compared with a pre-tax project IRR.

The investment analysis would be demonstrated at CPA level but the PP has provided a framework of the parameters to be assessed for the investment analysis in the PoA-DD. The benchmark calculation and investment analysis parameters will be in line with the 'Guidelines on the Assessment of Investment Analysis' EB 61 Annex 5. The fair value and of the project will be included at the end of the period analysis and calculated on the basis of national laws and regulations, if not already mentioned in a (pre-) Feasibility Study. The depreciation and depreciation term is either calculated based on national laws and regulations or already included in (Pre-) Feasibility studies. The framework parameters have been assessed by the audit team and are deemed to be appropriate.

As a summary based on its local, sectoral and financial expertise, the audit team confirms that the framework parameters applied in the calculation of a CPA Project IRR are appropriate and applicable and are suitable to be compared with a pre-tax WACC.

Sensitivity analysis: The assessment team also validated the possible impact on the financial attractiveness of the project due to variations in the main parameters used in the investment analysis. The Guidance on assessment of investment analysis requires the robustness of the conclusion arrived at to be proved through a sensitivity analysis by varying the critical assumptions to a reasonable variation ($\pm 10\%$). Accordingly the PP's have identified total investment cost, electricity generation and electricity price as parameters to be subjected for sensitivity analysis. If the IRR of a CPA remains below the benchmark even after varying each of the three parameters above by 10%, the CPA shall be considered additional. This means that the fluctuation, within a reasonable range, of the main parameters will not influence the conclusion on the investment decision: which is that the Project is not financially attractive without revenues from the sales of CERs generated by the project.

Approach B.2. Access-To-Finance Barrier (Loan):

While demonstrating barriers related to the lack of access to capital, the CPA implementer will provide the information, which will include nature of company, organization and its ownership and, financial information (as per EB50, Annex 13). In addition, the "loan barrier" will be demonstrated by using loan approval documents by the lender who explicitly takes into account the successful CPA inclusion. In the POA-DD it is explicitly stated that the loan must be conditioned to the successful CPA inclusion, i.e. the loan agreement needs to involve conditions that disbursements will only be made once the project is successfully included as a CPA.

In line with para 118 (b) of VVM 1.2, an overall determination of the credibility of the barrier analysis has been performed. TÜV SÜD confirms that the proposed PoA is additional. The additionality is therefore demonstrated at CPA level as per aforementioned approach. The barrier shall be applicable to all the CPAs within the geographical boundary of Chile. The CPAs that also meet the eligibility criteria for inclusion in the PoA would therefore be deemed additional.

In summary, in order to demonstrate the additionality, PP will perform either "Investment barrier" or "Access to finance barrier" for non micro scale projects.

For micro scale projects (up/equal to 5 MW) the PP will use the micro scale approach, which has been approved by the Executive Board of the CDM.

3.10 Emission Reductions from a typical CPA

The procedures provided in the methodology are correctly depicted in the PoA-DD and the Generic CPA-DD. The emission reductions are calculated on the basis of the small scale methodology AMS.I.D / Version 17.

Baseline emissions: As per applied methodology, the baseline emissions are the product of electrical energy baseline $EG_{BL,y}$ expressed in MWh of electricity produced by the hydropower plant multiplied by the grid emission factor (IRL 3).

Emission factor of the grid shall be calculated during the inclusion of the CPA based on the “Tool to calculate the emission factor for an electricity system” version 2.2.1

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

Step 1: The SIC was correctly identified as the relevant electricity system.

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

Step 3: The simple adjusted OM method (3b) was applied to calculate the OM. The data will be calculated ex-post for the year in which the project activity displaces electricity and updated annually during monitoring, which is in line with the options provided by the tool for the OM determination.

Step 4: The EF_{OM} is calculated according to the simple adjusted emission factor based on option A. The emission factor of each power unit is determined following either option A1, A2 or A3 depending on the availability of fuel consumption and/or efficiency data, which is in line with the tool.

Step 5: In terms of vintage of data, the Option 2 was chosen where EF_{BM} is calculated ex-post for the first seven years, ex-ante for the second seven years and for the final years; the same build margin factor calculated for the second crediting period will be used.

Step 6: The EF_{CM} was correctly calculated by using the Weighted Average CM.

Project emissions: As per applied methodology, AMS-I.D ver. 17, following could be potential emission source for hydropower plants

- Project emission from water reservoir of hydropower plants in year y (tCO_2/yr), $PE_{HP,y}$: In case a CPA includes a reservoir, the project emissions will be calculated according to ACM0002, version 12.3.0*

Leakage: As per applied methodology, AMS-I.D ver. 17, leakage is only applicable when energy generating equipment is transferred from another activity. If a CPA involves the transfer of equipment leakage will be considered accordingly.

The formulae are correctly presented for the determination of the emission reductions. TÜV SÜD has assessed the calculations of emission reductions. The parameters and equations presented in the PoA-DD, as well as other applicable documents, have been compared with the information and requirements presented in the methodology. An equation comparison has been made to ensure consistency between all the formulae presented in the PoA-DD, template CPA-DD, calculation files, methodology AMS.I.D / Version 17.

Based on the information reviewed it is confirmed that the sources used are correctly quoted and interpreted in the PoA-DD. In accordance with para 91 (e) of VVM 1.2, the calculation spreadsheets and the emission reductions can be replicated using the data and parameter values provided in the design documents.

3.11 Monitoring Plan of a typical CPA

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

* It may be noted that the version number from the methodology ACM0002 changed from version 12.2.0 to 12.3.0 during the validation process.

The procedures have been reviewed by the assessment team through document review and interviews with the relevant personnel. The information provided has allowed the assessment team to confirm that the proposed monitoring plan is feasible within the project design. The relevant points of monitoring plan have been discussed with the PoA managing entity and the CPA implementers. Specifically; these points include the monitoring methodology, data management, and the quality assurance and quality control procedures to be implemented in the context of the project. Therefore, the PoA managing entity and/or CPA implementer(s) will be able to implement the monitoring plan and the achieved emission reductions can be reported ex-post and verified.

3.11.1 Monitoring Parameters

The parameters that are to be monitored ex-post are:

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

In cases where CPAs result in new reservoir and/or increase of the existing reservoirs the following parameters need to be monitored ex-post:

- 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 : This parameter shall be continuously monitored and hourly measured by an energy meter and at least monthly recorded. Applicable only to CPAs with reservoirs with a power density of greater than 4 W/m^2 and less than or equal to 10 W/m^2
- Cap_{PJ} : Installed capacity of the hydro power plant after the implementation of the project activity. Determined yearly for each CPA based on recognized standards. Only for CPAs that result in new reservoirs and CPAs that result in the increase of existing reservoirs.
- A_{PJ} : Area of the reservoir measured in the surface of the water, after the implementation of the project activity, when the reservoir is full. Measure yearly from topographical surveys, maps, satellite pictures, etc. Only for CPAs that result in new reservoirs and CPAs that result in the increase of existing reservoirs.

The grid emission factor is calculated based on the ex-post data vintages and by applying the simple adjusted OM method. After thorough review of the listed monitoring parameters and the underlying documentation, the assessment team confirms that the listed parameters as per section E.7.1 of the PoA-DD including fossil fuel consumption parameters, fuel specific emission factors and net calorific values, electricity generation parameters, efficiencies as well as capacity additions data is considered to be in accordance with the prescriptions indicated in the applied tool. Please also refer to Annex 1 of this report for a detailed assessment of the applied monitoring parameters used to determine the emission factor.

Furthermore, based on the review of the documentation, as well as based on the on-site observations and interviews, it can be confirmed that the monitoring arrangements described in the monitoring plan are feasible within the project design and 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 combined margin emission factor can be reported ex post and verified.

In summary, it can be confirmed that the parameters that are determined ex-post are correctly presented according to the requirements as per § 123 (a) and (b) of VVM version 1.2 and are considered to be in accordance with the applied methodology and the applied tool.

3.11.2 Monitoring and Reporting System and Quality Assurance

The operational and management structure has been clearly described and in compliance with the envisioned situation. The responsibilities and institutional arrangements for data collection and ar-

chiving have been clearly provided. The information provided in the PoA-DD could be confirmed based on the on-site interviews and also through the submitted documentary evidence – the PoA management & monitoring system (IRL 89).

3.12 Stakeholder Consultation

It has been indicated that the local stakeholder consultation is done at the CPA level. The justification of doing local stakeholder consultation at the CPA level has been provided and is deemed appropriate.

Comments presented by the local stakeholders will be taken into account by the PoA managing entity.

Hence, the local stakeholder consultation will be performed adequately according to the CDM requirements.

3.13 Environmental Analysis

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

According to the Law 19.300 every project developer has to analyze if his project requires an Environmental Impact Assessment, following the specific criteria stated on the Environmental Impact Assessment System (SEIA) Regulations. If the CPA requires an Environmental Impact Assessment, the project shall obtain from the SEIA the approval for this Assessment, which is done by means of an authorization document, published on the SEIA webpage (IRL 17). If the CPA does not require an Environmental Impact Assessment, CPA developers must present a letter from the SEIA expressing this matter.

Therefore, the submission to the Environmental Impact Assessment System must be analyzed for each CPA considering the characteristics of the project and the location.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

TÜV SÜD published the project documents on the UNFCCC website and invited comments by affected Parties, stakeholders, and non-governmental organisations during a 30 day period.

All key information gathered is presented in the table below

GSP Comments

| | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| website: http://cdm.unfccc.int/ProgrammeOfActivities/Validation/DB/FINZ0M5OXUBITQ36TKD1R3SRGKAMTM/view.html | |
| Starting date of the global stakeholder consultation process: 2011-12-15 | |
| Comment submitted by: None | Issues raised: - |
| Response by TÜV SÜD: - | |

5 VALIDATION OPINION

TÜV SÜD has performed a validation of the following proposed CDM PoA project:

Chilean Small Hydroelectric Power Plants Programme of Activities

Standard auditing techniques have been used for the validation of the PoA. A methodology-specific protocol for the PoA has been prepared to conduct the audit in a transparent and comprehensive manner.

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

An analysis, as provided by the applied methodology, demonstrates that the proposed PoA is not a likely baseline scenario. Emission reductions attributable to the PoA are additional to any that would occur in the absence of the project activity. Given that the PoA is implemented as designed, the CPAs under the same are likely to achieve emission reductions.

The validation is based on the information made available to TÜV SÜD, as well as the engagement conditions detailed in this report. The validation has been performed following the VVM requirements. The single purpose of this report is its use during the registration process as part of the CDM project cycle.

Munich, 19-07-2012



Thomas Kleiser

Certification Body "Climate and Energy"
TÜV SÜD Industrie Service GmbH

Munich, 19-07-2012



Katrin Hartmann

Assessment Team Leader



Annex 1: Validation Protocol

Validation Protocol CDM-PoA-DD

Programme (PoA) Title: Chilean Small Hydroelectric Power Plants Programme of Activities

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Table 1 Conformity of CDM Programme of Activities

| CHECKLIST TOPIC / QUESTION | Ref. | COMMENTS | GSP | Final |
|-----------------------------------------------------------------------------------------------------------------------------|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|
| A. General description of small-scale programme of activities (PoA) | | | | |
| A.1. Title of the small-scale programme of activities (PoA) | | | | |
| A.1.1. Does the used PoA title clearly enable to identify the unique CDM programme of activities? | 4, 59 | Yes, the PoA title "Chilean Small Hydroelectric Power Plants Programme of Activities" clearly enables to identify the unique CDM PoA. <u>Corrective Action Request No.1.</u> The header of the PoA-DD is wrong. PP shall correct and make sure the correct template is used. | CAR1 | <input checked="" type="checkbox"/> |
| A.1.2. Are there any indications concerning the revision number and the date of the revision? | 4, 59 | Yes, the GSP-PoA-DD is indicated with version number 1, dated 09/08/2011. This is the version that was used for GSP. A Re-GSP was started on 15/12/2011 with version 02 (dated 13/12/2011) due to changes in the project design (i.e mainly due to the capacity) of the first CPA. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| A.1.3. Is this consistent with the time line of the programme's history? | 4, 59 | Yes, this is consistent with the timeline of the programme's history. This could also be confirmed during the on-site interviews and observations. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| A.2. Description of the small-scale programme of activities | | | | |
| A.2.1. Is the description delivering a transparent overview of the general operating and implementing framework of the PoA? | 4, 59 | Yes, the Chilean Small Hydroelectric Power Plants Programme of Activities intends to integrate various small scale (<15MW) hydro power projects in Chile in to his programmatic activity. It has been clearly described that the Association of Small and Medium Scale Hydroelectric Power Plants (APEMEC A.G.) will be the coordinating/managing entity of the PoA. The CDM programme activities (CPAs) included in the PoA will be implemented in Chile. The SSC-PoA involves hydropower plants delivering energy connected to the Central Interconnected System (SIC). | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

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| CHECKLIST TOPIC / QUESTION | Ref. | COMMENTS | GSP | Final |
|-------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------------------------------|
| A.2.2. Is the policy/measure or stated goal of the PoA clearly and unambiguously presented? | 4, 59 | <p>It has been clearly presented that the PoA's objective is to promote non-conventional renewable energy generation and to support small hydropower projects in Chile by providing a standardized and streamlined access to CDM services. However the following is missing:</p> <p><u>Corrective Action Request No.2.</u></p> <p>PP shall indicate in this section any national policy and/or measures with respect to small scale hydros.</p> | CAR2 | <input checked="" type="checkbox"/> |
| A.2.3. What proofs are available demonstrating that the project description is in compliance with the actual situation or planning? | 8, 9, 46, 49 | <p>The following documents/websites have been checked:</p> <ul style="list-style-type: none"> Statistics from the Transmission System Operator CDEC and National Energy Commission (CNE) confirming that the total installed capacity of small-scale hydroelectric power plants of less than 15 MW in Chile was around 82 MW, which is only 0.67% in 2010. CNE and CNR, 2007, "Estimation of the Hydroelectric Potential Associated with Existing or Planned Irrigation Projects" explain the actual situation in Chile with respect to small scale hydros. First director's board resume (Foundation Document; 11/08/2008; also confirms that APEMEC A.G. is a non-profit organization Financial support agreement between APEMEC A.G. and KFW. <p>However, these evidences are not enough in order to demonstrate that the project description is in compliance with the actual situation, i.e the history of the project activitiy.</p> <p><u>Corrective Action Request No.3.</u></p> <p>Under section A.2. the timeline of the development of the present PoA has been presented in the PoA-DD. PP shall submit available proofs in order to demonstrate that the project description is in compliance with the actual situation.</p> | CAR3 | <input checked="" type="checkbox"/> |

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| CHECKLIST TOPIC / QUESTION | Ref. | COMMENTS | GSP | Final |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|
| A.2.4. Is the information provided by these proofs consistent with the information provided by the PoA-DD? | 4, 8, 9, 46, 59 | Yes, the information is consistent with the other information and also the interviews performed on-site. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| A.2.5. Is there a valid confirmation that the proposed PoA is a voluntary action by the coordinating/managing entity? | 4, 59 | Yes, it has been indicated in the PoA-DD under section A.2. that proposed PoA is a voluntary action by the coordinating/managing entity – APEMEC A.G.. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| A.3. Coordinating/managing entity and participants of SSC-PoA | | | | |
| A.3.1. Is the form required for the indication of project participants correctly applied? | 4, 59 | The form has been applied. APEMEC A.G. is the participating party in the final PoA-DD. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| A.3.2. Is the participation of the listed entities or Parties in the PoA confirmed by each one of them? | 4, 59, 60, 61 | APEMEC A.G. has been indicated as the project participant in the final PoA-DD. However, the letter of authorization & letter of approval needs to be provided from the Chile DNA. <u>Clarification Request No. 1.</u> Letter of authorization and/or letter of approval need to be provided from the Chilean DNA. | CL1 | <input checked="" type="checkbox"/> |
| A.3.3. Is all information on participants / Parties provided in consistency with details provided by further chapters of the POA-DD (in particular annex 1)? | 4, 59 | APEMEC A.G. has been indicated as the project participant in the final PoA-DD and has been not fully consistently recorded in Annex-1 in the GSC PoA-DD. <u>Corrective Action Request No.4.</u> The host country PP name is not fully consistent throughout the PoA-DD. PP shall revise the PoA-DD accordingly. | CAR4 | <input checked="" type="checkbox"/> |
| A.3.4. Is it evident that the coordinating or managing entity of the PoA is the entity which communicates with the Executive Board (EB)? | 4, 59 | Yes, it is evident, and was also confirmed during the on-site interviews with APEMEC A.G. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| A.3.5. Is it evident whether individual project participants are involved in one of the CPAs re- | 4, 59 | Yes, different activity implementers will be responsible for the individual CPAs (e.g. Hydrowac y Compania for the Las Flores CPA). | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

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| CHECKLIST TOPIC / QUESTION | Ref. | COMMENTS | GSP | Final |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|
| lated to the PoA? | | However, APEMEC A.G. is the overall managing entity. | | |
| A.4. Technical description of the small-scale programme of activities | | | | |
| Is a technical description of the SSC PoA provided? | 4, 59 | Yes, see also section A.4.2.1. of the PoA-DD. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| A.4.1. Location of the programme of activities | | | | |
| A.4.1.1. Does the information provided on the location of the programme allow for a clear definition identification of the boundary for the PoA in terms of a geographical area, within which all CPAs included in this PoA will be implemented? | 4, 59 | The CPAs under the PoA will be implemented throughout the host country – Chile, which are connected to the SIC. Further details of the SIC and the relevant areas of Chile are clearly outlined in the PoA-DD and could be confirmed via local expertise. <u>Corrective Action Request No.5.</u> PP shall correct the boundary of the SIC, as Region IV is already included in region II - X and hence is a misleading information. | CAR5 | <input checked="" type="checkbox"/> |
| A.4.1.2. Is the consideration of all applicable national and/or sectoral policies and regulations of each host country within the boundary evident and substantiated? | 4, 59 | <u>Corrective Action Request No.6.</u> Although it has been indicated in section A.2 of the POA-DD that there are no mandatory policies or regulations for the generation of hydro power in the region, PP shall include the information on all applicable national and/or sectoral policies and regulations which are relevant to the PoA in section A.4.1.2 (as per the PoA-DD template). | CAR6 | <input checked="" type="checkbox"/> |
| A.4.1.3. Is/are the Host Party(ies) stated? | 4, 59 | Chile has been stated as the host party. This is deemed to be correct based on on-site observations and interviews. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| A.4.2. Description of a typical small-scale CDM programme activity (CPA) | | | | |
| A.4.2.1. Is it unambiguously stated which technology or measures are to be employed by the SSC-CPA? | 4, 59 | Yes, the technology is hydropower. Further details are listed in section A.4.2.1 of the PoA-DD. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| A.4.2.2. Does the technical design of the project activity reflect current good practices? | 4, 59 | The PoA generates energy from renewable source of power and replaces equivalent amount by exporting it to grid, thus reflects current good practices. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

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| CHECKLIST TOPIC / QUESTION | Ref. | COMMENTS | GSP | Final |
|--------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|
| A.4.2.3. Does the implementation of the project activity require any technology transfer from Annex-I-countries to the host country (ies)? | 4, 59, 78 | Yes, the turbines will be imported since there is no adequate supplier in Chile, which could be confirmed with the study by Pontt et al. and through the on-site visit. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| A.4.2.4. Is the technology implemented by the project activity environmentally safe? | 4, 59 | Yes, the technology implemented by the project activity is expected to be environmentally safe and the environmental impacts will be analysed at CPA level as mentioned in Section C.1 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| A.4.2.5. Is the information provided in compliance with actual situation or planning? | 4, 59 | Yes, the information is consistent, which could be confirmed via the interviews. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| A.4.2.6. Are there clear and unambiguous eligibility criteria for the inclusion of a SSC-CPA into the PoA? | 4, 59 | <p>The eligibility criteria have been stated with regards to the applicability of the applied methodology AMS.I.D ver17, geographical boundary, and the cooperation agreement with the managing entity of the PoA. In addition the DOE is requesting to include and to revise the following eligibility criteria as per EB65, Annex 3 (section B), mentioned below:</p> <p><u>Corrective Action Request No.7.</u></p> <ul style="list-style-type: none"> • The eligibility criterion for the geographical boundary is missing. PP shall revise the list of criteria accordingly. • PP shall clarify how the water rights are taken into account and assure by the CPA implementer. The criterion does not include any requirement to have such rights. • Eligibility criterion nr. 4: The condition “once operational” is not clear. PP shall clarify if there is a time limit when it will be connected to the SIC. • With eligibility criterion nr. 7 the requirement for PoAs that the CPA shall start after inclusion is not fully fulfilled. There is no control system mentioned that will assure that the CPA implementer will inform immediately the managing entity about the purchase of equipments or start of constructions. This in- | CAR7 | <input checked="" type="checkbox"/> |

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| | | <p>formation shall be transparent presented in the PoA-DD</p> <ul style="list-style-type: none"> • Criterion nr. 8. needs to be specified how the managing entity will assure that the stakeholder process complies with the requirements before submitting the CPA for inclusion (i.e. responsibilities, procedure how APEMEC A.G. will control the consultations, etc.). • Criterion nr. 9: PP shall clarify how a CPA can be in compliance with the Chilean environmental regulations at the planning stage (i.e. at the time of inclusion). In addition, chapter C.3 of the PoA DD indicates further information on EIAs and their approvals by SEIA. This shall be included as an eligibility criterion. • PP shall include a clear criterion that the CPA implementer shall follow all laws, which are available at the time of the CPA inclusion and which might constitute any obligation to the implementing entities of any of the small-scale hydroelectric projects | | |
| A.4.3. Description of how the anthropogenic emissions of GHG by sources are reduced by a SSC-CPA below those that would have occurred in the absence of the registered PoA (assessment and demonstration of additionality of the PoA as a whole) | | | | |
| A.4.3.1. Is it evident and clearly documented that the proposed PoA is a voluntary coordinated action? | 4, 59 | <p>It has been clearly documented in the PoA-DD that the proposed PoA is a voluntary coordinated action. However, see CAR below on additionality.</p> <p>The relevant laws have been checked on-site and it could be confirmed that there are no issues regarding the implementation of this SSC-hydro-PoA in Chile.</p> | See CAR 15/16 | <input checked="" type="checkbox"/> |
| A.4.3.2. Is it evident and substantiated that this voluntary coordinated action would not be implemented in the absence of the PoA? | 4, 59 | Yes, this is demonstrated via the additionality check. See Section E.5.2 for details and further corrective action requests. | See CAR 15/16 | <input checked="" type="checkbox"/> |
| A.4.3.3. Is it evident and substantiated that | 4, 59 | Not applicable (NA). | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

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| in case the PoA implements a mandatory policy or regulation this would not be enforced otherwise? | | | | |
| A.4.3.4. Is it evident and substantiated that in case the PoA implements a mandatory policy or regulation that is enforced the PoA will lead to a greater level of enforcement? | 4, 59 | NA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| A.4.4. Operational, management and monitoring plan for the programme of activities (PoA) | | | | |
| A.4.4.1. Is there a clear and transparent description of the operational and management arrangements established by the coordinating/managing entity? | 4, 59 | Clarification Request No. 2. PP shall clearly describe the management responsibilities and arrangements of each participating entity. Once finalized, PP shall provide: <ul style="list-style-type: none"> • CPA Standard MoU • CPA Standard Contract • Monitoring Manual • PoA database template | CL2 | <input checked="" type="checkbox"/> |
| A.4.4.2. Is there a record keeping system for each CPA under the PoA? | 4, 59 | Corrective Action Request No.8. It is not clear how all eligibility criteria are covered and addressed in the presented record keeping system. PP shall clearly state how the records are set-up that the compliance with each eligibility criteria can be easily identified. The PoA DD indicates that the monitoring plan, which is a living document, may contain additional items and is provided to the DOE at validation. This is misleading. The monitoring plan is defined in the PoA and CPA DD and hence is fixed. PP shall clarify. | CAR8 | <input checked="" type="checkbox"/> |
| A.4.4.3. Is there a system or procedure to avoid double accounting, i.e. to avoid that an included CPA under this PoA already is a reg- | 4, 59 | Yes, the system to avoid double counting has been indicated. Each CPA will have a contractual agreement with the ME which includes provisions to avoid double counting. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

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| istered CDM project or CPA in another PoA? | | This will be also part of the monitoring manual. | | |
| A.4.4.4. Is there a system or procedure to detect whether a SSC-CPA to be included in the PoA is not a de-bundled component of another CPA or CDM project? | 4, 59 | Yes, all requirements of the de-bundling guidance (EB 54, annex 13, (http://cdm.unfccc.int/Reference/Guidclarif/index.html#reg)) are described on the PoA-DD. However, <u>Corrective Action Request No.9.</u> PP shall indicate the version number of the debundling guidance. | CAR9 | <input checked="" type="checkbox"/> |
| A.4.4.5. Are provisions in place to ensure that those operating the CPA are aware of and have agreed that their activity is being subscribed to the PoA? | 4, 59 | Yes, this could be confirmed during the on-site with the CPA implementers of the Las Flores CPA. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| A.4.4.6. Is there a monitoring plan for the PoA, including a description of the proposed statistically sound sampling methods or procedures to be used by the DOE for the verification (please consider sampling among CPAs and within CPAs)? | 4, 59 | Yes, monitoring will be performed on a CPA level. However, <u>Corrective Action Request No.10.</u> The description of the periodic verifications performance is not in line with the requirements of the PoA DD form: In case the coordinating/managing entity opts for a verification method that does not use sampling but verifies each CPA (whether in groups or not, with different or identical verification periods) a transparent system is to be defined and described that ensures that no double accounting occurs and that the status of verification can be determined anytime for each CPA. PP shall establish a transparent system including responsibilities of the decision of which CPAs will be included in which monitoring period. PP shall include a description that ensures that the status of verification can be determined anytime for each CPA. | CAR 10 | <input checked="" type="checkbox"/> |
| A.4.4.7. In case the coordinating/managing entity opts for a verification method that does not use sampling but verifies each CPA, does the monitoring plan provide a transparent system to ensure that no double accounting occurs? | 4, 59 | Yes, the ME will develop a database. However, see CL2. | See CL2 | <input checked="" type="checkbox"/> |

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| curs and that the status of verification can be determined any time for each CPA? | | | | |
| A.4.5. Public funding of the small-scale project activity | | | | |
| A.4.5.1. Is the information provided on public funding provided in compliance with the actual situation or planning as available by the project participants? | 4, 59, 62 | The initial development of the PoA-DD and the CPA-DD was financed by the Chilean economic development agency (CORFO). | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| A.4.5.2. Is all information provided consistent with the details given in remaining chapters of the PoA-DD (in particular annex 2)? | 4, 59, 62 | <u>Corrective Action Request No.11.</u> Annex 2 is missing any information on the public funding. PP shall revise accordingly and ensure consistency throughout the PoA-DD. | CAR 11 | <input checked="" type="checkbox"/> |
| B. Duration of the programme of activities | | | | |
| B.1. Starting date of the programme of activities | | | | |
| B.1.1. Is the programme's starting date clearly defined and reasonable? | 4, 54, 59 | The starting date is indicated with 17/05/2011, which is the date when the ERPA was signed between APEMEC A.G. and KfW. Hence, this date is deemed to be reasonable. This is confirmed to be the first real action of the programme activity. This date is deemed to be conservative, since it is prior to the first GSP. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| B.2. Length of the programme of activities (PoA) | | | | |
| B.2.1. Is the assumed length of the PoA clearly defined by the coordinating managing entity and reasonable (max 28 years)? | 4, 54, 59 | Yes, the length of the PoA is reasonable (28 years). | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| C. Environmental Analysis | | | | |
| C.1. Definition of the level at which environmental analysis as per requirements of the CDM modalities and procedures is undertaken: | | | | |
| C.1.1. Is it defined whether the environmental analysis takes place at PoA or CPA level? | 4, 59 | Yes, it has been indicated that the environmental analysis takes place at CPA level. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

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| C.1.2. Is the choice whether the environmental analysis takes place at PoA or CPA level justified? | 4, 59 | Yes, it has been appropriately justified. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| C.2. Documentation on the analysis of the environmental impacts of the PoA, including transboundary impacts: | | | | |
| C.2.1. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, has an EIA been approved? | 4, 15, 59 | Yes, in Chile the assessment of the environmental impacts and the environmental approval of a specific project are regulated by the LAW N° 19,300. Every project developer has to analyse if his/her project requires an EIA. Hence, the decision to do an EIA has to be analysed for each CPA. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| C.2.2. Has the analysis of the environmental impacts of the project activity been sufficiently described? | 4, 15, 59 | Yes, it has been sufficiently described and an EIA will be done at the CPA level. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| C.2.3. Will the project create any adverse environmental effects? | 4, 15, 59 | NA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| C.2.4. Were trans-boundary environmental impacts identified in the analysis? | 4, 15, 59 | NA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| C.3. Please state whether in accordance with the host Party laws/regulations, an environmental impact assessment is required for a typical CPA of the PoA: | | | | |
| C.3.1. Have the identified environmental impacts been addressed in the project design sufficiently? | 4, 15, 59 | Since environmental impacts will be addressed on a CPA level, please refer to the CPAs. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| C.3.2. Does the project comply with environmental legislation in the host country? | 4, 15, 59 | Since environmental impacts will be addressed on a CPA level, please refer to the CPAs. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| C.3.3. Is, per host country laws/regulations, an en- | 4, | The submission to the EIA System must be analysed for each CPA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

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| environmental impact assessment necessary for a typical CPA? | 15, 59 | considering the characteristics of the project and the location. This has been described in detail in the PoA-DD. | | |
| D. Stakeholders' comments | | | | |
| D.1. Please indicate the level at which local stakeholder comments are invited. Justify the choice: | | | | |
| D.1.1. Is there a clear statement whether the stakeholder comments will be invited at PoA or CPA level? | 4, 59 | Yes, it has been indicated that the stakeholder comments will be invited at CPA level. However, <u>Corrective Action Request No.12.</u> It is not clear if there is any national regulation for stakeholders (i.e. does for example the EIA require a stakeholder consultation?). PP shall clearly state if a CDM specific stakeholder consultation will be done separately or if this is included in another stakeholder consultation. | CAR 12 | <input checked="" type="checkbox"/> |
| D.1.2. Is the choice justified in a clear and reasonable manner? | 4, 59 | Yes, the choice has been justified in the PoA-DD. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| D.1.3. If the stakeholder comments will be invited at PoA level, is there sufficient information provided, on how comments by local stakeholders were invited? | 4, 59 | NA, as the local stakeholder consultation will be done at a CPA level, which can be accepted by the assessment team. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| D.1.4. If the stakeholder comments will be invited at PoA level, is there a summary of the contents? | 4, 59 | NA, as the local stakeholder consultation will be done at a CPA level, which can be accepted by the assessment team | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| D.1.5. If the stakeholder comments will be invited at PoA level, is there sufficient information provided, on how due account was taken of any comments received? | 4, 59 | NA, as the local stakeholder consultation will be done at a CPA level, which can be accepted by the assessment team | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| D.2. Brief description how comments by local stakeholders have been invited and compiled | | | | |
| D.2.1. Have relevant stakeholders been consulted? | 4, 59 | NA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

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| D.2.2. Have appropriate media been used to invite comments by local stakeholders? | 4, 59 | NA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| D.2.3. If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws? | 4, 59 | NA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| D.2.4. Is the undertaken stakeholder process that was carried out described in a complete and transparent manner? | 4, 59 | NA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| D.3. Summary of the comments received | | | | |
| D.3.1. Is a summary of the received stakeholder comments provided? | 4, 59 | NA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| D.4. Report on how due account was taken of any comments received | | | | |
| D.4.1. Has due account been taken of any stakeholder comments received? | 4, 59 | NA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| E. Application of a baseline and monitoring methodology to a typical SSC-CPA | | | | |
| E.1. Title and reference of the approved SSC baseline and monitoring methodology applied to SSC-CPA included in the PoA | | | | |
| E.1.1.1. Are reference number, version number, and title of the baseline and monitoring methodology clearly indicated? | 4, 59 | Yes, the methodology AMS I.D, Grid connected renewable electricity generation - Version 17 - has been applied. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| E.1.1.2. Is the applied version the most recent one and / or is this version still applicable? | 4, 59 | Yes, the version used is the most recent one at the time of uploading the PoA for GSP and Re-GSP. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| E.1.1.3. Is the applied SSC methodology approved by the board, for use in PoA? | 4, 59 | Yes, the applied SSC methodology has been approved by the board, for use in PoA. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

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| E.2. Justification of the choice of the methodology and why it is applicable to a SSC-CPA | | | | | | | | | | | | |
| E.2.1. Is the applied methodology considered the most appropriate one? | 4, 59 | Yes, the applied methodology AMS I.D- Grid connected renewable electricity generation, is the most appropriate small scale methodology for this kind of programme. However, <u>Corrective Action Request No.13.</u> The condition 1b of E.2 of the PoA DD (i.e. 1. A CPA will consist of a renewable energy generation unit (hydro) that ... b) supplies electricity to an identified consumer facility via national/regional grid through a contractual arrangement such as wheeling”) is not included at all in the eligibility criteria. PP shall clarify which requirements/criteria are needed for the inclusion of this case. | CAR 13 | ☑ | | | | | | | | |
| E.2.2. Does the SSC methodology account for leakage in the context of a SSC-CPA? | 4, 59 | As per the applied methodology, leakage would only be accounted if generating equipment is transferred from another activity. | ☑ | ☑ | | | | | | | | |
| Integrate the required amount of sub-checklists on the applicability criteria as given by the applied methodology and comment on at least every line answered with “No”; | | | | | | | | | | | | |
| E.2.2.1. Criterion 1: This category comprises renewable energy generation units, such as photovoltaic, hydro, tidal/wave, wind, geothermal and renewable biomass, that supply electricity to and/or displace electricity from an electricity distribution system that is or would have been supplied by at least one fossil fuel fired generating unit. | 4, 59 | <table><tr><td>Applicability checklist</td><td>Yes / No / NA</td></tr><tr><td>Criterion discussed in the POA-DD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table> <p>The PoA includes hydroelectric plants.</p> | Applicability checklist | Yes / No / NA | Criterion discussed in the POA-DD? | Yes | Compliance provable? | Yes | Compliance verified? | Yes | ☑ | ☑ |
| Applicability checklist | Yes / No / NA | | | | | | | | | | | |
| Criterion discussed in the POA-DD? | Yes | | | | | | | | | | | |
| Compliance provable? | Yes | | | | | | | | | | | |
| Compliance verified? | Yes | | | | | | | | | | | |
| E.2.2.2. Criterion 2: Hydro power plants with reservoirs that satisfy at least one of the following conditions are eligible to apply this methodology: • The project activity is implemented in | 4, 59 | <table><tr><td>Applicability checklist</td><td>Yes / No / NA</td></tr><tr><td>Criterion discussed in the POA-DD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table> | Applicability checklist | Yes / No / NA | Criterion discussed in the POA-DD? | Yes | Compliance provable? | Yes | Compliance verified? | Yes | ☑ | ☑ |
| Applicability checklist | Yes / No / NA | | | | | | | | | | | |
| Criterion discussed in the POA-DD? | Yes | | | | | | | | | | | |
| Compliance provable? | Yes | | | | | | | | | | | |
| Compliance verified? | Yes | | | | | | | | | | | |

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| <p>an existing reservoir with no change in the volume of reservoir;</p> <ul style="list-style-type: none">• The project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the Project Emissions section, is greater than 4 W/m2;• The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the Project Emissions section, is greater than 4 W/m2. | | Yes, all three scenarios are discussed in the PoA-DD and also confirmed on-site during the interviews. | | | | | | | | | | |
| E.2.2.3.Criterion 3: If the unit added has both renewable and non-renewable components (e.g., a wind/diesel unit), the eligibility limit of 15 MW for a small-scale CDM project activity applies only to the renewable component. If the unit added co-fires fossil fuel ¹ , the capacity of the entire unit shall not exceed the limit of 15 MW.. | 4, 59 | <table><tr><td>Applicability checklist</td><td>Yes / No / NA</td></tr><tr><td>Criterion discussed in the POA-DD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table> <p>Yes, this is discussed in the PoA-DD and also confirmed on-site during the interviews.</p> | Applicability checklist | Yes / No / NA | Criterion discussed in the POA-DD? | Yes | Compliance provable? | Yes | Compliance verified? | Yes | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Applicability checklist | Yes / No / NA | | | | | | | | | | | |
| Criterion discussed in the POA-DD? | Yes | | | | | | | | | | | |
| Compliance provable? | Yes | | | | | | | | | | | |
| Compliance verified? | Yes | | | | | | | | | | | |
| E.2.2.4.Criterion 4: Combined heat and power (co-generation) systems are not eligible under this category. | 4, 59 | <table><tr><td>Applicability checklist</td><td>Yes / No / NA</td></tr><tr><td>Criterion discussed in the POA-DD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table> | Applicability checklist | Yes / No / NA | Criterion discussed in the POA-DD? | Yes | Compliance provable? | Yes | Compliance verified? | Yes | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Applicability checklist | Yes / No / NA | | | | | | | | | | | |
| Criterion discussed in the POA-DD? | Yes | | | | | | | | | | | |
| Compliance provable? | Yes | | | | | | | | | | | |
| Compliance verified? | Yes | | | | | | | | | | | |
| E.2.2.5.Criterion 5: In the case of project activities that involve the addition of renewable energy generation units at an exist- | 4, 59 | <table><tr><td>Applicability checklist</td><td>Yes / No / NA</td></tr><tr><td>Criterion discussed in the POA-DD?</td><td>Yes</td></tr></table> | Applicability checklist | Yes / No / NA | Criterion discussed in the POA-DD? | Yes | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | | | |
| Applicability checklist | Yes / No / NA | | | | | | | | | | | |
| Criterion discussed in the POA-DD? | Yes | | | | | | | | | | | |

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| ing renewable power generation facility, the added capacity of the units added by the project should be lower than 15 MW and should be physically distinct from the existing units. | | Compliance provable? | Yes | | |
| | | Compliance verified? | Yes | | |
| | | Yes, the capacity addition is discussed in the PoA-DD and also confirmed on-site during the interviews. | | | |
| E.2.2.6.Criterion 6: Project activities that seek to retrofit or modify an existing facility for renewable energy generation are included in this category. To qualify as a small-scale project, the total output of the modified or retrofitted unit shall not exceed the limit of 15 MW. | 4, 59 | Applicability checklist | | Yes / No / NA | |
| | | Criterion discussed in the POA-DD? | | Yes | |
| | | Compliance provable? | | Yes | |
| | | Compliance verified? | | Yes | |
| | | No, the PoA does not include any retrofit or modification projects. | | | |
| E.2.2.7.Criterion 7: In the specific case of biomass project activities the applicability of the methodology is limited to either project activities that use biomass residues only or biomass from dedicated plantations complying with the applicability conditions of AM0042. | 4, 59 | Applicability checklist | | Yes / No / NA | |
| | | Criterion discussed in the POA-DD? | | NA | |
| | | Compliance provable? | | NA | |
| | | Compliance verified? | | NA | |
| | | It is a hydro power plant. | | | |
| E.3.Description of the sources and gases included in the SSC-CPA boundary | | | | | |
| E.3.1. Does the SSC-CPA boundary include the physical and geographical location where the programme activities take place? | 4, 59 | Yes, the SSC-CPA boundary is clearly described. | | | |
| E.3.2. Are all sources and gases within the boundary considered in a clear manner? | 4, 59 | <u>Corrective Action Request No.14.</u> The sources and gases within the boundary in the table provided in section E.3 are not clear (especially project emissions). PP shall clarify and adjust accordingly (the table is only for LS projects). | | | |
| E.3.3. Do the spatial and technological boundaries as verified on-site comply with the | 4, 59 | Yes, the boundaries are clearly described, in line with the applied methodology and could be confirmed on-site. | | | |

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| discussion provided by / indication included to the PoA-DD? | | | | |
| E.4. Description of how the baseline scenario is identified and description of the identified baseline scenario: | | | | |
| E.4.1. Have all technically feasible baseline scenario alternatives to the PoA been identified and discussed by the PoA-DD? Why can this list be considered as being complete? | 4, 59 | NA as the baseline is set in the methodology: The baseline scenario is that the 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 into the grid. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| E.4.2. Does project identify correctly and exclude those options not in line with regulatory or legal requirements? | 4, 59 | NA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| E.4.3. Have applicable regulatory or legal requirements been identified? | 4, 59 | NA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| E.4.4. Does the PoA-DD identify the most likely baseline scenario in absence of the project activity? | 4, 59 | NA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| E.4.5. Is this identification supported by official and/or verifiable documents (e.g. studies, web pages, certificates, etc)? | 4, 59 | NA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| E.4.6. Is the identified baseline scenario in line with regulatory or legal requirements? | 4, 59 | NA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| E.5. Description of how the anthropogenic emissions of GHG by sources are reduced below those that would have occurred in the absence of a typical SSC-CPA, included in a registered PoA (assessment and demonstration of additionality): | | | | |
| E.5.1. Are the key criteria and data for assessing additionality of a SSC-CPA that is to be included into the PoA clearly and unambiguously stated? | 4, 59 | No, the criteria are not clearly stated. <u>Corrective Action Request No.15.</u> A: Microscale Approach: PP shall update the Micro-Scale Approach according to the latest EB | CAR 15 | <input checked="" type="checkbox"/> |

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| | | | <p>decisions.</p> <p>B: Non-Mircoscale Approach: PP shall clarify if this approach is only used for plants larger than 5 MW as described in the header of this section (i.e. header B).</p> <p>B.1.1: Investment barrier due to unfavourable geographic location and scale of the project:</p> <p>The requirement is to demonstrate the additionality. And this means to have clear criteria when a project will be additional. PP shall present the positive list with clear criteria.</p> | | |
| E.5.2. | Are the key criteria and data for assessing additionality of a SSC-CPA that is to be included into the PoA based on the additionality assessment in section E.5.1 of the PoA-DD? | 4, 59 | <p>Additionality is based on the most recent tools (i.e. Attachment A to Appendix B to Annex II of 4/CMP.1 ("Attachment A") available at the time of this validation.</p> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| E.5.3. | Is the choice of the criteria justified, based on the analysis in section E.5.1 of the PoA-DD? | 4, 59 | <p><u>Corrective Action Request No.16.</u></p> <p>PP shall update the PoA-POA-DD according to the PPs latest decisions on cashflow analysis, including:</p> <ul style="list-style-type: none"> • Benchmark and IRR: before or after taxes? • Parameters in Table 5 are for project IRR or equity IRR calculation – the PoA-DD is not consistent. • PP shall justify the rationale when the WACC will be applied instead of the 10% benchmark taking into account the principle of conservativeness. • PP shall clarify if there will be a standardized Excel worksheet for the IRR calculation. • PP shall clarify the inflation rate adjustments as either real or nominal values shall be used in the financial calculation according to EB 62, annex c and an appropriate explanation to determine technical lifetime for any CPA (section E.5.2 of PoA-DD) | CAR 16 | <input checked="" type="checkbox"/> |

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| | | | shall be added. | | | | | | | | | | | | | | | | | |
| E.5.4. | Does it become evident how these criteria would be applied to assess the additional-ity of a typical CPA at the time of inclu-sion? | 4, 59 | Please refer to E.5.3. | See CAR 16 | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | |
| E.5.5. | Is this information incorporated into the specific CDM-SSC-CPA-DD ("real case")? | 4, 59 | Yes, however, see CAR above. | See CAR 16 | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | |
| E.5.6. | Is a complete list of barriers developed that prevents the project activity to occur? | 4, 59 | See comments below. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | |
| E.5.7. | Does this list include at least one of the following barriers? | 4, 59 | <table border="1"><thead><tr><th>Barrier</th><th>Discussed?</th><th>Verifiable?</th></tr></thead><tbody><tr><td>Investment</td><td>Yes</td><td>See CL below</td></tr><tr><td>Technological</td><td>Yes</td><td>Not applicable.</td></tr><tr><td>Due to prevailing practice</td><td>Yes</td><td>Not applicable.</td></tr><tr><td>Other</td><td>No</td><td>NA</td></tr></tbody></table> <p>Clarification Request No. 3.</p> <p>PP shall elaborate the access to finance since it is not clear how the mentioned barriers are real for the indicated PPs (i.e. APEMEC A.G. and KfW).</p> <p>While demonstrating barriers related to the lack of access to capital, information should include nature of company, organization and its ownership and, financial information (As per EB 50, Annex 13).</p> <p>In addition, the "loan barrier" needs to be demonstrated using loan approval documents by the lender who explicitly takes into account the successful CPA inclusion. How can it be confirmed whether the bank would have provided assistance in the absence of the PoA inclusion and are there provisions for any liquidation penalties or in-creased lending rate in the event of failure to obtain the successful</p> | Barrier | Discussed? | Verifiable? | Investment | Yes | See CL below | Technological | Yes | Not applicable. | Due to prevailing practice | Yes | Not applicable. | Other | No | NA | CL3 | <input checked="" type="checkbox"/> |
| Barrier | Discussed? | Verifiable? | | | | | | | | | | | | | | | | | | |
| Investment | Yes | See CL below | | | | | | | | | | | | | | | | | | |
| Technological | Yes | Not applicable. | | | | | | | | | | | | | | | | | | |
| Due to prevailing practice | Yes | Not applicable. | | | | | | | | | | | | | | | | | | |
| Other | No | NA | | | | | | | | | | | | | | | | | | |

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| | | CPA inclusion. | | | | | | | | |
| E.5.8. Does the discussion sufficiently take into account relevant national and/or sectoral policies? | 4, 59 | NA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | | | | | |
| E.5.9. Is transparent and documented evidence provided on the existence and significance of these barriers? | 4, 59 | See discussion above. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | | | | | |
| E.5.10. Is it appropriately explained how the approval of the project activity will help to overcome the identified barriers? | 4, 59 | See discussion above. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | | | | | |
| E.6.Estimation of Emission reductions of a CPA | | | | | | | | | | |
| E.6.1. Explanation of methodological choices, provided in the approved baseline and monitoring methodology applied, selected for a typical CPA | | | | | | | | | | |
| E.6.1.1.Is it explained how the procedures provided in the methodology are applied? | 4, 59 | Yes, it is explained how the procedures provided in the methodology are applied by the proposed PoA. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | | | | | |
| E.6.1.2.Is every selection of options offered by the methodology correctly justified and is this justification in line with the situation verified on-site? | 4, 59 | Yes, every selection is correctly justified. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | | | | | |
| Determination of Project Emission (Comment on any line answered “No”) | | | | | | | | | | |
| E.6.1.3.Component 1: Emissions from the consumption of fossil fuel | 4, 59 | <table><tr><td>Project emission checklist</td><td>Yes / No /NA</td></tr><tr><td>Component discussed in the POA-DD?</td><td>No</td></tr><tr><td>Formulae correctly applied?</td><td>No</td></tr></table> Please refer to Corrective Action Request 14 | Project emission checklist | Yes / No /NA | Component discussed in the POA-DD? | No | Formulae correctly applied? | No | see CAR 14 | <input checked="" type="checkbox"/> |
| Project emission checklist | Yes / No /NA | | | | | | | | | |
| Component discussed in the POA-DD? | No | | | | | | | | | |
| Formulae correctly applied? | No | | | | | | | | | |
| E.6.1.4.Component 2: Emissions from the consumption of electricity. | 4, 59 | <table><tr><td>Project emission checklist</td><td>Yes / No /NA</td></tr></table> | Project emission checklist | Yes / No /NA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | | | |
| Project emission checklist | Yes / No /NA | | | | | | | | | |

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| | | Component discussed in the POA-DD? | Yes | | | | | | | | |
| | | Formulae correctly applied? | Yes | | | | | | | | |
| E.6.1.5.Component 3: Emissions from the consumption of non-condensable gases. | 4, 59 | <table><tr><td>Project emission checklist</td><td>Yes / No /NA</td></tr><tr><td>Component discussed in the POA-DD?</td><td>NA</td></tr><tr><td>Formulae correctly applied?</td><td>NA</td></tr></table> Comments: Not Applicable. | | Project emission checklist | Yes / No /NA | Component discussed in the POA-DD? | NA | Formulae correctly applied? | NA | ☑ | ☑ |
| Project emission checklist | Yes / No /NA | | | | | | | | | | |
| Component discussed in the POA-DD? | NA | | | | | | | | | | |
| Formulae correctly applied? | NA | | | | | | | | | | |
| E.6.1.6.Component 4: Emissions from water reservoirs of hydro power plant | 4, 59 | <table><tr><td>Project emission checklist</td><td>Yes / No /NA</td></tr><tr><td>Component discussed in the POA-DD?</td><td>Yes</td></tr><tr><td>Formulae correctly applied?</td><td>Yes</td></tr></table> | | Project emission checklist | Yes / No /NA | Component discussed in the POA-DD? | Yes | Formulae correctly applied? | Yes | ☑ | ☑ |
| Project emission checklist | Yes / No /NA | | | | | | | | | | |
| Component discussed in the POA-DD? | Yes | | | | | | | | | | |
| Formulae correctly applied? | Yes | | | | | | | | | | |
| E.6.2. Equations, including fixed parametric values, to be used for calculation of emission reductions of a SSC-CPA: | | | | | | | | | | | |
| E.6.2.1.Are the formulae required for the determination of emission reductions correctly presented, enabling a complete identification of parameters to be used and / or monitored? | 4, 59 | <u>Corrective Action Request No.17.</u> PP shall address the following concerns regarding the EF calculation: <ul style="list-style-type: none">In File "EF calculation..." sheet "plant EF", row 49 and 51, the plants Enor and Eyzaguirre are non-low cost/must run plants, but there is no EF calculation for these plants, nor information regarding the type of fuel used. The same goes for row 89, 107, 108.On the same file, sheet "OM2010" cell AN155 and AN156 there are some calculations made informally without any explanation of the values. PP shall clarify. The same goes for sheet "BM2010", cells C2:D22. | | CAR 17 | ☑ | | | | | | |
| E.6.2.2.Are the equations, including fixed parametric values, to be used for calculation of emission reductions of a SSC- | 4, 59 | See CAR above. | | See CAR | ☑ | | | | | | |

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| CPA, completely presented? | | | 17 | |
| E.6.3. Data and parameters that are to be reported in CDM-SSC-CPA-DD form | | | | |
| E.6.3.1. Is the list of parameters presented in chapter B.6.2 considered to be complete with regard to the requirements of the applied methodology? | 4, 59 | Yes, see discussions below. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| E.6.3.2. Comment on any line answered with "No" | | | | |
| Additional parameters used for the calculation of the grid factors (if necessary) | | | | |
| E.6.3.2.1. Parameter Title: Operating margin (OM) emission factor of the grid Note: OM should be calculated as per the procedures described in the "Tool to calculate the emission factor for an electricity system" | 4, 59 | NA as monitored ex post | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| E.6.3.2.2. Parameter Title: Build margin (BM) emission factor of the grid Note: BM should be calculated as per the procedures described in the "Tool to calculate the emission factor for an electricity system" | 4, 59 | NA as monitored ex post | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| E.6.3.2.3. Parameter Title: fuel consumption of each power source | 4, 59 | NA as monitored ex post | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| E.6.3.2.4. Parameter Title: emission coefficient of each fuel | 4, 59 | NA as monitored ex post | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

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| E.6.3.2.5. Parameter Title: electricity generation of each power source | 4, 59 | NA as monitored ex post | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | |
| E.6.3.2.6. Parameter Title: fraction of time with low costs /must run plant at the margin (for simple adjusted OM only) | 4, 59 | NA as monitored ex post | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | |
| E.6.3.2.7. Parameter Title: electricity imports | 4, 59 | NA as monitored ex post | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | |
| E.6.3.2.8. Parameter Title: CO ₂ emission coefficient of fuels used in connected grids | 4, 59 | NA as monitored ex post | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | |
| E.7.Application of the monitoring methodology and description of the monitoring plan | | | | | | | | | | | | | | | | | | |
| E.7.1. Data and parameters to be monitored by each SSC-CPA | | | | | | | | | | | | | | | | | | |
| E.7.1.1.Is the list of parameters presented in chapter B.7.1 considered to be complete with regard to the requirements of the applied methodology? | 4, 59 | See comments below. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | |
| E.7.1.2. $EG_{BL,y}$ (in case of capacity addition projects the parameter is called $EG_{PJ, facility,y}$) Quantity of net electricity supplied to the grid in year y | 4, 59 | NA here, as it will be checked at CPA level <table border="1"><tr><th>Monitoring Checklist</th><th>Yes / No/NA</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided for estimation?</td><td>NA</td></tr><tr><td>Has this value been verified?</td><td>NA</td></tr></table> | Monitoring Checklist | Yes / No/NA | Title in line with methodology? | Yes | Data unit correctly expressed? | Yes | Appropriate description of parameter? | Yes | Source clearly referenced? | Yes | Correct value provided for estimation? | NA | Has this value been verified? | NA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Monitoring Checklist | Yes / No/NA | | | | | | | | | | | | | | | | | |
| Title in line with methodology? | Yes | | | | | | | | | | | | | | | | | |
| Data unit correctly expressed? | Yes | | | | | | | | | | | | | | | | | |
| Appropriate description of parameter? | Yes | | | | | | | | | | | | | | | | | |
| Source clearly referenced? | Yes | | | | | | | | | | | | | | | | | |
| Correct value provided for estimation? | NA | | | | | | | | | | | | | | | | | |
| Has this value been verified? | NA | | | | | | | | | | | | | | | | | |

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| | | Measurement method correctly described? | Yes | | |
| | | Correct reference to standards? | Yes | | |
| | | Indication of accuracy provided? | NA | | |
| | | QA/QC procedures described? | Yes | | |
| | | QA/QC procedures appropriate? | Yes | | |
| E.7.1.3. $EF_{CO2,i,y}$ and $EF_{CO2,m,i,y}$ CO2 emission factor of fossil fuel type i in tCO2e/MJ Monitoring/Recording Frequency: As per the “Tool to calculate project or leakage CO2 emissions from fossil fuel combustion” Measurement Methods and Procedures: As per the “Tool to calculate project or leakage CO2 emissions from fossil fuel combustion” | 4, 59 | NA here, as it will be checked at CPA level | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| | | Monitoring Checklist | Yes / No/NA | | |
| | | Title in line with methodology? | Yes | | |
| | | Data unit correctly expressed? | Yes | | |
| | | Appropriate description of parameter? | Yes | | |
| | | Source clearly referenced? | Yes | | |
| | | Correct value provided for estimation? | NA | | |
| | | Has this value been verified? | NA | | |
| | | Measurement method correctly described? | Yes | | |
| | | Correct reference to standards? | Yes | | |
| | | Indication of accuracy provided? | NA | | |
| | | QA/QC procedures described? | Yes | | |
| | | QA/QC procedures appropriate? | Yes | | |
| E.7.1.4. Parameter Title: Standard deviation of the annual average historical net electricity generation delivered to the grid by the existing renewable energy plant that was operated at the project site prior to the implementation of the project activity (in MWh/year); $O_{historical}$ Monitoring/Recording Frequency: Annually. | 4, 59 | NA here, as it will be checked at CPA level | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| | | Monitoring Checklist | Yes / No/NA | | |
| | | Title in line with methodology? | Yes | | |
| | | Data unit correctly expressed? | Yes | | |
| | | Appropriate description of parameter? | yes | | |
| | | Source clearly referenced? | Yes | | |
| | | Correct value provided for estimation? | NA | | |
| | | Has this value been verified? | NA | | |
| | | Measurement method correctly described? | NA | | |

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| Measurement Methods and Procedures: Calculated from data used to establish EGhistorical Parameter to be calculated as the standard deviation of the annual generation data used to calculate EGhistorical for retrofit or replacement project activities. | | Correct reference to standards? | NA | | |
| | | Indication of accuracy provided? | NA | | |
| | | QA/QC procedures described? | NA | | |
| | | QA/QC procedures appropriate? | NA | | |
| E.7.1.5.Parameter Title: EG _{historical} (only appli- cable to modification/retrofit of an exist- ing grid-connected renewable power plant/unit) Average of historical electricity delivered by the existing facility to the grid (MWh) | 4, 59 | NA here, as it will be checked at CPA level | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| | | Monitoring Checklist | Yes / No/NA | | |
| | | Title in line with methodology? | Yes | | |
| | | Data unit correctly expressed? | Yes | | |
| | | Appropriate description of parameter? | yes | | |
| | | Source clearly referenced? | NA | | |
| | | Correct value provided for estimation? | NA | | |
| | | Has this value been verified? | NA | | |
| | | Measurement method correctly described? | NA | | |
| | | Correct reference to standards? | NA | | |
| | | Indication of accuracy provided? | NA | | |
| | | QA/QC procedures described? | NA | | |
| | | QA/QC procedures appropriate? | NA | | |
| E.7.1.6.NC <i>V_i</i> , <i>y</i> : Net calorific value (energy content) of fossil fuel type <i>i</i> in year <i>y</i> Monitoring/Recording Frequency: As per the “Tool to calculate project or leakage CO2 emissions from fossil fuel combus- tion” | 4, 59 | NA here, as it will be checked at CPA level | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| | | Monitoring Checklist | Yes / No/NA | | |
| | | Title in line with methodology? | Yes | | |
| | | Data unit correctly expressed? | Yes | | |
| | | Appropriate description of parameter? | yes | | |
| | | Source clearly referenced? | Yes | | |

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| Measurement Methods and Procedures: As per the “Tool to calculate project or leakage CO2 emissions from fossil fuel combustion” | | Correct value provided for estimation? | NA | | |
| | | Has this value been verified? | NA | | |
| | | Measurement method correctly described? | Yes | | |
| | | Correct reference to standards? | Yes | | |
| | | Indication of accuracy provided? | NA | | |
| | | QA/QC procedures described? | NA | | |
| | | QA/QC procedures appropriate? | NA | | |
| E.7.1.7.FCi,m,y, FCi,y, FCi,k,y, FCi,n,y and FCi,n, Amount of fossil fuel type i consumed by power plant / unit m, k or n (or in the project electricity system in case of FCi,y) in year y or hour h | 4, 59 | NA here, as it will be checked at CPA level | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| | | Monitoring Checklist | Yes / No/NA | | |
| | | Title in line with methodology? | Yes | | |
| | | Data unit correctly expressed? | Yes | | |
| | | Appropriate description of parameter? | yes | | |
| | | Source clearly referenced? | Yes | | |
| | | Correct value provided for estimation? | NA | | |
| | | Has this value been verified? | NA | | |
| | | Measurement method correctly described? | Yes | | |
| | | Correct reference to standards? | Yes | | |
| | | Indication of accuracy provided? | NA | | |
| | | QA/QC procedures described? | Yes | | |
| | | QA/QC procedures appropriate? | Yes | | |
| E.7.1.8. EGm,y, EGy, EGk,y and EGn,h Net electricity generated by power plant/unit m, k or n (or in the project electricity system in case of EGy) in year y or hour h. | 4, 59 | NA here, as it will be checked at CPA level | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| | | Monitoring Checklist | Yes / No/NA | | |
| | | Title in line with methodology? | Yes | | |
| | | Data unit correctly expressed? | Yes | | |

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| Monitoring frequency: Dispatch data OM: Hourly. Further guidance can be found in Step 3 of the Tool | | <table><tr><td>Appropriate description of parameter?</td><td>yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided for estimation?</td><td>NA</td></tr><tr><td>Has this value been verified?</td><td>NA</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr><tr><td>Correct reference to standards?</td><td>Yes</td></tr><tr><td>Indication of accuracy provided?</td><td>NA</td></tr><tr><td>QA/QC procedures described?</td><td>NA</td></tr><tr><td>QA/QC procedures appropriate?</td><td>NA</td></tr></table> | | Appropriate description of parameter? | yes | Source clearly referenced? | Yes | Correct value provided for estimation? | NA | Has this value been verified? | NA | Measurement method correctly described? | Yes | Correct reference to standards? | Yes | Indication of accuracy provided? | NA | QA/QC procedures described? | NA | QA/QC procedures appropriate? | NA | | | | | | | | |
| Appropriate description of parameter? | yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Source clearly referenced? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Correct value provided for estimation? | NA | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Has this value been verified? | NA | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Measurement method correctly described? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Correct reference to standards? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Indication of accuracy provided? | NA | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| QA/QC procedures described? | NA | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| QA/QC procedures appropriate? | NA | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| E.7.1.9.Parameter Title: Installed capacity of the hydro power plant after the implementation of the project activity (Cap _{PJ} in W). Monitoring/Recording Frequency: Yearly. Measurement Methods and Procedures: Determine the installed capacity based on recognized standards. | 4, 59 | NA here, as it will be checked at CPA level <table><tr><td>Monitoring Checklist</td><td>Yes / No/NA</td></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>yes</td></tr><tr><td>Source clearly referenced?</td><td>NA</td></tr><tr><td>Correct value provided for estimation?</td><td>NA</td></tr><tr><td>Has this value been verified?</td><td>NA</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr><tr><td>Correct reference to standards?</td><td>Yes</td></tr><tr><td>Indication of accuracy provided?</td><td>NA</td></tr><tr><td>QA/QC procedures described?</td><td>NA</td></tr><tr><td>QA/QC procedures appropriate?</td><td>NA</td></tr></table> | | Monitoring Checklist | Yes / No/NA | Title in line with methodology? | Yes | Data unit correctly expressed? | Yes | Appropriate description of parameter? | yes | Source clearly referenced? | NA | Correct value provided for estimation? | NA | Has this value been verified? | NA | Measurement method correctly described? | Yes | Correct reference to standards? | Yes | Indication of accuracy provided? | NA | QA/QC procedures described? | NA | QA/QC procedures appropriate? | NA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Monitoring Checklist | Yes / No/NA | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Title in line with methodology? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Data unit correctly expressed? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Appropriate description of parameter? | yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Source clearly referenced? | NA | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Correct value provided for estimation? | NA | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Has this value been verified? | NA | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Measurement method correctly described? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Correct reference to standards? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Indication of accuracy provided? | NA | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| QA/QC procedures described? | NA | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| QA/QC procedures appropriate? | NA | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| E.7.1.10. Parameter Title: Area of the reservoir measured in the | 4, 59 | NA here, as it will be checked at CPA level | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | |

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| surface of the water, after the implementation of the project activity, when the reservoir is full (A_{PJ} in m^2). Monitoring/Recording Frequency: Yearly. Measurement Methods and Procedures: Measured from topographical surveys, maps, satellite pictures, etc. | | Monitoring Checklist | Yes / No/NA | | |
| | | Title in line with methodology? | Yes | | |
| | | Data unit correctly expressed? | yes | | |
| | | Appropriate description of parameter? | yes | | |
| | | Source clearly referenced? | NA | | |
| | | Correct value provided for estimation? | NA | | |
| | | Has this value been verified? | NA | | |
| | | Measurement method correctly described? | Yes | | |
| | | Correct reference to standards? | Yes | | |
| | | Indication of accuracy provided? | NA | | |
| | | QA/QC procedures described? | NA | | |
| | | QA/QC procedures appropriate? | NA | | |
| | | E.7.1.11. Parameter Title: $\eta_{m,y}$ and $\eta_{k,y}$ Average net energy conversion efficiency of power unit “m” in year “y”. | 4, 59 | | |
| | | Monitoring checklist | Yes / No/ NA | | |
| | | Title in line with methodology? | Yes | | |
| | | Data unit correctly expressed? | NA | | |
| | | Appropriate description of parameter? | Yes | | |
| | | Source clearly referenced? | NA | | |
| | | Correct value provided for estimation? | NA | | |
| | | Has this value been verified? | NA | | |
| | | Measurement method correctly described? | Yes | | |
| | | Correct reference to standards? | Yes | | |
| | | Indication of accuracy provided? | NA | | |
| | | QA/QC procedures described? | NA | | |
| | | QA/QC procedures appropriate? | NA | | |
| E.7.1.12. Parameter Title: TEGy Total electricity produced by the project | 4, 59 | NA here, as it will be checked at CPA level | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

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| activity, including the electricity supplied to the grid and the electricity supplied to internal loads, in year y (in MWh). | | Monitoring Checklist | Yes / No/ NA | | |
| | | Title in line with methodology? | Yes | | |
| | | Data unit correctly expressed? | Yes | | |
| | | Appropriate description of parameter? | Yes | | |
| | | Source clearly referenced? | Yes | | |
| | | Correct value provided for estimation? | NA | | |
| | | Has this value been verified? | NA | | |
| | | Measurement method correctly described? | Yes | | |
| | | Correct reference to standards? | Yes | | |
| | | Indication of accuracy provided? | Yes | | |
| | | QA/QC procedures described? | Yes | | |
| | | QA/QC procedures appropriate? | Yes | | |
| E.7.2. Description of the monitoring plan for a SSC-CPA | | | | | |
| E.7.2.1.Is the operational and management structure clearly described and in compliance with the envisioned situation? | 4, 59 | Yes, the operational and management structure has been defined in the PoA-DD. | | ☑ | ☑ |
| E.7.2.2.Are responsibilities and institutional arrangements for data collection and archiving clearly provided? | 4, 59 | Yes, it has been indicated. | | ☑ | ☑ |
| E.7.2.3.Does the monitoring plan provide current good monitoring practice? | 4, 59 | Based on the audit team’s expertise, it can be confirmed that the monitoring plan provides current good monitoring practice. | | ☑ | ☑ |
| E.7.2.4.If applicable: Does annex 4 provide useful information enabling a better understanding of the envisioned monitoring provisions? | 4, 59 | NA | | ☑ | ☑ |

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| E.8.Date of completion of the application of the baseline study and monitoring methodology and the name of the responsible person(s)/entity(ies) | | | | |
| E.8.1.1.Is there any indication of a date when the baseline was determined? | 4, 59 | Yes, the baseline was determined on 13/12/2011. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| E.8.1.2.Has dd/mm/yyyy format been used to indicate the date? | 4, 59 | Yes, the correct format has been used. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| E.8.1.3.Is this consistent with the time line of the PoA-DD history? | 4, 59, 61, 62 | Yes, the timeline is consistent based on interviews during the on-site audit and confirmed through further documentation. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| E.8.1.4.Is the information on the person(s) / entity (ies) responsible for the application of the baseline and monitoring methodology provided consistent with the actual situation? | 4, 59 | Yes, the information on the person responsible for the application of the baseline and monitoring methodology is consistent with the actual situation, which was also confirmed through the on-site visit. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| E.8.1.5.Is information provided whether this person / entity is also considered a project participant? | 4, 59 | Yes, information is provided that Ole Meier-Hahn and Martha Djourdjin (Bridge Builders) are not considered as PPs. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| F. Annexes 1 – 4 | | | | |
| F.1. Annex 1: Contact Information | | | | |
| F.1.1. Is the information provided consistent with the one given under section A.3? | 4, 59 | No, see CAR4 and CL1 above. | See CAR 4/ CL1. | <input checked="" type="checkbox"/> |
| F.1.2. Is the information on all private participants and directly involved Parties presented? | 4, 59, 60 | Yes, the relevant information on the PP and directly involved Party is presented in the PoA-DD and can be further confirmed through the MoC and LoA. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

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| F.2. Annex 2: Information regarding public funding | | | | |
| F.2.1. Is the information provided on the inclusion of public funding (if any) in consistency with the actual situation presented by the project participants? | 4, 59 | No, see CAR above. | See CAR above | <input checked="" type="checkbox"/> |
| F.2.2. If necessary: Is an affirmation available that any such funding from Annex-I-countries does not result in a diversion of ODA? | 4, 59 | NA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| F.3. Annex 3: Baseline information | | | | |
| F.3.1. If additional background information on baseline data is provided: Is this information consistent with data presented by other sections of the POA-DD? | 4, 59 | No information is provided in Annex-3 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| F.3.2. Is the data provided verifiable? Has sufficient evidence been provided to the validation team? | 4, 59 | NA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| F.3.3. Does the additional information substantiate / support statements given in other sections of the POA-DD? | 4, 59 | No extra information is provided in Annex-3 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| F.4. Annex 4: Monitoring information | | | | |
| F.4.1. If additional background information on monitoring is provided: Is this information consistent with data presented in other sections of the PoA-DD? | 4, 59 | No additional information is provided in Annex-4 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| F.4.2. Is the information provided verifiable? Has sufficient evidence been provided to the validation team? | 4, 59 | NA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

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| F.4.3. Do the additional information and / or documented procedures substantiate / support statements given in other sections of the PoA-DD? | 4, 59 | No additional information is provided in Annex-4 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

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Table 2 Resolution of Clarification and Corrective Action Requests

| Requests by validation team | Ref. to table 1 | Summary of programme owner response | Validation team Conclusion |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CARs | | | |
| <u>Corrective Action Request No.1</u> The header of the PoA-DD is wrong. PP shall correct and make sure the correct template is used. | A 1.1. | The header has been corrected and the document has been checked for consistency with the template. | <input checked="" type="checkbox"/> The header of the PoA-DD has been corrected and the correct template is used in the final PoA-DD (IRL 104). |
| <u>Corrective Action Request No.2</u> PP shall indicate in this section any national policy and/or measures with respect to small scale hydros. | A.2.2 | An explanation of the promotional law 20257 for non-conventional renewable energies in Chile and its negligible impact has been included in section A.2. | <input checked="" type="checkbox"/> The law 20257 (IRL 95), which has been introduced on 01/04/2008) in Chile, has been indicated in the final PoA-DD. Due to the low fine of 30US\$/MWh for generators if they are not meeting the objective of the law (i.e. 5% must be supplied from their contracted energy from NRCE sources) and the very low target of 5 %, the law has not been created any impact and can be seen as an acknowledgement of the Chilean government. |
| <u>Corrective Action Request No.3</u> Under section A.2. the timeline of the development of the present PoA has been presented in the PoA-DD. PP shall submit avail- | A.2.3 | Additional links to internet sources confirming the timeline of the PoA have been included in section A.2. The following additional documents have been submitted to the DOE: | <input checked="" type="checkbox"/> The timeline can be further confirmed with the submitted evidences (IRL 85, 88, 92). Based |

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| Requests by validation team | Ref. to table 1 | Summary of programme owner response | Validation team Conclusion |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| able proofs in order to demonstrate that the project description is in compliance with the actual situation. | | <ol style="list-style-type: none"> 1. Bases licitaciones CORFO – POCH (highlighted sections) 2. Contrato CORFO – POCH (highlighted sections) 3. Estudio sobre el Mercado Voluntario (p.57 highlighted sections) | on these submitted evidences as well as through on-site interviews the validation team confirms that the project description is in compliance with the actual situation. |
| <u>Corrective Action Request No.4</u> The host country PP's name is not fully consistent throughout the PoA-DD. PP shall revise the PoA-DD accordingly. | A.3.3 | The host country PP's name has been adjusted throughout the PoA-DD. Additionally, KfW has been removed as a PP in section A.3 for the time being. | <input checked="" type="checkbox"/> The host country PP's name is now fully consistent throughout the PoA-DD. The final name (i.e. Asociación Chilena de Pequeñas y Medianas Centrales Hidroeléctricas A.G.) is fully consistent with supporting documents (IRL 49, 50, 60, 101). In addition KfW as PP has been removed from section A.3. and annex 1 in the final PoA-DD (IRL 104). For more information please refer to the respective section in the Validation report. |
| <u>Corrective Action Request No.5</u> PP shall correct the boundary of the SIC, as Region IV is already included in region II - X and hence is a misleading information. | A.4.1.1. | The boundary of the SIC has been corrected. Region IV was a typo, it is actually region XIV. | <input checked="" type="checkbox"/> The boundary of the SIC is now correct defined in the final PoA-DD (IRL 104). |
| <u>Corrective Action Request No.6</u> Although it has been indicated in section A.2 of the PoA-DD that there are no mandatory | A.4.1.2. | A list of applicable national and sectoral policies and regulations has been included in section A.4.1.2. | <input checked="" type="checkbox"/> A list of applicable and sectoral policies has been added under |

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| Requests by validation team | Ref. to table 1 | Summary of programme owner response | Validation team Conclusion |
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| policies or regulations for the generation of hydro power in the region, PP shall include the information on all applicable national and/or sectoral policies and regulations which are relevant to the PoA in section A.4.1.2 (as per the PoA-DD template). | | | the respective section in the final PoA-DD (IRL 104). The list can be considered correct due to the local and sectoral expertise of the assessment team. |
| <p><u>Corrective Action Request No.7</u></p> <ul style="list-style-type: none"> The eligibility criterion for the geographical boundary is missing. PP shall revise the list of criteria accordingly. PP shall clarify how the water rights are taken into account and assured by the CPA implementer. The criterion does not include any requirement to have such rights. Eligibility criterion nr. 4: The condition "once operational" is not clear. PP shall clarify if there is a time limit when it will be connected to the SIC. With eligibility criterion nr. 7 the requirement for PoAs that the CPA shall start after inclusion is not fully fulfilled. There is no control system mentioned that will assure that the CPA implementer will inform immediately the managing entity about the purchase of equipments or start of constructions. This information shall be trans- | A.4.2.6. | <ul style="list-style-type: none"> A new criterion with respect to the geographic boundary has been included (EC5). A new criterion with respect to water rights and land ownership has been included (EC6). The wording of EC4 has been revised. There is no time limit until when a project must be connected to the SIC. EC7 (now EC9) has been revised in the PoA, Generic CPA and Specific CPA DDs. The control system for determining the future start date of a CPA is contained in the PoA management & monitoring system that has been provided to the DOE and that is referenced in the eligibility criterion. EC8 (now EC10) has been revised in the PoA, Generic CPA and Specific CPA DDs. Clear procedures for local stakeholder consultations on CPA level have been elaborated in section D.2 of the specific CPA DD. A procedure how APEMEC A.G. will control the compliance with these procedures are contained in the PoA management & monitoring system, which has been referenced in the eligibility criterion. EC9 (now EC11) has been revised in the PoA, Generic CPA and Specific CPA DDs. Indeed it might be | <p style="text-align: center;">☑</p> <p>New eligibility criteria (EC 5, EC 6) have been included, the wording of EC 4 has been revised, EC 8 has been specified. Procedures on how the managing entity will control the compliance with the introduced procedures in order to comply with the CDM requirements of local stakeholder consultations are contained in the PoA management & monitoring system, which has been checked and can be accepted by the validation team (IRL 89). EC 9 can be accepted with the sworn declaration template, which will be provided by the CPA implementer prior to the start of operation of the project (IRL 92). However, the following issue has not be fully addressed: Follow-up 1:</p> |

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| Requests by validation team | Ref. to table 1 | Summary of programme owner response | Validation team Conclusion |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>parently presented in the PoA-DD.</p> <ul style="list-style-type: none"> • Criterion nr. 8. needs to be specified how the managing entity will assure that the stakeholder process complies with the requirements before submitting the CPA for inclusion (i.e. responsibilities, procedure how APEMEC A.G. will control the consultations, etc.). • Criterion nr. 9: PP shall clarify how a CPA can be in compliance with the Chilean environmental regulations at the planning stage (i.e. at the time of inclusion). In addition, chapter C.3 of the PoA DD indicates further information on EIAs and their approvals by SEIA. This shall be included as an eligibility criterion. • PP shall include a clear criterion that the CPA implementer shall follow all laws, which are available at the time of the CPA inclusion and which might constitute any obligation to the implementing entities of any of the small-scale hydroelectric projects | | <p>difficult to determine the compliance with Chilean environmental legislation in the case of CPAs that are included while certain environmental authorizations are still pending. The Chilean DNA also realized this issue and has included in its requirements for letters of approvals for PoAs a respective procedure: All CPAs that are included to a PoA that has gotten an LoA from the Chilean DNA have to submit a sworn declaration (Modelo Declaracion Jurada PAS, provided to the DOE) that they will obtain all pertinent environmental authorizations prior to the start of operations of their project. Later on the respective authorizations have to be provided to the DNA as soon as they are available. The Chilean DNA will monitor the compliance with these requirements and in case of non-compliance the DNA reserves the right to trigger the exclusion of a non-complying CPA from the PoA.</p> <ul style="list-style-type: none"> • A new eligibility criterion (EC15) has been included that obliges the CPA implementer to warrant compliance with all laws applicable to the implementation and operation of the project. <p>Response from the PP wrt follow-up 1: In sections A.4.2.2 of the PoA-DD and A.4.2.1 and B.2 of the Generic and Specific CPA-DDs the provisions for determining and checking the starting date have been rewritten. Now, the starting date is considered to be the earliest of the date of the purchase order of electromechanical equipment, financial closure of the project and the contractual subscription to the PoA. In case any of</p> | <p>The provided explanation in the PoA DD with respect to EC 7 is not fully in line with the given requirement on the starting date of a project activity. As per the CDM glossary of terms, the starting date is the earliest date at which either the implementation or construction or real action of a programme activity begins. Hence, how is it ensured that the earliest date is taken as the starting date? In addition, the starting date cannot be validated as part of the first verification (as currently indicated in the PoA-DD), hence, the reason and rationale behind the indicated date shall be indicated and provided to the DOE for further validation. With respect to EC 15 PP shall clarify by which means the warranty is given to APEMEC A.G..</p> <p>Conclusion: The purchase order of electromechanical equipment, financial closure of the project and the contractual subscription to the PoA can be considered as the</p> |

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| | | <p>the documents is not available yet at the time of validation of a CPA the missing document(s) have to be obtained by the CME through the PoA M&M System and checked for consistency with the previously identified starting date. The three events considered for determining the starting date cover a range of events that determine the beginning of implementation (purchase order) or beginning of real action (financial closure, subscription to the PoA). By choosing the earliest of the dates strict conservativeness is maintained in determining the starting date. Furthermore, the mandatory follow up by the CME through the PoA M&M system in case any of the three events has not occurred yet ensures the fulfilment of the criterion irrespective of the availability of all documents at the time of validation.</p> <p>With respect to EC15 it has been clarified in all three DDs that the warranty is given via a contractual agreement between the CPA implementer and the CME.</p> | <p>starting date of CPAs. The three events as mentioned now in the final PoA-DD cover a range of events that determine the beginning of determination (purchase order) or beginning of real action (financial closure, subscription to the PoA) according to the terms of CDM glossary. By choosing the earliest date to determine the starting date, a conservative approach will be followed and will be guaranteed through the PoA Management & Monitoring system (IRL 89)</p> <p>It has been clarified that by a contractual agreement the warranty between the CPA implementer and the CME is given. Hence, after checking the EC 15 is fulfilled (IRL 84, 104).</p> |
| <p><u>Corrective Action Request No.8</u></p> <p>It is not clear how all eligibility criteria are covered and addressed in the presented record keeping system. PP shall clearly state how the records are set-up that the compliance with each eligibility criteria can be easily identified.</p> <p>The PoA DD indicates that the monitoring plan, which is a living document, may contain</p> | A.4.4.2 | <p>The full PoA management & monitoring system has been provided to the DOE. The PoA M&M contains detailed procedures on the checking of CPA eligibility criteria and the storage of the respective information in the information management system and the electronic database. Generic explanations have been included in section A.4.4.1</p> <p>The wording in section A.4.4.1 has been revised and the misleading term “monitoring plan” has been deleted.</p> | <p style="text-align: center;"><input checked="" type="checkbox"/></p> <p>The PoA management & monitoring system, which covers and address detailed procedures on the checking of the CPA eligibility criteria and the storage of the respective information in the information management system and the electronic data-</p> |

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| additional items and is provided to the DOE at validation. This is misleading. The monitoring plan is defined in the PoA and CPA DD and hence is fixed. PP shall clarify. | | | base, has been checked thoroughly and can be accepted by the assessment team (IRL 89). |
| <u>Corrective Action Request No.9</u> PP shall indicate the version number of the debundling guidance. | A.4.4.4- | The version number (Version 03) has been included. | <input checked="" type="checkbox"/> The version number has been included in the final PoA-DD (IRL 104). |
| <u>Corrective Action Request No.10</u> The description of the periodic verifications performance is not in line with the requirements of the PoA DD form: In case the coordinating/managing entity opts for a verification method that does not use sampling but verifies each CPA (whether in groups or not, with different or identical verification periods) a transparent system is to be defined and described that ensures that no double accounting occurs and that the status of verification can be determined anytime for each CPA. PP shall establish a transparent system including responsibilities of the decision of which CPAs will be included in which monitoring period. PP shall include a description that ensures that the status of verification can be determined at anytime for each CPA. | A.4.4.6. | Respective provisions are laid out in detail in the PoA management & monitoring system and have been included with a brief description in section 4.4.2. The PoA management & monitoring system contains procedures and a recording mechanism through which the status of verification for each CPA can be unambiguously identified at any time. These procedures establish that for every given monitoring period of the PoA all CPAs that were operational during the full period or a part thereof shall be included in the respective periodic verification. For CPAs considered for a certain monitoring and verification period of the PoA the period of each CPA that is considered for monitoring, reporting and verification shall be equal to the PoA monitoring and verification period. Every change of status of verification for each CPA is recorded in the database of the PoA management & monitoring system with date and information on the event. | <input checked="" type="checkbox"/> In the PoA management & monitoring system procedures and a recording mechanism through which the status of verification for each CPA can be identified at any time, i.e. the set-up of the monitoring plan and the underlying system (i.e. database; IRL 89) allows the exact determination of the status of each CPA with respect to its verification and CER issuance, monitoring periods., has been developed and can be accepted by the assessment team. |
| <u>Corrective Action Request No.11</u> Annex 2 is missing any information on the | A.4.5.2 | Annex 2 has been updated and consistency was checked throughout the PoA-DD. | <input checked="" type="checkbox"/> Annex 2 has been updated in |

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| public funding. PP shall revise accordingly and ensure consistency throughout the PoA-DD. | | | the final PoA-DD and is now consistent with other parts of the final PoA-DD (IRL 104). |
| <p><u>Corrective Action Request No.12</u></p> <p>It is not clear if there is any national regulation for stakeholders (i.e. does for example the EIA require a stakeholder consultation?). PP shall clearly state if a CDM specific stakeholder consultation will be done separately or if this is included in another stakeholder consultation.</p> | D.1.1 | <p>Under certain circumstances Chilean national regulations demand a stakeholder consultation. In these cases CPA implementers may opt for integrating the CDM stakeholder consultation into such stakeholder consultations.</p> <p>However, since not all CPAs may be required to undertake a stakeholder consultation based on Chilean national regulations it is not possible to say whether the CDM stakeholder consultation will always or never be integrated into another mandatory stakeholder consultation process.</p> <p>Therefore, we have included respective clarifications in section D.1 of the PoA-DD and D.2 of the CPA-DDs. For any CPA it will now be unambiguously stated if the stakeholder consultation was integrated into another mandatory stakeholder consultation process or not.</p> | <p><input checked="" type="checkbox"/></p> <p>It has been clarified in the final version of the PoA-DD if a CDM specific stakeholder consultation will be done separately or if this is included in another stakeholder consultation, which may be required by the Chilean authorities if the installed capacity is higher than 3 MW.</p> |
| <p><u>Corrective Action Request No.13</u></p> <p>The condition 1b of E.2 of the PoA DD (i.e. 1. A CPA will consist of a renewable energy generation unit (hydro) that ... b) supplies electricity to an identified consumer facility via national/regional grid through a contractual arrangement such as wheeling") is not included at all in the eligibility criteria. PP shall clarify which requirements/criteria are needed for the inclusion of this case.</p> | E.2.1. | <p>In section E.2 it has been clarified how any CPA that fulfils eligibility criterion 4 (connection to the SIC) automatically complies either with requirement 1. (a) supplying electricity to a national or a regional grid; or (b) supplying electricity to an identified consumer facility via national/regional grid through a contractual arrangement such as wheeling.</p> | <p><input checked="" type="checkbox"/></p> <p>It has been clarified that condition 1b of E.2 of the final PoA-DD fulfils the eligibility criteria 4, which is deemed to be appropriate and can be accepted by the validation team (IRL 104).</p> |

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| <p><u>Corrective Action Request No.14</u></p> <p>The sources and gases within the boundary in the table provided in section E.3 are not clear (especially project emissions). PP shall clarify and adjust accordingly (the table is only for LS projects).</p> | E.3.2. | <p>The table has been adjusted to the original format as provided in ACM02 and has been clarified in all three DDs. Although it is not mandatory for small-scale projects it was considered useful for illustrating the emission sources and their relevance for the project.</p> <p>Additionally, potential project emissions due to fossil fuel consumption of auxiliary generation systems have been removed from the table and throughout all DDs since:</p> <ol style="list-style-type: none"> 1. They are not considered as project emissions neither in AMS I.D nor in ACM02. 2. No important (more than 1% of yearly electricity generation of a project) fossil fuel fired auxiliary generation is expected from future CPAs <p>In any case, if important fossil fuel fired auxiliary electricity generation is to be found at any of the future CPAs these emissions will be considered as project emissions in the respective monitoring report according to the pertinent CDM tools.</p> <p>Response from the PP wrt follow-up 1:</p> <p>The table has been corrected in the three DDs.</p> | <p style="text-align: right;">☑</p> <p>Follow-up 1:</p> <p>It is not clear why the methane emissions from the reservoir are also under the category “baseline”, although the table in the ACM0002 meth indicates that these emissions are under the category “project activity” in the left-hand column. PP shall clarify.</p> <p>Conclusion follow-up 1:</p> <p>The table has been corrected according to the methodology in all three DDs (IRL104, 105, 106).</p> |
| <p><u>Corrective Action Request No.15</u></p> <p>A: Microscale Approach:</p> <p>PP shall update the Micro-Scale Approach according to the latest EB decisions.</p> <p>B: Non-Mircoscale Approach: PP shall clarify if this approach is only used for plants larger than 5 MW as described in the header of this section (i.e. header B).</p> | E.5.1. | <p>A: Microscale Approach:</p> <p>The microscale approach is up to date of the latest rulings of the EB. Options 2a, b, c have been deleted as in fact they do not apply here. Meanwhile on 23/02/2012 the Chilean DNA resubmitted its recommendation on automatic additionalilty of specific renewable energy technology, including micro-hydro, according to the latest version of the “Guidelines for Demonstrating Additio-nality of Microscale Project Activities” (Version 03) and</p> | <p style="text-align: right;">☑</p> <p>The SSC WG has recom-mended the Chilean submission for approval to the EB on 03/04/2012. If no further com-ments are received from the EB the micro scale additionality will be automatically approved. Ac-cording to the UNFCCC web-</p> |

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| B.1.1: Investment barrier due to unfavourable geographic location and scale of the project: The requirement is to demonstrate the additionality. And this means to have clear criteria when a project will be additional. PP shall present the positive list with clear criteria. | | <p>the latest form for respective host country submissions. The section in the PoA DD has been updated accordingly. However, since the ruling of the EB on the submission is still pending it can not yet be considered final.</p> <p>B: Non-Microscale Approach: Any of the approaches B may also be applied for micro-scale projects. The misleading headers have been revised accordingly.</p> <p>B.1.1: Investment barrier due to unfavourable geographic location and scale of project: The approach has been removed and deleted.</p> | <p>page (http://cdm.unfccc.int/DNA/submissions/index.html) the Board has adopted the SSC WG recommendation on 16/04/2012.</p> <p>The misleading headers for the micro and non-micro scale approach have been revised in the final PoA-DD and can be accepted by the assessment team (IRL 104).</p> <p>Investment barrier due to unfavourable geographic location and scale of project has been removed and can be accepted (IRL 104).</p> |
| <p><u>Corrective Action Request No.16</u></p> <p>PP shall update the PoA-POA-DD according to the PPs latest decisions on cashflow analysis, including:</p> <ul style="list-style-type: none"> Benchmark and IRR: before or after taxes? Parameters in Table 5 are for project IRR or equity IRR calculation – the PoA-DD is not consistent. PP shall justify the rationale when the WACC will be applied instead of the 10% benchmark taking into account the principle of conservativeness. | E.5.3. | <ul style="list-style-type: none"> It has been clarified in the PoA-DD that both benchmarks, national benchmark and WACC, apply after taxes. Therefore, also the Project IRR shall be calculated after taxes. The caption of table 5 has been corrected. The parameters listed relate to the Project IRR. The PoA-DD has been checked for consistency. An explanation has been included in section E.5.1 of the PoA-DD when and why a WACC would be used instead of the national benchmark. The main rationale of using the WACC is that it is more accurate and case specific than the national benchmark. So, in general it would be the preferred approach. However, | <p>☑</p> <p>It has been clarified that the benchmark is after tax.</p> <p>Table 5 has been corrected and includes now only parameters, which are related to the project IRR.</p> <p>It has been clarified that only real or nominal values will be used in the financial calculation.</p> <p>Appropriate explanation with respect to the determination of the technical lifetime has been</p> |

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| <ul style="list-style-type: none"> PP shall clarify if there will be a standardized Excel worksheet for the IRR calculation. <p>PP shall clarify the inflation rate adjustments as either real or nominal values shall be used in the financial calculation according to EB 62, annex c. An appropriate explanation to determine technical lifetime for any CPA (section E.5.2 of PoA-DD) shall be added.</p> | | <p>the calculation of the WACC can be very costly considering that several sources, especially for computing β and risk premiums, are only available for purchase from specialized companies (e.g. rating agencies) and that the calculation needs to be performed by a financial specialist. Particularly for smaller projects these costs may be too high. In these cases the national benchmark would be used. With respect to the principle of conservativeness the WACC can also be considered to be more conservative than the national benchmark because it is calculated specific to the case of each project. The national benchmark applies equally to investment projects in generation or transmission, to large projects or small projects, to fossil fuel based projects or to renewable energy projects and can therefore not be considered to be case specific at all. It rather reflects a national rule of thumb, which does not seem to be a particularly conservative approach for analyzing renewable energy investments.</p> <ul style="list-style-type: none"> For the time being no standardized Excel sheet will be used for the calculation of the IRR calculations. This has been clarified in the PoA-DD. No inflation rate was considered in the approach to calculate the Project IRR or anywhere else in the calculation of financial indicators. A more detailed explanation on the sources for determining the technical lifetime of any CPA and how to apply the respective provisions of the "Tool to determine the remaining lifetime of equipment" has | <p>included in the final PoA-DD. However, the following items shall be clarified:</p> <p>Follow-up 1:</p> <p>It is still mentioned in the PoA-DD that a standard template will be provided:</p> <p>"Standard templates have been developed and are made available to the CPA proponents for the calculation of both the project IRR and the WACC of a project, but their use is not mandatory"</p> <p>The PP shall clarify why the parameters used for the WACC calculation are only available for purchase from specialized companies as in contrary in the PoA-DD in table 3 is mentioned that most of the parameters will be publicly available.</p> <p>Conclusion follow-up 1:</p> <p>The phrase in the final PoA-DD has been deleted. Respective table 3 in the PoA-DD and Generic CPA-DD has been revised in order to allow a better determination of the technical lifetime</p> |

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| | | <p>been included in the PoA and Generic CPA DD.</p> <p>Response from the PP wrt follow-up 1:</p> <p>The misleading phrase on standard templates has been deleted.</p> <p>With respect to the calculation of the WACC the table was misleading. The official publicly available data was mentioned as a potential source in order to not exclude the possibility to use such data in case it was available. In general such data is NOT available. In order to avoid misunderstandings the official publicly available data has been removed from the list of potential sources of the different financial parameters, but an “e.g.” was included in order to show that other sources may be used should they be available.</p> <p>Additionally, we revised the PoA-DD in section E.5.1 and the Generic CPA-DD in section B.3 in the following aspects:</p> <ol style="list-style-type: none"> 1. The ranking between the two approaches for benchmarks has been further clarified, highlighting the clear preference for the WACC approach. 2. The WACC formula has been changed from post-tax to pre-tax WACC. <p>The rationale of the latter is the EB's preference for a pre-tax benchmark for financial analysis based on a Project IRR as expressed in par.11 of the “Guidelines on the Assessment of Investment Analysis” Version 4. In the above mentioned sections of the PoA-DD, Generic and Specific CPA-DD clear provisions have been included that the Project IRR shall be calculated in the corre-</p> | <p>for any CPA and can be accepted by the assessment team (IRL 104, 105).</p> <p>However,</p> <p>Follow-up 2:</p> <ul style="list-style-type: none"> • Benchmark: The PoA is considered as one project, and for one project, there can be only one benchmark. PP shall revise accordingly. • Electricity tariff: PP shall clarify if the indicated value is with or without taxes (and make necessary adjustments if tariff is with VAT). <p>Conclusion follow-up 2:</p> <p>In the final PoA-DD (IRL 104) only one benchmark – the pre-tax WACC has been chosen. The pre-tax WACC has been validated and can be accepted by the audit team (please see also respective section in the validation report).</p> <p>The tariff is without VAT, which is in line with EB 62, annex 5 and can be therefore accepted by the validation team (IRL 104, 105).</p> |

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| | | <p>sponding way: pre-tax Project IRR in case the pre-tax WACC is used as a benchmark, post-tax Project-IRR in case the national benchmark is used.</p> <p>Response from the PP wrt follow-up 2:</p> <ul style="list-style-type: none"> The pre-tax WACC has been chosen as the only applicable benchmark. The PoA and Generic CPA DDs have been revised accordingly. <p>In general electricity tariffs used for financial analysis of a CPA do not include VAT. If so, the VAT shall be deducted from the price that includes VAT. This has been clarified in table 4 of the PoA DD and table 4 of the Generic CPA DD.</p> | |
| <p><u>Corrective Action Request No.17</u></p> <p>PP shall address the following concerns regarding the EF calculation:</p> <ul style="list-style-type: none"> In File "EF calculation..." sheet "plant EF", row 49 and 51, the plants Enor and Eyzaguirre are non-low cost/must run plants, but there is no EF calculation for these plants, nor information regarding the type of fuel used. The same goes for row 89, 107, 108. On the same file, sheet "OM2010" cell AN155 and AN156 there are some calculations made informally without any explanation of the values. PP shall clarify. The same goes for sheet | E.6.2.1. | <ul style="list-style-type: none"> For the power plants Eyzaguirre, Enor and those on rows 89, 107, 108, no information is available on fuel type used or fuel consumption. The emissions are therefore calculated as per Option A3: "If for a power unit <i>m</i> only data on electricity generation is available, an emission factor of 0tCO₂/MWh can be assumed as a simple and conservative approach." The approach taken for the emissions calculation of each power unit is stated in Column Z, "EF Option". Please see corrected EF calculation sheet. <p>Response from the PP wrt follow-up 1:</p> <p>Small hydropower projects in Chile do not involve on-site consumption of fossil fuels, i.e. no auxiliary fossil fuel fired generators are operated on the project site. Therefore no project or leakage emissions from fossil fuel combustion are considered. This has been clarified in</p> | <p style="text-align: center;">☑</p> <p>For the mentioned power plant option A3 has been chosen and explained in the EF calculation, which can be accepted by the assessment team.</p> <p>The corrected EF calculation has been checked and no mistakes have been found (IRL 87).</p> <p>Follow-up 1:</p> <p>According to the methodology CO₂ emissions from on-site consumption of fossil fuels due to the project activity shall be calculated using the latest ver-</p> |

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| "BM2010", cells C2:D22. | | section E.6.1 of the PoA DD. | <p>sion of the "Tool to calculate project or leakage CO2 emissions from fossil fuel combustion". PP shall revise accordingly.</p> <p>Conclusion follow-up 1:</p> <p>In the final PoA-DD it has been clarified that small hydropower projects in Chile do not involve on-site consumption of fossil fuels, i.e. no auxiliary fossil fuel fired generators are operated on the project site. Hence, no project or leakage emission needs to be considered (IRL 104). This has also been clarified during several interviews with the PPs of the specific CPA and can be further confirmed with the local expertise of the validation team. However, this situation needs to be verified against the statement in the PoA-DD during CPA inclusion.</p> |
| CRs | | | |
| <u>Clarification Request No. 1</u> Letters of authorization and/or letters of approval need to be provided from Chilean DNA | A.3.2. | The Letter of authorization/approval of the Chilean DNA is still pending. Kindly note that KfW was removed as a project participant upon own wish and therefore no letter of approval/authorization of the German DNA is required | <input checked="" type="checkbox"/> The letter of authorization of the Chilean DNA has been submit- |

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| and German DNA, respectively. | | anymore. | ted to the validation team. After a thorough assessment the validation team considers the provided letter as authentic (IRL 60). As KfW was removed in the in the final PoA-DD no letter of authorization from the German DNA is required anymore (IRL 104). |
| <u>Clarification Request No. 2</u> PP shall clearly describe the management responsibilities and arrangements of each participating entity. Once finalized, PP shall provide: <ul style="list-style-type: none"> • CPA Standard MoU • CPA Standard Contract • Monitoring Manual • PoA database template | A.4.4.1 | The management responsibilities and arrangements of all parties involved in the PoA have been elaborated in detail in the following documents, which are provided to the DOE for validation: <ol style="list-style-type: none"> 1. PoA management plan 2. PoA management & monitoring system (resembles the monitoring manual and the PoA database template) The following other documents have been provided to the DOE as requested: <ol style="list-style-type: none"> 1. CPA standard MoU 2. CPA standard contract | <input checked="" type="checkbox"/> The management responsibilities and arrangements of each participating entity have been clearly described in the PoA management plan (IRL 47) and the PoA management & monitoring system, which includes the monitoring manual and the PoA database template (IRL 89). In addition, the CPA standard MoU template (IRL 86) and the CPA standard contract template (IRL 84) have been submitted to the validation team. All requested documents have been checked in depth and can be accepted by the assessment team. |
| <u>Clarification Request No. 3</u> PP shall elaborate the access to finance | E.5.7. | The access to finance barrier presented in section E.5.1 is not meant for and does not apply to the project partici- | <input checked="" type="checkbox"/> The access to finance barrier |

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| <p>since it is not clear how the mentioned barriers are real for the indicated PPs (i.e. APEMEC A.G. and KfW).</p> <p>While demonstrating barriers related to the lack of access to capital, information should include nature of company, organization and its ownership and, financial information (As per EB50, Annex 13).</p> <p>In addition, the “loan barrier” needs to be demonstrated using loan approval documents by the lender who explicitly takes into account the successful CPA inclusion. How can it be confirmed whether the bank would have provided assistance in the absence of the PoA inclusion and are there provisions for any liquidation penalties or increased lending rate in the event of failure to obtain the successful CPA inclusion.</p> | | <p>pant APEMEC A.G. (note that KfW has been removed from the project participant list). A demonstration on the additionality of APEMEC A.G.'s participation in the PoA has been included in the proper section A.4.3, that is meant for the demonstration of additionality related to the program itself, instead.</p> <p>Clear criteria on the provision of information regarding the nature of the company, organization and its ownership and financial information in the context of the financial barrier assessment are already contained in section E.5.2 of the PoA-DD.</p> <p>With respect to the loan barrier the type of evidence needed to demonstrate the barrier has been further refined and tightened in section E.5.1 and E.5.2 of the PoA-DD. Particularly, now it is made explicit that the loan must be conditioned to the successful CPA inclusion, i.e. the loan agreement needs to involve conditions that disbursements will only be made once the project is successfully included as a CPA.</p> | <p>(loan) can be accepted when the evidence to demonstrate the existence of the loan investment include the loan agreement and an additional official statement from the bank that the loan will not enter into force if the project is not registered as a CDM project/CPA.</p> |

Table 3 Unresolved Corrective Action and Clarification Requests (in case of denials)


| Clarifications and / or corrective action requests by validation team | Id. of CAR/CR | Explanation of Conclusion for Denial |
|-----------------------------------------------------------------------|---------------|--------------------------------------|
| - | - | - |




Annex 2: Information Reference List

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| Ref. No. | Author/Editor/ Issuer | Title/Type of Document. Publication place | Issuance and/or submission date | Additional Information (Relevance in CDM Context) |
|----------|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|---------------------------------------------------|
| | TÜV SÜD | Onsite interviews carried out by TÜV SÜD: Validation Team (on-site): Katrin Hartmann GHG Auditor TÜV SÜD Industrie Service Karin Wagner GHG Auditor TÜV SÜD Industrie Service Lester Saldias Kiefer GHG Auditor TÜV SÜD Industrie Service Interviewed Persons: Juan Tapia Ecotourism Futrono Luis Nahuelpan Futrono Inhabitant Jorge Wachholtz Project Manager (HYDROWAC y COMPAÑIA) Carlos Wachholtz Project Manager (HYDROWAC y COMPAÑIA) Ole Meier-Hahn CDM Consultant Barbara Alcaíno APEMEC PoA Coordinator Giovanna Correa Secretary of the Director of SEA (Environmental Assessment Service) Sergio Gonzalez Director and Broadcaster (Radio Lago Ranco) | 28/08/2011 – 31/08/2011 and 18/05/2012 | |
| 0. | Bridge Builders | CPA-DD of "Chilean Small Hydroelectric Power Plants Programme of Activities": CPA Title: Las Flores Hydroelectric Project, Version 01 | 09/08/2011 | PoA-CPA for GSP |
| 1. | IPCC | Guidelines for National Greenhouse Gas Inventories. | 2006 | |
| 2. | UNFCCC | Validation and Verification Manual Version 01.2, EB 55 Annex 01 | 30/07/2010 | |
| 3. | UNFCCC | "Indicative simplified baseline and monitoring methodologies for selected small-scale CDM project activity categories" AMS I-D Version 17 | 03/06/2011 | Applied methodology |

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| Ref. No. | Author/Editor/ Issuer | Title/Type of Document. Publication place | Issuance and/or submission date | Additional Information (Relevance in CDM Context) |
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| 4. | Bridge Builders | PoA-DD of "Chilean Small Hydroelectric Power Plants Programme of Activities", Version 01 | 09/08/2011 | PoA-DD for GSP |
| 5. | UNFCCC | Tool to calculate the Emission factor for an electricity system Version 02.2.1 | 29/09/2011 | |
| 6. | UNFCCC | Tool for the demonstration and assessment of additionality, Version 05.2.1 | 11/08/2011 | |
| 7. | Transmission System Operator CDEC | Total installed capacity of SSC hydros in Chile; www.cdec-sic.cl | 2011 | |
| 8. | CNE and CNR | "Estimation of the Hydroelectric Potential Associated with Existing or Planned Irrigation Projects" [Spanish]; http://www.cne.cl/cnewww/export/sites/default/05_Public_Estudios/descargas/estudios/Texto12_PotencialEnObras | 2007 (accessed on 14.06.2011) | |
| 9. | National Energy Commission (CNE) | Chilean Central Interconnected System (SIC), Power grid composition, www.cne.cl | 2010 | |
| 10. | WCD | Dams and development: a new framework for decision making. Earthscan Publications. London, U.K: http://www.dams.org/docs/report/wcdreport.pdf | 2000 | |
| 11. | Economy, Development and Rebuilding Ministry | Law 19,940 (Short Law I) | 13/05/2004 | |
| 12. | Economy, Development and Rebuilding Ministry | Law 20,018 (Short Law II) | 19/05/2004 | |
| 13. | Economy Development and | Law 20,257 | 01/04/2008 | |

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| Ref. No. | Author/Editor/ Issuer | Title/Type of Document. Publication place | Issuance and/or submission date | Additional Information (Relevance in CDM Context) |
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| | Rebuilding Ministry | | | |
| 14. | UNFCCC | Guidelines on assessment of debundling for SSC project activities (Version 03) | 28/05/2010 | |
| 15. | General Secretariat of the Presidency Ministry | Law N° 19,300, "The Environmental General Basis Law" ("Ley de Bases Generales del Medio Ambiente"). http://www.leychile.cl/Navegar?idNorma=30667 | 13/11/2010 | Environmental impacts |
| 16. | General Secretariat of the Presidency Ministry | Law N° 20,417 (Environmental Law) | 26/01/2010 | Environmental impacts |
| 17. | General Secretariat of the Presidency Ministry | Environmental Impact Assessment Regulations (SEIA); http://www.sea.gob.cl/ | Accessed on 15/04/2012 | Environmental impacts |
| 18. | A. Damodaran | Equity Risk Premiums (ERP): Determinants, Estimation and Implications – The 2010 Edition; Stern School of Business; http://pages.stern.nyu.edu/~adamodar/ http://www.stern.nyu.edu/~adamodar/pc/datasets/histimpl.xls | 2010 /2011 | Benchmark |
| 19. | A. Damodaran; Barad, M.W. | Technical analysis of the size premium | 2010 | Benchmark |
| 20. | Ibbotson Associates; Banz, R.W. | The Relationship between Return and Market Value of Common Stocks, Journal of Financial Economics, 9, pp. 3-18 | 1981 | Benchmark |
| 21. | Duff & Phelps | Risk Premium Report, Business Valuation Resources, LLC Size Premium (SP): http://www.duffandphelps.com/sitecollectiondocuments/2011_Duff_Phelps_Risk_Premium_Report_EXCERPT.pdf | 2011 | Benchmark |

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| Annex 2 | 19/07/2012 | Validation of the CDM Project "Chilean Small Hydroelectric Power Plants Programme of Activities" Information Reference List | Page 4 of 11 |  Industrie Service |
|---------|------------|---------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------------------------------------------------------------------------------------------------------|


| Ref. No. | Author/Editor/ Issuer | Title/Type of Document. Publication place | Issuance and/or submission date | Additional Information (Relevance in CDM Context) |
|----------|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|---------------------------------------------------|
| 22. | A. Damodaran | Risk-free-Rate (RfR): http://www.stern.nyu.edu/~adamodar/pc/datasets/histimpl.xls | 2011 | Benchmark |
| 23. | A. Damodaran | Unlevered Beta (β) for power industries in emerging market: http://www.stern.nyu.edu/~adamodar/pc/datasets/totalbetaemerg.xls | 2011 | Benchmark |
| 24. | Bridge Builders | Emission reduction calculation (Excel spreadsheet; first version) | 2011 | |
| 25. | JMS | Feasibility study of Las Flores (MINI CENTRAL HIDROELÉCTRICA 'LAS FLORES') including the following annexes: <ul style="list-style-type: none"> Annex 1.1. -1.2: hydraulic preconditions and soil conditions Annex 2.1. -2.5: Memoria Estructural Annex 3 to the Feasibility study: technical specifications of the electrical equipment Annex 3 to the Feasibility study: technical specifications of the electrical equipment Annex 4: pre-estimation of the investment cost of Las Flores Annex 5: topographical layout of Las Flores Annex 7: to the Feasibility study: approval of the water rights from the Ministry (Ministerio de obras publicas direccion general de aguas region de los rios) | December 2011 | |
| 26. | JMS | Pre-Feasibility Study (Draft) of Las Flores | May 2009 | |
| 27. | UNFCCC | Guidelines on the assessment of investment analysis; EB62, Annex05 | EB62 | |
| 28. | UNFCCC | F-CDM-SSC-PoA-DD - Programme design document form for small-scale CDM programmes of activities; Ver01.0 | online | |
| 29. | UNFCCC | F-CDM-SSC-CPA-DD - Component project activity design document form | online | |

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| Annex 2 | 19/07/2012 | Validation of the CDM Project "Chilean Small Hydroelectric Power Plants Programme of Activities" Information Reference List | Page 5 of 11 |  Industrie Service |
|---------|------------|---------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------------------------------------------------------------------------------------------------------|


| Ref. No. | Author/Editor/ Issuer | Title/Type of Document. Publication place | Issuance and/or submission date | Additional Information (Relevance in CDM Context) |
|----------|--------------------------------------------------|-----------------------------------------------------------------------------------------------|---------------------------------|---------------------------------------------------|
| | | for small-scale component project activities; Ver01.0 | | |
| 30. | UNFCCC | General guidelines for SSC CDM methodologies; EB61, Annex 21 | EB61 | |
| 31. | UNFCCC | Guidelines for demonstrating additionality of microscale project activities; EB63, Annex 23 | EB63 | |
| 32. | Javier Gho Barba – Energias Renovables | Hydraulic studies, province of Valdivia, Region de los Rios | 04/05/2009 | |
| 33. | Bridge Builders | EF calculation 2010 CM | August 2011 | Emission factor |
| 34. | Government of Chile – National Energy Commission | Balance Nacional de Energia (BNE) | 2008 | Emission factor |
| 35. | Government of Chile – National Energy Commission | Installed capacity of the national power grids | 2010 | Emission factor |
| 36. | CDEC-SIC | Cuadros ITD SIC ABR excel file, containing references to the node prices and energy tariffs. | 2011 | |
| 37. | CDEC-SIC | CD data – from CDEC-SIC | 2010 | Emission factor |
| 38. | Bridge Builders | EF References for the calculation of the Grid Emission Factor of the Chilean SIC for 2010 | 2010 | |
| 39. | Bridge Builders | Financial Analysis Las Flores | 2011 | |
| 40. | HYDROWAC Y COMPAÑIA to SEA | Invitation letter for stakeholder consultation sent to director of the regional office of SEA | 25/11/2011 | Stakeholder Consultation |
| 41. | General Secretariat of the Presidency | Law N°. 20,071 | 2005 | |

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| Annex 2 | 19/07/2012 | Validation of the CDM Project "Chilean Small Hydroelectric Power Plants Programme of Activities" Information Reference List | Page 6 of 11 |  Industrie Service |
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| Ref. No. | Author/Editor/ Issuer | Title/Type of Document. Publication place | Issuance and/or submission date | Additional Information (Relevance in CDM Context) |
|----------|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|---------------------------------------------------|
| | Ministry | | | |
| 42. | General Secretariat of the Presidency Ministry | Law N°. 20,099 | 2006 | |
| 43. | General Direction of Water | Public Water Cadastre ("Catastro público de Aguas") in 7 Section IV and V, pages 5-7 Available at : http://www.dga.cl/orientacionalpublico/guias/Guias%20para%20presentacion%20de%20solicitudes/guiaaprovchaguas.pdf | 03/2010 | Accessed on 30/08/2011 |
| 44. | CORFO | Webpage of the Chilean Development Corporation: http://www.corfo.cl/ | N.A. | Accessed on 30/08/2011 |
| 45. | APEMEC A.G. | Society Constitution of APEMEC | n.a. | |
| 46. | APEMEC A.G. | First Director's board minute, specifying that the Society constitution of APEMEG A.G. was constituted on 11/08/2009 | 27/03/2009 | |
| 47. | APEMEC A.G | PoA Management Plan (signed copy) Version 1.1 | 31/08/2011 | |
| 48. | Universidad Técnica Federico Santa María | Feasibility Study on unconventional renewable Hydropower Energy in Chile (Energía Renovable No Convencional Hidroeléctrica en Chile) | 03/07/2008 | Cross-check on investment costs |
| 49. | APEMEC A.G./KfW | Financial support agreement between APEMEC A.G. and KfW. | 21/04/2011 | |
| 50. | APEMEC A.G./KfW | First Amendment to financial support agreement between APEMEC A.G. and KfW. | 20/05/2011 | |
| 51. | UNEP Risoe | CDM Pipeline | March 2012 | Cross-check on operational hours |
| 52. | Bridge Builders | Generic CPA-DD of "Chilean Small Hydroelectric Power Plants Programme of Activities", Version 01 | 09/08/2011 | |
| 53. | Los Lagos Property | Property Registry in Los Lagos Property Registrar of the lands owned by | 13/07/2009 | |

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| Annex 2 | 19/07/2012 | Validation of the CDM Project "Chilean Small Hydroelectric Power Plants Programme of Activities" Information Reference List | Page 7 of 11 |  Industrie Service |
|---------|------------|---------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------------------------------------------------------------------------------------------------------|


| Ref. No. | Author/Editor/ Issuer | Title/Type of Document. Publication place | Issuance and/or submission date | Additional Information (Relevance in CDM Context) |
|----------|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|------------------------------------------------------------------------------|
| | Registrar | Hydrowac y Cía.(Authorized Copy) | 01/04/2010 | |
| 54. | APEMEC A.G./KfW | Contract for the purchase of certified emission reductions | 17/05/2011 | Starting date of the PoA |
| 55. | Los Lagos Property Registrar | Water Property Registry in Los Lagos Property Registrar of the Quimán River water flow owned by Hydrowac y Cía.(Authorized Copy) | 15/06/2009 | |
| 56. | Hydrowac y Cía. | Pertinence letter from Hydrowac to CONAMA (National Environmental Commitment) regarding the pertinence of the project to be presented in the Environmental Impact Assessment System. | 08/07/2011 | |
| 57. | CONAMA/SEIA | Response from CONAMA to Hydrowac Request regarding the necessity of the project to be submitted to the Environmental Impact Assessment System | 09/08/2011 | Environmental Impacts (confirmation that there is no need to develop an EIA) |
| 58. | UNFCCC | Attachment A of Appendix B of the Simplified modalities and procedures for small-scale CDM project activities | EB63 | |
| 59. | Bridge Builders | PoA-DD of "Chilean Small Hydroelectric Power Plants Programme of Activities", Version 02 | 13/12/2011 | PoA-DD for re-GSP |
| 60. | DNA Chile | Letter of Approval (DNA Chile) | 20/04/2012 | |
| 61. | El Mercurio online | http://www.edicionesespeciales.elmercurio.com/destacadas/detalle/index.asp?idnoticia=20101004512236&idcuerpo | Accessed on 13/03/2012 | |
| 62. | CORFO | Tender documents tender regarding the finalization of the CDM documentation of the PoA | 30/04/2009 | |
| 63. | Bridge Builders | CPA-DD of "Chilean Small Hydroelectric Power Plants Programme of Activities": CPA Title: Las Flores Hydroelectric Project, Version 02 | 13/12/2011 | PoA-CPA for re-GSP |
| 64. | Bridge Builders | PoA-DD of "Chilean Small Hydroelectric Power Plants Programme of Activities", Version 03 | 25/02/2012 | PoA-CPA for GSP |

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| Ref. No. | Author/Editor/ Issuer | Title/Type of Document. Publication place | Issuance and/or submission date | Additional Information (Relevance in CDM Context) |
|----------|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|---------------------------------------------------|
| 65. | Bridge Builders | CPA-DD of "Chilean Small Hydroelectric Power Plants Programme of Activities": CPA Title: Las Flores Hydroelectric Project, Version 03 | 25/02/2012 | PoA-CPA for re-GSP |
| 66. | CONSERVADOR DE BIENES RAICES LOS LAGOS (CBR) | Water rights, FS_ 29 N° 32 Ano 2009 | 15/06/2009 | |
| 67. | Grupo Saesa | Transmission grid connection feasibility study | July 2011 | |
| 68. | APEMEC A.G./HYDROWAC y COMPAÑIA | CPA contract (MoU) | 28/09/2011 | |
| 69. | Ministry of Economy, Promotion and Reconstruction | Article 174 of Decree with the force of Law N°4 | 12/05/2006 | Benchmark (10%) |
| 70. | Government Chile | First category income tax; http://www.sii.cl/aprenda_sobre_impuestos/impuestos/imp_directos.htm | 14/01/2011 | Income tax |
| 71. | Valgas Energia | Price projection study of Las Flores | November 2011 | |
| 72. | CNE | Technical Standard for Service Security and Quality; http://www.cne.cl/electricidad/seguridad/NT_de_SyCS.pdf | 16/05/2005 | |
| 73. | Ministry of Economy, Promotion and Reconstruction | NSEG 3 E.n71, technical Standards for Measurement Equipment; http://www.sec.cl/pls/portal/docs/PAGE/SECNORMATIVA/electricidad_no_rmastecnicas/NSEG3_71.pdf | Accessed in January 2012 | |
| 74. | General Direction of Water | Article 151-157 of the Code of Waters | na | Stakeholder consultation |
| 75. | UNFCCC | CDM Validation and Verification Manual; Version 01.2 | EB55 | |
| 76. | El Provincial | Publication of the extract in the newspaper "el provincial" | 15/11/2011 | Stakeholder consultation |

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| Annex 2 | 19/07/2012 | Validation of the CDM Project "Chilean Small Hydroelectric Power Plants Programme of Activities" Information Reference List | Page 9 of 11 |  Industrie Service |
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| Ref. No. | Author/Editor/ Issuer | Title/Type of Document. Publication place | Issuance and/or submission date | Additional Information (Relevance in CDM Context) |
|----------|------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|---------------------------------------------------|
| 77. | RADIO LAGO RANCO F.M.9G.9 | The radio broadcast was carried out at 10:00 am, 13:00 pm, and 16:00pm | 15/11/2011 | Stakeholder consultation |
| 78. | Pontt et al. | "Estudio de contribución de las ERNC al SIC al 2025: Energía Renovable No Convencional Hidroeléctrica en Chile" Universidad Técnica Federico Santa María: Santiago de Chile: http://www.neim.utfsm.cl/arch/20080808-06-Hidroelectricidad%20-%20Hidro.pdf | 03/07/2008 | |
| 79. | Servicio de Impuestos Internos (Chilean Tax Service) | Chilean standard equipment lifetime values for electricity generation projects http://www.sii.cl/documentos/resoluciones/2002/reso43.htm | 2002 | Cross-check on lifetime and residual value |
| 80. | Bridge Builders | PoA-DD of "Chilean Small Hydroelectric Power Plants Programme of Activities", Version 04 | 07/03/2012 | |
| 81. | Bridge Builders | Generic CPA-DD of "Chilean Small Hydroelectric Power Plants Programme of Activities", Version 04 | 07/03/2012 | |
| 82. | Bridge Builders | CPA-DD of "Chilean Small Hydroelectric Power Plants Programme of Activities": CPA Title: Las Flores Hydroelectric Project, Version 04 | 07/03/2012 | |
| 83. | Bridge Builders, APEMEC A.G. | PoA Capacity Building (August 22-25, 2011) | 12/01/2012 | |
| 84. | APEMEC A.G. | Chilean small hydroelectric power plants programme of activities – end user agreement between APEMEC and CPA implementer (template) | n.a. | Template |
| 85. | CORFO and Poch Ambiental | Contract to finalize the CDM documentation of the PoA | 28/09/2009 | |
| 86. | APEMEC A.G. | CPA Standard Memorandum of Understanding (Template) | n.a. | |
| 87. | APEMEC A.G., | EF Calculation 2010 Combined Margin (Revised Version) | February/2012 | Final emission reduction |

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| Annex 2 | 19/07/2012 | Validation of the CDM Project "Chilean Small Hydroelectric Power Plants Programme of Activities" Information Reference List | Page 10 of 11 |  Industrie Service |
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| Ref. No. | Author/Editor/ Issuer | Title/Type of Document. Publication place | Issuance and/or submission date | Additional Information (Relevance in CDM Context) |
|----------|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|---------------------------------------------------|
| | Bridge Builders | EF calculation 2010 Combines Margin (revised version after incompleteness) | July 2012 | calculation |
| 88. | CORFO, DEUMAN | Study on the voluntary carbon market (final) | December 2008 | |
| 89. | APEMEC, Bridge Builders | PoA Management and Monitoring System (Excel file) | 2012 | |
| 90. | Bridge Builders | Generic CPA-DD of "Chilean Small Hydroelectric Power Plants Programme of Activities", Version 02 | 13/12/2011 | |
| 91. | APEMEC A.G., Bridge Builders | Emission Reduction Calculation – Las Flores Project (Revised) | 2012 | |
| 92. | APEMEC A.G. | Sworn Declaration Template | n.a. | Template |
| 93. | International Energy Association | Renewable Energy Essentials | 2010 | Cross-check for investment costs and O&M costs |
| 94. | APEMEC A.G., HYDROWAC y COMPAÑIA | Hydrowac CPA Standard Contract | 20/12/2011 | |
| 95. | Chilean government | (Law 20257) to encourage the development of Non Conventional Renewable Energies (NCRE) (LEY-20257_01-ABR-2008) | 01/04/2008 | |
| 96. | HYDROWAC y COMPAÑIA | Sworn Declaration | 28/02/2012 | |
| 97. | UNFCCC | Submissions by DNAs for recommendation of microscale renewable energy technologies for automatic additionality (Chile); http://cdm.unfccc.int/DNA/submissions/index.html | 16/04/2012 | |

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| Annex 2 | 19/07/2012 | Validation of the CDM Project "Chilean Small Hydroelectric Power Plants Programme of Activities" Information Reference List | Page 11 of 11 |  Industrie Service |
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| Ref. No. | Author/Editor/ Issuer | Title/Type of Document. Publication place | Issuance and/or submission date | Additional Information (Relevance in CDM Context) |
|----------|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|---------------------------------------------------|
| 98. | Bridge Builders | PoA-DD of "Chilean Small Hydroelectric Power Plants Programme of Activities", Version 05 | 05/04/2012 | |
| 99. | Bridge Builders | Generic CPA-DD of "Chilean Small Hydroelectric Power Plants Programme of Activities", Version 03 | 25/02/2012 | |
| 100. | Bridge Builders | CPA-DD of "Chilean Small Hydroelectric Power Plants Programme of Activities": CPA Title: Las Flores Hydroelectric Project, Version 05 | 05/04/2012 | |
| 101. | APEMEC A.G. | Modalities of Communication | 03/05/2012 | |
| 102. | A. Damodaran | Country Risk Premium (CRP): http://www.stern.nyu.edu/~adamodar/pc/datasets/ctryprem.xls | 2011 | Benchmark |
| 103. | Bridge Builders | Generic CPA-DD of "Chilean Small Hydroelectric Power Plants Programme of Activities", Version 05 | 05/04/2012 | |
| 104. | Bridge Builders | PoA-DD of "Chilean Small Hydroelectric Power Plants Programme of Activities", Version 06 | 18/07/2012 | Final version after incompleteness |
| 105. | Bridge Builders | Generic CPA-DD of "Chilean Small Hydroelectric Power Plants Programme of Activities", Version 06 | 18/07/2012 | Final version after incompleteness |
| 106. | Bridge Builders | CPA-DD of "Chilean Small Hydroelectric Power Plants Programme of Activities": CPA Title: Las Flores Hydroelectric Project, Version 06 | 18/07/2012 | Final version after incompleteness |

Annex 3: Appointment Certificates



Industrie Service

CERTIFICATE OF APPOINTMENT

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

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

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

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

| Qualification in technical areas | |
|----------------------------------------------------|----------|
| Technical Area | Date |
| 1.2_Energy generation from renewable energy source | 07.04.11 |
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This appointment is valid for 1 year from its date of signature below and is bound by internal requirements of the Management System of the Certification Body "climate and energy" of TÜV SÜD Industrie Service GmbH.

In case of loss of validity of this certificate as per result of an assessment according internal procedures or due to any other reason, it will be properly communicated to you.

Your Certificate has the internal reference No. CMS-Z-0013/03.

| Date | Signature |
|--------------------------------|--------------------------------|
| 07.04.12 Extension of Validity | <i>[Handwritten Signature]</i> |
| | |
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Industrie Service

CERTIFICATE OF APPOINTMENT

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

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

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

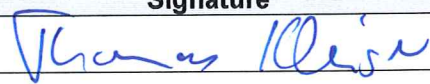
| Other qualification | | | | | |
|---------------------|----------|---|---|---|---|
| Country Expertise | | | | | |
| Region | 1 | 2 | 3 | 4 | 5 |
| Date | 23.03.11 | | | | |
| Financial Expertise | | | | | |
| Date | 23.03.11 | | | | |

| Qualification in technical areas | |
|----------------------------------------------------|----------|
| Technical Area | Date |
| 1.2_Energy generation from renewable energy source | 23.03.11 |
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This appointment is valid for 1 year from its date of signature below and is bound by internal requirements of the Management System of the Certification Body "climate and energy" of TÜV SÜD Industrie Service GmbH.

In case of loss of validity of this certificate as per result of an assessment according internal procedures or due to any other reason, it will be properly communicated to you.

Your Certificate has the internal reference No. CMS-Z-0015/02.

| Date | Signature |
|--------------------------------|--------------------------------------------------------------------------------------|
| 23.03.12 Extension of Validity |  |
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Industrie Service

CERTIFICATE OF APPOINTMENT

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

| Qualification applicable to | | | | | | |
|-----------------------------|----------|----|----|-----|-----|-------|
| Standard | CDM | JI | GS | VCS | VER | Other |
| Date | 07.04.11 | | | | | |

| Qualification as | | | | | | |
|------------------|---------|-----------|----------|-------------|--------------------|------------------|
| Status | Trainee | Validator | Verifier | Team Leader | Technical Reviewer | Technical Expert |
| Date | | 07.04.11 | 07.04.11 | | | |

| Other qualification | | | | | |
|---------------------|----------|----------|---|---|---|
| Country Expertise | | | | | |
| Region | 1 | 2 | 3 | 4 | 5 |
| Date | 07.04.11 | 07.04.11 | | | |
| Financial Expertise | | | | | |
| Date | | | | | |

| Qualification in technical areas | |
|----------------------------------------------------|----------|
| Technical Area | Date |
| 1.2_Energy generation from renewable energy source | 07.04.11 |
| 13.1_Waste handling and disposal | 07.04.11 |
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This appointment is valid for 1 year from its date of signature below and is bound by internal requirements of the Management System of the Certification Body "climate and energy" of TÜV SÜD Industrie Service GmbH.

In case of loss of validity of this certificate as per result of an assessment according internal procedures or due to any other reason, it will be properly communicated to you.

Your Certificate has the internal reference No. CMS-Z-0039/03.

| Date | Signature |
|--------------------------------|---------------------|
| 07.04.12 Extension of Validity | <i>Thomas Klein</i> |
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Industrie Service

CERTIFICATE OF APPOINTMENT

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

| Qualification applicable to | | | | | | |
|-----------------------------|----------|----|----|-----|-----|-------|
| Standard | CDM | JI | GS | VCS | VER | Other |
| Date | 07.09.11 | | | | | |

| Qualification as | | | | | | |
|------------------|---------|-----------|----------|-------------|--------------------|------------|
| Status | Trainee | Validator | Verifier | Team Leader | Technical Reviewer | PoA Expert |
| Date | | | | | | 07.09.11 |

| Other qualification | | | | | |
|---------------------|--------------------------------------|---|---|---|---|
| Country Expertise | | | | | |
| Region | 1 | 2 | 3 | 4 | 5 |
| Date | 07.09.11 | | | | |
| Further countries | Angola, Brazil, Portugal, Mozambique | | | | |
| Financial Expertise | | | | | |
| Date | 01.12.11 | | | | |

| Qualification in technical areas | |
|----------------------------------|------|
| Technical Area | Date |
| | |
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This appointment is valid for 1 year from its date of signature below and is bound by internal requirements of the Management System of the Certification Body "climate and energy" of TÜV SÜD Industrie Service GmbH.

In case of loss of validity of this certificate as per result of an assessment according internal procedures or due to any other reason, it will be properly communicated to you.

Your Certificate has the internal reference No. CMS-Z-001/0067.

| Date | Signature |
|----------|---------------------|
| 07.09.11 | <i>Thomas Klein</i> |
| 01.12.11 | <i>Thomas Klein</i> |
| | |
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| | |



Industrie Service

CERTIFICATE OF APPOINTMENT

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

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

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


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

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

This appointment is valid for 1 year from its date of signature below and is bound by internal requirements of the Management System of the Certification Body "climate and energy" of TÜV SÜD Industrie Service GmbH.

In case of loss of validity of this certificate as per result of an assessment according internal procedures or due to any other reason, it will be properly communicated to you.

Your Certificate has the internal reference No. CMS-Z-0001/06.

| Date | Signature |
|--------------------------------|--------------------------------------------------------------------------------------|
| 22.03.12 Extension of Validity |  |
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