



VALIDATION REPORT

For the CDM Project Activity

Cabo Leones Wind Farm

In
Chile

Report No. 01 997 9105070150

Version No. 04.1, 2013-09-13

Designated Operational Entity (DOE)

TÜV Rheinland (China) Ltd

Unit 707, AVIC Building, No. 10B, Central Road, East 3rd Ring Road,
Chaoyang District, Beijing 100022,
People's Republic of China.

Tel.: +86 10 65 66 66 60 (ext.169)

FAX: +86 1065 66 66 67

E-mail: doe@chn.tuv.com

I. Project description:

Project title:	Cabo Leones Wind Farm		Report No.: 01 997 9105070150
Host Country:	Chile		Current revision No.: 04.1
Methodology:	ACM0002, "Consolidated Methodology for Grid-Connected Electricity Generation from Renewable Sources", Version 13.0.0	<input checked="" type="checkbox"/> Large Scale <input type="checkbox"/> Small Scale	Date of current revision: 2013-09-13
			Date of first issue: 2013-04-02
Annual average emission reductions (estimate):			305,956 tCO ₂ e/y
GHG reducing measure/technology:	The project activity will deliver electricity to the grid by means of a renewable energy source, i.e. wind power. The wind farm will have an installed capacity of 170 MW with an estimated energy generation of 446,975 MWh/year that will be supplied to the Central Interconnected Electricity System (SIC1), avoiding the emission of 305,956 tCO ₂ e per year.		

Party	Project Participants	Party considered a project participant	Contract party
Chile (host)	Ibereólica Cabo Leones I S.A (private entity)	No	<input type="checkbox"/>
Chile (host)	Aprovechamientos Energéticos S.A. (private entity).	No	<input checked="" type="checkbox"/>

II. Validation Team:

Validation Team			Role									
Full name	Affiliation TÜV Rheinland	Appointed for Sectoral Scopes (Technical Areas)	Team leader	Acting Team Leader	Local Expert	Team Member (Auditor)	Technical Expert	Acting Tech. Expert	Trainee Auditor	Technical Reviewer	Expert to TR	Trainee TR
Arturo Lemus	Mexico	1.2/ 13.1	X		X		X					
Guadalupe Avendaño	Mexico	1.2/ 13.1				X						
Danae Diaz	Mexico	1.2, 13.1, 13.2								X		

Validation Phases	Validation Status
<input checked="" type="checkbox"/> Desk Review <input checked="" type="checkbox"/> Follow up interviews <input checked="" type="checkbox"/> Resolution of outstanding issues <input checked="" type="checkbox"/> Corrective Actions / Clarifications Requested	<input checked="" type="checkbox"/> Full Approval and Submission for Registration <input type="checkbox"/> Rejected

III. Validation Report:

Final approval	Released	Distribution
<input checked="" type="checkbox"/>	By: Mr. Henri Phan	<input type="checkbox"/> No distribution without permission from the Client or responsible organizational unit
Date: 2013-09-16		<input checked="" type="checkbox"/> Unrestricted distribution

Executive Summary – Validation Opinion

The validation team assigned by the DOE (TÜV Rheinland (China) Ltd.), here after called TRC, is been assigned by “Aprovechamientos Energéticos S.A.” to perform the validation of their project “**Cabo Leones Wind Farm**”. The validation was performed on the basis of UNFCCC criteria for the Clean Development Mechanism. The scope of the validation is defined as an independent and objective review of the project design document, the project’s baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against CDM Validation and Verification Standard (Version 04.0), Kyoto Protocol requirements, CDM Executive Board/UNFCCC rules.

The report is based on the assessment of the project design document undertaken through stakeholder consultations, application of standard auditing techniques including but not limited to document reviews, site visit, and stakeholder interviews, review of the applicable methodology and its underlying formulae and calculations.

Validation methodology and process

The validation has been performed as described in the VVS version 04.0 and constitutes the following steps:

- Publication of the PDD on the UNFCCC website (29/05/2012 – 27/06/2012).
- Desk review of the PDD and the relevant documents
- On-site assessment (10/07/2012 to 12/07/2012)
- Issuance of Validation Report

Validation criteria

The following CDM requirements have been considered:

- Article 12 of the Kyoto Protocol,
- Modalities and procedures for CDM (Marrakech Accords)
- Subsequent decisions by the COP/MOP and CDM Executive Board
- Host country criteria
- Criteria given to provide for consistent project operations, monitoring and reporting.

The host part is Chile which fulfils the participation criteria and has approved and authorized the project and the project participants. The DNA from Chile confirms that the project assists in achieving sustainable development.

The project correctly applies the baseline and monitoring methodology ACM0002, version 13.0.0, “Consolidated Methodology for Grid-Connected Electricity Generation from Renewable Sources”.

The project results in reductions of CO₂ emissions that are real, measurable and give long-term benefits to the mitigation of climate change. It is demonstrated that the project is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity.

The validation did not reveal any information that indicates that the project can be seen as a diversion of ODA funding towards” Chile”.

The monitoring plan provides for the monitoring of the project’s emission reductions. The monitoring arrangements described in the monitoring plan are feasible within the project design and it is TRC’s opinion that the project participants are able to implement the monitoring plan.

By fossil fuel consumption displacement through Wind Power Energy Generation the project activity will result in reductions of greenhouse gas (GHG) emissions that are real, measurable and give long-term benefits to the mitigation of climate change.

The total emission reductions from the project are estimated to be (2,141,692) t of CO₂e over a (seven) year crediting period, averaging (305,956) t of CO₂e annually. The emission reduction forecast has been checked and it is deemed likely that the stated amount is achieved given the underlying assumptions do not alter.

The validation protocol describes total of (39) findings which include:

- (27) Corrective Action Requests (CARs);
- (11) Clarification Requests (CLs);
- (1) Forward Action Requests (FARs).

All findings have been closed satisfactorily and the highlight issues to the project implementation in FARs will be verified during the first verification of the project activity

TRC concludes that the CDM Project Activity “Cabo Leones Wind Farm” in Chile, as described in the PDD (version 8, dated on 25/08/2013), meets all relevant requirements of the UNFCCC for CDM project activities including article 12 of the Kyoto Protocol, the modalities and procedures for CDM (Marrakesh Accords) and the subsequent decisions by the COP/MOP and CDM Executive Board.

The selected baseline and monitoring methodologies (ACM0002, Version 13.0.0) are applicable to the project and correctly applied. The TRC therefore requests the registration of the project as a CDM project activity with UNFCCC.

Arturo Lemus (Team Leader)



TÜV Rheinland Mexico
Mexico, 2013-09-13

Mr. Henri Phan
(DOE/AIE Manager)



TÜV Rheinland (China) Ltd.
Beijing, 2013-09-16

Abbreviations

BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM EB	CDM Executive Board
CDM PCP	Clean Development Mechanism Project Cycle Procedure
CDM PS	Clean Development Mechanism Project Standard
CDM VVS	CDM Validation and Verification Standard
CER	Certified Emission Reduction(s)
CH ₄	Methane
CDEC-SIC	Center for Economic Load Dispatch Central Interconnected Electricity System
CL	Clarification request
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
CM	Combined Margin
DNA	Designated National Authority
DOE	Designated operational entity
EIA	Environmental Impact Assessment
FAR	Forward Action Request
FSR	Feasibility Study Report
GHG	Greenhouse gas (es)
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
LoA	Letter of approval
MoC	Modalities of Communication
NGO	Non-governmental Organization
ODA	Official Development Assistance
OM	Operating Margin
PDD	Project Design Document
PP	Project Participant
tCO ₂ e	Tonnes of CO ₂ equivalents
TRC	TÜV Rheinland (China) Ltd.
SIC	Central Interconnected Electricity System
UNFCCC	United Nations Framework Convention on Climate Change
GWP	Global Warming Potential

TABLE OF CONTENTS

1	Introduction	7
1.1	Objective	7
1.2	Scope	7
2	Methodology	8
2.1	Desk Review of the Project Design Documentation	8
2.2	Follow-up Interviews with Project Stakeholders	10
2.3	Resolution of Outstanding Issues	12
2.4	Internal Quality Control	14
2.5	Validation Team	14
3	validation Findings	14
3.1	Approval and Participation	14
3.2	Project Design Document	15
3.3	Project Description	16
3.4	Baseline and Monitoring Methodology	20
3.5	Additionality	28
3.6	Monitoring	48
3.7	Sustainable Development	50
3.8	Environmental Impacts	51
3.9	Local Stakeholder Consultation	52
3.10	Comments by Parties, Stakeholders and NGOs	52

Appendix A: Validation Protocol

Appendix B: Certificates of Competence

1. Introduction:

The organization “Aprovechamientos Energéticos S.A” has commissioned the DOE TÜV Rheinland (China) Ltd. to perform a validation of the CDM Project Activity “**Cabo Leones Wind Farm**” in Chile (hereafter called “the project”). This report summarises the findings of the validation of the project, performed on the basis of UNFCCC criteria for the CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting. The term “UNFCCC criteria” refers to Article 12 of the Kyoto Protocol, the CDM modalities and procedures or the simplified modalities and procedures for small-scale CDM project activities (as applicable) and the subsequent decisions by the CDM Executive Board.

1.1 Objective:

The purpose of a validation is to have an independent, professional, ethical and fair third party assessment of the project design. In particular, the project's baseline, monitoring plan, and the project's compliance with relevant UNFCCC and host Party criteria are validated in order to confirm that the project design, as documented, is sound and reasonable and meets the identified criteria. Validation is a requirement for all CDM projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of certified emission reductions (CERs).

1.2 Scope:

The validation scope is defined as an independent and objective review of the project design document (PDD). The PDD is reviewed against the relevant criteria (see above) and decisions by the CDM Executive Board, including the approved baseline and monitoring methodology. The validation team has, based on the recommendations in the Validation and Verification Standard employed (latest version) a risk-based approach, focusing on the identification of significant risks for project implementation and the generation of CERs. The validation is not meant to provide any consulting towards the project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the project design.

While carrying out the validation, TRC determines if the project activity complies with the requirements of Para 37 of the CDM M&P and also assess the claims and assumptions made in the PDD without limitation on the information provided by the project participants.

The scope of the validation is:

- To apply TRC's own quality management system integrated with the VVS standard along with the recent decisions and guidance provided by the UNFCCC board to determine if the project activity meets all applicable CDM requirements, including those specified in the project standard /6/, relevant methodologies, tools and guidelines and processing the same with CDM project cycle procedure;
- Asses the accuracy, conservativeness, relevance, completeness, consistency and transparency of the information provided by the project participants;
- Determine whether information provided by the project participants are reliable and credible;
- Present information in the form of validation report in a factual, neutral, coherent manner and document all assumptions, provide references to the background material and identify changes made to the documentation;
- Base the findings and conclusions on objective evidence and conduct all validation in accordance with CDM rules and procedures;
- Apply consistent validation criteria in providing expert judgments to the requirements of applicable approved methodologies, tools and also cross check the same with projects of similar characteristics, technology, time period and region; and
- Safeguard the confidentiality of all information's obtained or created during validation.
- Where sampling is involved, the standard for sampling and surveys are applied.

2. Methodology:

The validation consists of the following four phases:

- I A desk review of the project design documents
 - Publication of PDD in UNFCCC for global stakeholder consultation;
 - A review of data and information;
 - Cross checking between information provided in PDD with all necessary means without limitations to the information provided by the project proponent;
- II On-site visit and follow-up interviews with project stakeholders
 - Interviews with relevant stakeholders in host country with personnel's having knowledge with the project development via telephone, email or direct on-site visits;
 - Cross checking between information provided by interviewed personnel with all necessary means without limitations to the information provided by the project proponent;
- III Reference to available information's relating to projects or technologies similar projects under validation and review based on the approved methodology being applied of the appropriateness of formulae and accuracy of calculations.
- IV The resolution of outstanding issues and the issuance of the final validation report and opinion.

The following sections outline each step in more detail.

2.1 Desk Review of the Project Design Documentation:

The following table outlines the documentation reviewed during the validation:

Ref no.	Reference Document
/1/	GSP-PDD – Cabo Leones Wind Farm, Version 1, dated on 09/05/2012
/2/	Final PDD - Cabo Leones Wind Farm, Version 8, dated on 25/08/2013
/3/	Host Country Approval / Letter of Approval: Chile, DNA(Ministry of Environment of Chile), #124455 / (without version number), dated on 03/12/2012
/4/	MoC Modalities of Communication Statement, version 02.1, dated on 13/11/2012
/5/	Clean Development Mechanism Validation and Verification Standard (version 04.0) http://cdm.unfccc.int/Reference/Standards/index.html
/6/	Clean Development Mechanism Project Standard (version 04.0) http://cdm.unfccc.int/Reference/Standards/index.html Clean Development Mechanism Project Cycle procedure (version 04.0) http://cdm.unfccc.int/Reference/Procedures/index.html#proj_cycle Glossary of CDM terms version 07
/7/	CDM-PDD - Project Design Document form, Version 04.1 http://cdm.unfccc.int/Reference/PDDs_Forms/index.html#ls Guidelines for completing the project design document (CDM-PDD) (version 01.0) http://cdm.unfccc.int/Reference/Guidclarif/index.html#pdd
/8/	Approved consolidated baseline and monitoring methodology: ACM0002, version 13.0.0 http://cdm.unfccc.int/methodologies/DB/UB3431UT915KN2MUL2FGZXZ6CV71LT “Consolidated baseline methodology for grid-connected electricity generation from renewable sources”.
/9/	UNFCCC “Tool for the demonstration and assessment of additionality” version 07.0.0 EB 70, dated on 23/11/2012. http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v7.0.0.pdf
/10/	UNFCCC “Tool to calculate the emission factor for an electricity system” version 03.0.0 EB 70, dated on 23/11/2012. http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v3.0.0.pdf
/11/	UNFCCC “Tool to calculate project or leakage CO2 emissions from fossil fuel combustion” version 02, EB 41 dated on 02/08/2008. http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-03-v2.pdf
/12/	UNFCCC “Combined tool to identify the baseline scenario and demonstrate additionality” version 05.0.0 EB 70, dated on 23/11/2012. http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-02-v5.0.0.pdf

/13/	Cabo Leones EF and ER ex-ante estimations spread sheet, (without version number), dated on 02/04/2013
/14/	2001-2010 CDEC-SIC Operation Statistics Yearbook 2001-2010 (http://www.cdec.cl/datos/anuario2011/espanol/index.html), (https://www.cdec-sic.cl/contenido_es.php?categoria_id=4&contenido_id=000034), (https://www.cdec-sic.cl/contenido_es.php?categoria_id=6&contenido_id=000044), CDEC-SIC Central Interconnected Electric System Load Economic Dispatch Center.
/15/	National Energy Balance, 2009 (http://www.cne.cl/estadisticas/balances-energeticos) Identified power plants: http://www.cne.cl/estadisticas/energia/electricidad
/16/	CDEC- SIC Central Interconnected Electric System Load Economic Dispatch Center hourly generation 2008.
/17/	CDEC- SIC Central Interconnected Electric System Load Economic Dispatch Center hourly generation 2009.
/18/	CDEC- SIC Central Interconnected Electric System Load Economic Dispatch Center hourly generation 2010.
/19/	Cabo Leones Wind Farm Financial model spread sheet, (without version number), dated on 22/05/2013.
/20/	Cabo Leones Evidences of CER prices and exchange rates, provided by Point Carbon (http://www.pointcarbon.com/news/marketdata/euets/forward/eua/), (without version number), gathered between 13/06/2011 and 12/12/2011 (date of investment decision of Cabo Leones Wind Farm).
/21/	Cabo Leones Wind Farm Wind Resource Study, provided by Altermia, dated on 18/05/2011.
/22/	Decommissioning plan- Residual value estimation, prepared by American Consulting Professionals of New York, dated on 12/08/2008.
/23/	Electricity price based on the CDEC- SIC Central Interconnected Electric System Load Economic Dispatch Center, average price 2009- 2010 Marginal Costs in Maitencillo.
/24/	Evidence for Interest Rate, provided by BBVA- Madrid treasury, dated on 24/11/2011.
/25/	Evidence for SWAP Rate, provided by the bank BBVA period 15/06/2011 to 15/12/2011.
/26/	CDEC-SIC Central Interconnected Electric System Load Economic Dispatch Center: "Transmission calculation year 2010". Annex 3 Table A3-3. Based on Average 2010 Data of Paposo 220 substation.
/27/	Lifetime GAMESA G97 2MW DNV TYPe Certificate, issued date 30/03/2012.
/28/	Operation and maintenance costs GAMESA O&M OFFER, issued on 01/12/2011.
/29/	Land Lease Contract, between Aprovechamientos Energeticos S.A. and Agrícola Konavle Limitada issued on 07/06/2011.
/30/	Management technical operation OFERTA ING. PROPIEDAD, D.I.OBRA Y GESTION TECNICA (Engineering Offer. Property, Construction and technical management), issued on 17/11/2011.
/31/	Amortisation Period Exempt Resolution Nr. 43 from 26th December 2002, concept "Electrical equipment used for the generation". http://www.sii.cl/documentos/resoluciones/2002/reso43.htm
/32/	Wind farm civil and electric works "WIND TURBINES AND EPC GAMESA OFFER" dated on 01/12/2011.
/33/	Project Performance of Cabo Leones Wind Farm, presented by Aprovechamientos Energéticos JG, SL; and owned Ibereólica Cabo Leones I, S.L. issued on June 2012.
/34/	Addendum contract EPC Cabo Leones wind farm I 120927 signed and dated on 27/09/2012.
/35/	Electricity Price at starting date Sector Electrical Report by System Engineering and Designs, dated on April 2012.
/36/	Contract EPC Cabo Leones Wind Farm, signed on 04/06/2012.
/37/	Contract O&M Cabo Leones Wind Farm, signed 04/06/2012.
/38/	Residual value_Decommissioning Plan for the Marble River Wind Farm_ p1 (3), (without version number and date).
/39/	Invitation and Questionnaires to stakeholder meeting at Freirina celebrated on 30/01/2012.
/40/	Invitation and questionnaires to stakeholder meeting at Chañaral de Aceituno village, celebrated on 31/01/2012.
/41/	Contract with Garrigues Medio Ambiente consultant company for carrying out the project

	(Time of investment decision) , issued on 12/12/2011.
/42/	Interconnection Agreement with Transelec, issued on 12/09/2011.
/43/	Declaration of the Environmental Impact Assessment developed by AGEA, dated on September 2011. Studies included Annex 2 Environmental Characterization, Annex 3 Landscape assessment, Annex 4 Noise Assessment, Annex 5 Emissions estimation, Annex 6 Archaeology, Annex 7 Archaeological assessment, Annex 8 Plant wastewater treatment, Annex 9 Flora management and Annex 10 consultancy in management and environment.
/44/	Favourable Environmental Assessment Qualification Resolution, issued by Republic of Chile dated on 21/03/2012.
/45/	Cabo Leones Wind Farm Lay out, prepared by Ibereólica, issued on 02/06/2012.
/46/	Evidence Transmission line length, prepared by Ibereólica, issued on November 2011.
/47/	Transmissions losses calculation, prepared by Ibereólica, without date and version.
/48/	Project planning, prepared by Ibereólica, version 1, dated on 14/11/2012. Version 02, updated on 01/08/2013
/49/	Cabo Leones Wind farm coordinates prepared by Ibereólica, issued on 19.03.2013
/50/	Authenticity of the LoA was confirmed through e-mail from the Ministry of Environment of Chile, dated on 04/04/2013.
/51/	UNFCCC Guidelines on the assessment of investment analysis” version 05 http://cdm.unfccc.int/Reference/Guidclarif/reg/reg_guid03.pdf
/52/	Manual procedures for metering and monitoring systems at CDEC-SIC(Central Interconnected Electric System Load Economic Dispatch Center), without version, dated on July 2000.
/53/	Technical Norms about meters NSEG3_71, from Ministry of Economy, Development and Reconstruction, starting on 22/06/1925.
/54/	IPCC. Guidelines on National GHG Inventories, 2006 Chapter 1 of Vol. 2 (Energy) http://www.ipcc-nggip.iges.or.jp/public/2006gl/index.html
/55/	CDEC –SING, “Marginal Costs of Energy”, http://cdec2.cdec-sing.cl/pls/portal/cdec.pck_rpt_cne_pub.rpt_prom_cmg_mensual
/56/	Public Information, “Shortage of gas in Chile”, version N/A, Dated on 2004. http://en.wikipedia.org/wiki/2004_Argentine_energy_crisis http://www.agnchile.cl/prontus_agn/site/artic/20081126/pags/20081126205330.html
/57/	Contract with the selected DOE TRM, dated on 23/05/2012.
/58/	First contact with Garrigues Medio Ambiente consultant company for carrying out the project’s PDD, dated on 23/09/2011.
/59/	Internal tax services article 20 Income tax law, from Internal services of tax in Chile, based on the following link web site (http://www.sii.cl/aprenda_sobre_impuestos/impuestos/imp_directos.htm#o2p1).
/60/	UNFCCC Guidelines on the demonstration and assessment of prior consideration of the CDM (version 4.0), EB annex 13.
/61/	Santa Maria de Nieva Term sheet, issued by the Bank BBVA dated on 31/10/2011.
/62/	CDEC-SIC: “Cálculo de Peajes por el Sistema de Transmisión Troncal Año 2010”. Annex 3 Table A3-3. Based on Average 2010 Data of Paposo 220 substation.
/63/	UNFCCC Guidelines on Common Practice, EB 69 annex 8 dated on 13/09/2012. http://cdm.unfccc.int/Reference/Guidclarif/meth/meth_guid44.pdf

2.2. Follow-up Interviews with Project Stakeholders:

TÜV Rheinland validation team carried out an on-site visit from 10/07/2012 – 12/07/2012 and performed interviews with the project representatives and stakeholders. The site visit was conducted to validate the accuracy and completeness of the project description as specified under webhosted PDD.

During the site visit, the validation team reviewed the available project activity designs, feasibility studies, and documentation check and comparison analysis with equivalent projects as appropriate.

Prior to the interview salient points to be discussed were planned. Date of interview, interviewee and points discussed are given in the following table.

	Date	Name	Organization	Topic
/i/	11/07/2012	Antonio Fernández	Technical Director / Ibereólica	<ul style="list-style-type: none"> ✓ General description of the Project activity ✓ Technology to be applied ✓ Financial and financial evaluation. ✓ CDM prior consideration ✓ Application of the baseline and monitoring methodology ✓ Description of the baseline scenario ✓ Additionality ✓ Emission reductions formulae and calculations ✓ Monitoring parameters ✓ Monitoring plan ✓ Duration of project activity ✓ Environmental issues. Stakeholders consultation
/ii/	11/07/2012	Víctor M. López-Tola	Marketing Director/ Ibereólica	<ul style="list-style-type: none"> ✓ General description of the Project activity ✓ Technology to be applied ✓ Financial and financial evaluation. ✓ CDM prior consideration ✓ Application of the baseline and monitoring methodology ✓ Description of the baseline scenario ✓ Additionality ✓ Emission reductions formulae and calculations ✓ Monitoring parameters ✓ Monitoring plan ✓ Duration of project activity ✓ Environmental issues. Stakeholders consultation
/iii/	11/07/2012	Cristián Arévalo Leal	General Manager	<ul style="list-style-type: none"> ✓ General description of the Project activity ✓ Technology to be applied ✓ Environmental issues. ✓ Stakeholders consultation
/iv/	04/04/2013	Andrea Rudnick	Ministry of Environment of Chile	Authenticity of the LoA was confirmed through e-mail from the Ministry of Environment of Chile, dated on 04/04/2013 /50/.

Validation Team considered the views obtained in these interviews while arriving at Validation Opinion.

2.3 Resolution of Outstanding Issues:

The objective of this phase of the validation is to resolve any outstanding issues (issues that require further elaboration, research or expansion) which need be clarified prior to TÜV Rheinland's positive conclusion on the project design. In order to ensure transparency a validation protocol is customized for the project. The protocol shows in transparent manner criteria (requirements), means of validation and the results from validating the identified criteria. The validation protocol serves the following purposes:

- It organizes, details and clarifies the requirements a CDM project is expected to meet CDM requirements;
- It ensures a transparent validation process where the validator will document how a particular requirement has been validated and the result of the validation.
- It ensures that the issues are accurately identified, formulated, discussed and concluded in the validation report.
- It ensures the determination of achieving credible emission reductions from the project activity.

The validation protocol consists of three tables. The different columns in these tables are described in the figure below. The completed validation protocol for this project is enclosed in Appendix A to this report.

Findings established during the validation can either be seen as a non-fulfilment of CDM criteria or where a risk to the fulfilment of project objectives is identified. Corrective action requests (CAR) are issued, where:

- Mistakes have been made with a direct influence the ability of the project activity to achieve on project results like real, measurable, verifiable and additional emission reductions;
- CDM and/or methodology specific requirements have not been met; or
- There is a risk that the project would not be accepted as a CDM project or that emission reductions will not be certified.

A request for clarification (CL) may be used where additional information is needed to fully clarify an issue.

A forward action request (FAR) is raised during validation to highlight issues related to project implementation that require review during the first verification of the project activity. FARs shall not relate to the CDM requirements for registration.

Validation Protocol Table 1: Validation requirements				
Checklist Question	Reference	Means of Validation (MoV)	Comment	Draft and/or Final Conclusion
The various UNFCCC requirements as specified in the VVS are linked to checklist questions the project should meet. The checklist is organized in different sections, following the logic of the VVS.	Gives reference to documents where the answer to the checklist question or item is found.	Explains how conformance with the checklist question is investigated. Examples of means of validation are document review (DR) or interview (I). N/A means not applicable.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence provided (OK), or a corrective action request (CAR) due to non-compliance with the checklist question (See below). A request for clarification (CL) is used when the validation team has identified a need for further clarification.

Validation Protocol Table 2: List of Requests for Corrective Action (CAR) and Clarification (CL)			
Draft report clarifications and corrective action requests	Ref. to checklist question in table 2	Summary of project owner response	Validation conclusion
If the conclusions from the draft Validation are either a CAR or a CL, these should be listed in this section.	Reference to the checklist question number in Table 2 where the CAR or CL is explained.	The responses given by the project participants during the communications with the validation team should be summarized in this section.	This section should summaries the validation team's responses and final conclusions. The conclusions should also be included in Table 2, under "Final Conclusion".

Table 3: List of forward action requests (FARs)			
FAR number	Reference	Summary of project owner response	Validation team conclusion
Forward action request (FAR) to be raised during validation to highlight issues related To project implementation that requires review during the first verification of the project activity. FARs Shall not relate to the CDM requirements for registration.	Reference to the checklist question number in Table 2 where the CAR or CL is explained.	The responses given by the project participants during the communications with the validation team should be summarized in this section.	This section should summaries the validation team's responses and final conclusions. The conclusions should also be included in Table 2, under "Final Conclusion".

Figure 1. Validation protocol tables

2.4 Internal Quality Control:

The final validation report underwent a technical review by a qualified independent reviewer before requesting registration of the project activity. The technical review was performed by a technical reviewer qualified in accordance with TÜV Rheinland's qualification scheme for CDM validation and verification that meets the criteria of EB guidelines for qualification.

2.5 Validation Team:

Before the assessment begins, members of the validation team are ensured to cover the technical area(s), sectoral scope(s) and relevant host country experience including local language ability for evaluating the CDM project activity. The qualification of the team is as per the criteria defined by the EB guidelines for qualification.

Validation Team			Type of Involvement						
Full name	Affiliation TÜV Rheinland	Appointed for Sectoral Scopes (Technical Areas)	Supervising the work	Desk review	Site Visit + Interview	Report and protocol Writing	Technical Expert Input	Reporting Support	Technical Reviewer
Arturo Lemus	Mexico	1.2/ 13.1	X	X	X	X			
Guadalupe Avendaño	Mexico	1.2/ 13.1						X	
Danae Diaz	Mexico	1.2, 13.1, 13.2							X

3. Validation Findings:

The findings of the validation are stated in the following sections. The validation criteria (requirements), the means of validation and the results from validating the identified criteria are documented in more detail in the validation protocol in Appendix A.

The final validation findings relate to the project design as documented and described in the revised and resubmitted project design documentation.

3.1 Approval and Participation:

3.1.1 Letter of Approval:

The CDM project activity involves two parties: Ibereólica Cabo Leones I S.A and Aprovechamientos Energéticos S.A. from the host party (Chile).

Validating DOE has received the Letter of Approval /3/ which was provided by project participant as part of the desk review process.

The Letter of Approval was validated and confirmed through email communication dated on 04/04/2013 with the DNA personnel (Andrea Rudnick Ministry of Environment of Chile) /50/. After the validation the LoA is considered to be valid for the CDM project activity

The below table summarizes the project participants and parties involved. The authenticity of the letters of approval has been validated by TÜV Rheinland validation team.

These LoA(s) are therefore regarded as valid and meeting the requirements.

Project participants	Ibereólica Cabo Leones I S.A and Aprovechamientos Energéticos S.A.
Parties involved	Chile
APPROVAL	
LoA received	Yes
Date of LoA	03/12/2012
Reference to document	#124455
LoA received from	PP /DNA
Validation of authenticity	By e-mail from DNA /50/
Validity of LoA	Valid
PARTICIPATION	
Party is party to Kyoto Protocol	Yes
Voluntary participation	Yes
Diversion of official development aid towards host country	No
Project contribution to Sustainable Development	Yes

The validation team confirms that the information related to the letter of approval as mentioned in the above table is authentic. The validation team has confirmed the same through email communication dated on 02/04/2013 with the DNA personnel (Andrea Rudnick Ministry of Environment of Chile) /50/. The entire project participants listed in the tabular form of the PDD have obtained the letter of approval from their respective DNA.

3.1.2 Modalities of Communications:

Requirement of MOC	Criteria fulfilled	Determination by the validation team
Is the focal point identified	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Aprovechamientos Energéticos S.A. has been identified as the focal point in the MoC /4/ for: <ol style="list-style-type: none"> Authority to instruct the secretariat and communicate with the CDM EB on allocation/forwarding of CERs; Authority to request the addition of project participants and/or to communicate any voluntary withdraw and to update contact details of project participants (includes changes in company's name and legal status, addressed, etc.) Communication with the secretariat and the CDM EB on matters related to registration and/or issuance.
Is the MOC signed by all project participant (including focal point identified entity/personal)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Yes, the MoC is signed by all project point included.
Is the written confirmation obtained by the PP's stating the authorization, specimen signatures and personal details, employment status are valid and accurate?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	As per "Procedures for Modalities of Communication between Project participants and the Executive Board", the PP has provided an authenticated handwritten signature accompanied by a company stamp /4/.
Is MOC received by the validation team from the PP with whom DOE has the contractual relationship?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Yes, the MoC was received from the contractual entity.

The validation team confirms that the applicable latest template is been employed by the project participant for the MOC. The MOC is been received from the DOE's contractual project participant. All the personal who have duly signed the MOC are been confirmed from the written communication by the project proponent regarding their personal identity, specimen signatures and employment status.

Since there is any annex I party included as project participant, the validation team can confirm that the project activity is not receiving public funding, as indicated in section A.5 of the PDD.

3.2 Project Design Document:

The Project Design Document is based on the currently valid PDD template and is completed in accordance with the applicable guidance document /7/.

Name	Version	Date	CDM Relevance
PDD – Cabo Leones Wind Farm	1	09/05/2012	GSP PDD /1/
PDD – Cabo Leones Wind Farm	2	27/09/2012	PDD addressing first round CARs and CLs.
PDD – Cabo Leones Wind Farm	3	15/11/2012	PDD addressing second round CARs and CLs.
PDD – Cabo Leones Wind Farm	4	06/02/2013	PDD addressing third round CARs and CLs.
PDD – Cabo Leones Wind Farm	5	22/02/2013	PDD addressing fourth round CARs and CLs.
PDD – Cabo Leones Wind Farm	6	08/04/2013	PDD addressing fifth round CARs and CLs
PDD – Cabo Leones Wind Farm	7	22/05/2013	PDD addressing sixth round CARs and CLs
PDD – Cabo Leones Wind Farm	8	25/08/2013	Final Version

3.3 Project Description:

The project activity will be a power generation facility of 170 MW and a net average annual grid-connected power generation of 446,975 MWh. The electricity generated by the proposed project will be supplied to the Central Interconnected Electricity System (SIC), based in wind power technology which will be operated by “Aprovechamientos Energéticos S.A”. The wind turbines will be Gamesa G97 type (of 78 metres of hub height and rotor diameter 97 m), with an installed capacity of 2 MW /27/.

The 170 MW will be evacuated by a new 54 km long 220 kV transmission line, from the Project to the SET Domeyko substation /46/.

The minimum expected operational lifetime of the Gamesa G97 wind turbines is 20 years. The equivalent annual full load hours are 2,678, based on the Lifetime GAMESA G97 2MW DNV TYPe Certificate, issued on 30/03/2012 /27/.

As per “Guidelines for the Reporting and Validation of Plant load Factor, it has been set ex-ante according to option (b) “the plant load factor determined by a third party contracted by the project participants (e.g. an engineering company)”. According to the Wind Resource Study, provided by Altermia Asesores company engineering company in its feasibility study, the estimated load factor is 30.6%., dated on 18/05/2011 /21/.

This entity has considered an Operation and Maintenance Department that will be responsible of the proper operation and maintenance of the project activity. The project activity will be located in Huasco province, in 3rd Region of Atacama, in the North of Chile.

The geographical coordinates of the wind turbines are presented in decimal format with +/- sign and precision of almost 4 decimals in the following table /49/:

Vertex	Longitude	Latitude
1	-71.4170	-28.9119

2	-71.4179	-28.9490
3	-71.4694	-28.9481
4	-71.4685	-28.9110
Geometrical middle/center point	-71.4432	-28.9300

Specific coordinates of Wind Turbine Generators are included in the following table:

Turbine	Longitude	Latitude
AE 1	-71.4673	-28.9439
AE 2	-71.4644	-28.9440
AE 3	-71.4613	-28.9441
AE 4	-71.4583	-28.9441
AE 5	-71.4552	-28.9442
AE 6	-71.4521	-28.9442
AE 7	-71.4490	-28.9443
AE 8	-71.4460	-28.9443
AE 9	-71.4429	-28.9444
AE 10	-71.4398	-28.9444
AE 11	-71.4367	-28.9445
AE 12	-71.4337	-28.9446
AE 13	-71.4306	-28.9446
AE 14	-71.4275	-28.9447
AE 15	-71.4244	-28.9447
AE 16	-71.4214	-28.9448
AE 17	-71.4183	-28.9448
AE 18	-71.4673	-28.9358
AE 19	-71.4642	-28.9359
AE 20	-71.4611	-28.9359
AE 21	-71.4581	-28.9360
AE 22	-71.4550	-28.9361
AE 23	-71.4519	-28.9361
AE 24	-71.4488	-28.9362
AE 25	-71.4458	-28.9362
AE 26	-71.4427	-28.9363
AE 27	-71.4396	-28.9363
AE 28	-71.4365	-28.9364
AE 29	-71.4335	-28.9364
AE 30	-71.4304	-28.9365
AE 31	-71.4273	-28.9366
AE 32	-71.4242	-28.9366
AE 33	-71.4212	-28.9367
AE 34	-71.4181	-28.9367
AE 35	-71.4671	-28.9277
AE 36	-71.4640	-28.9278
AE 37	-71.4610	-28.9278
AE 38	-71.4579	-28.9279
AE 39	-71.4548	-28.9279
AE 40	-71.4517	-28.9280
AE 41	-71.4487	-28.9280
AE 42	-71.4456	-28.9281
AE 43	-71.4425	-28.9282
AE 44	-71.4394	-28.9282
AE 45	-71.4363	-28.9283
AE 46	-71.4333	-28.9283
AE 47	-71.4302	-28.9284
AE 48	-71.4271	-28.9284
AE 49	-71.4240	-28.9285
AE 50	-71.4210	-28.9286
AE 51	-71.4179	-28.9286

AE 52	-71.4669	-28.9196
AE 53	-71.4638	-28.9197
AE 54	-71.4608	-28.9197
AE 55	-71.4577	-28.9198
AE 56	-71.4546	-28.9198
AE 57	-71.4515	-28.9199
AE 58	-71.4485	-28.9199
AE 59	-71.4454	-28.9200
AE 60	-71.4423	-28.9200
AE 61	-71.4392	-28.9201
AE 62	-71.4362	-28.9202
AE 63	-71.4331	-28.9202
AE 64	-71.4300	-28.9203
AE 65	-71.4269	-28.9203
AE 66	-71.4239	-28.9204
AE 67	-71.4208	-28.9204
AE 68	-71.4177	-28.9205
AE 69	-71.4667	-28.9115
AE 70	-71.4636	-28.9115
AE 71	-71.4606	-28.9116
AE 72	-71.4575	-28.9116
AE 73	-71.4544	-28.9117
AE 74	-71.4513	-28.9118
AE 75	-71.4483	-28.9118
AE 76	-71.4452	-28.9119
AE 77	-71.4421	-28.9119
AE 78	-71.4390	-28.9120
AE 79	-71.4360	-28.9120
AE 80	-71.4329	-28.9121
AE 81	-71.4298	-28.9122
AE 82	-71.4267	-28.9122
AE 83	-71.4237	-28.9123
AE 84	-71.4206	-28.9123
AE 85	-71.4175	-28.9124

The coordinates of the measurements tower (North tower) are presented in the following table:

Longitud	Latitude
-71.4458	-28.9019

The project activity description has been validated by means of a site visit carried out to the place where the activity will be constructed and implemented as well as by means of a technical assessment of the technology that will be used in the implementation of the facility. The assessment was carried out by checking Management technical operation “Oferta Ing. Propiedad, D.I. .Obra y Gestion Tecnica (*Engineering Offer. Property, Construction and technical management*), issued on 17/11/2011 /30/, and the technical description of the wind turbines that will be used in the project activity /27/.

The project duration has been considered to be the same of the project lifetime: 20 years. The crediting time has been set as a renewable seven years period starting in 01/11/2014 or the day after the project has been registered, whichever the latest. The lifetime was validated and cross-checked by means of the technical brochure /27/ and the financial model provided by the project participant /19/. The former considers 20 years of duration in the project activity financial model and the later states that the lifetime of the turbines is 20 years.

It is TÜV Rheinland’s opinion that the project description in section A.1 of the PDD has been sufficiently and accurately described.

Starting date of project	Expected project operational lifetime	Crediting period
30/10/2013 (estimated date when the final wind turbines supply contract will be signed).	20 years	Seven years renewable

Herewith, the Validation Team summarizes major changes between webhosted PDD and final version of PDD for submission as follows:

Subject	Webhosted PDD	Correction to webhosted PDD in the final PDD submission for registration with DOE assessment and reason of acceptance.
PDD (project title / participants involved/ project location /project technology etc.)	- Project Technology: Estimated load factor was incorrectly stated and the long transmission line was missing in the GSP-PDD /1/.	- Estimated load factor has been updated as per Cabo Leones Wind Farm Wind Resource Study, provided by Altermia, dated on 18/05/2011 /21/. - Long transmission line has been correctly stated in section A.3 of the latest version PDD /2/, as per evidence Transmission line length, prepared by Ibereólica, issued on November 2011 /46/.
Methodologies and tools applied (scope and version numbers)	ACM0002 (version 13.0.0) “Consolidated baseline methodology for grid-connected electricity generation from renewable sources”; “Tool for the demonstration and assessment of additionality” Version 06.0.0. “Tool to calculate the emission factor for an electricity system” (version 2.2.1) “Combined tool to identify the baseline scenario and demonstrate additionality” (version 04.0.0).	ACM0002 (version 13.0.0) “Consolidated baseline methodology for grid-connected electricity generation from renewable sources”; “Tool for the demonstration and assessment of additionality” (version 07.0.0) /9/, “Tool to calculate the emission factor for an electricity system” (version 03.0.0)/10/ and Combined tool to identify the baseline scenario and demonstrate additionality” (version 05.0.0)/12/. Version of the methodology and associated tools were updated in the latest version of the PDD /2/.
CER calculations (formula applied/ amount of emission reduction)	Amount of ER expected, Total expected during the crediting period: 2,195,168 (t CO ₂ e) Average during the crediting period: 313,595 (t CO ₂ e) Annual expected: 01/11/2014 – 31/12/2014: 52,266 t CO ₂ e 2015 to 2020: 313,595 t CO ₂ e 01/01/2021- 31/10/2021: 261,330 t CO ₂ e	Amount of ERs expected has been updated due to the change in the calculation of the net energy supplied to the grid by the project, that will be calculated as the difference between the energy exported, imported and the transmission losses in the transmission line (L) of 1.81% of EG _{export} are taken into account, as per transmission losses calculation /47/. Total expected during the crediting period: 2,141,692 (t CO ₂ e) Average during the crediting period: 305,956 (t CO ₂ e) Annual expected: 01/11/2014 – 31/12/2014: 50,993 t CO ₂ e 2015 to 2020: 305,956 t CO ₂ e 01/01/2021- 31/10/2021: 254,963 t CO ₂ e
Additionality: (Benchmark / input values/analysis)	Input values of the project financial model were not included. The financial Benchmark adopted in the	Input financial values utilised in the calculation of the financial model were included in the latest version of the PDD.

type/project start date/IRR or NPV values etc.)	GSP-PDD /1/ was 10.3% adopted from the Appendix A of the used Guidelines /51/	Please refer to CAR 17 for further details. According to the “Guidelines on the assessment of investment analysis” (version 05) /51/, and considering that the project belongs to group 1 “Energy Industries”, the default value for the expected return on equity in Chile provided by the Guidelines document is 10.3%.
Monitoring (parameters frequency) /	In the GSP_PDD was stated that the main meter will be of 0.2 S precision class, while the secondary meter will be of 0.5 S precision class, and the Meters will be calibrated each year by the operative personnel according to the applicable national standard.	<ul style="list-style-type: none"> - The precision class for both meters main and backup meter will be 0.2 S and was correctly addressed in the section B.7.1 of the latest version of the PDD /2/. - Meters will be calibrated once every two years by the operative personnel. <p>This is in line with national regulations related to electricity meters, as per technical Norms about meters NSEG3_71, from Ministry of Economy, Development and Reconstruction, starting on 22/06/1925 /53/.</p>
Crediting period (type / start date)	Start of crediting period, estimated on the GSP-PDD /1/ was 01/11/2014.	Start of crediting period remains the same (01/11/2014) in the latest version of the PDD /2/.
<p>Please refer to Appendix A of this report for details of each change between webhosted PDD and the final PDD for submission. The Validation Team has carried out the validation process based on the Webhosted PDD and raised CARs/CLs against the project by issuing the validation protocol.</p> <p>With the updated information and corrections done on final PDD, the PP has addressed all the CARs /CLs that were raised by the Validation Team.</p> <p>It is concluded that the Validation Team has reviewed the project in line with the VVS (version 04.0) and all the evidence, corrections, justifications and updating done on the final PDD with respect to CARs /CLs raised are accepted and closed by the Validation Team, issuing the positive validation opinion for project registration. A FAR 1 is further issued to the DOE verification team to check the implementation and operational completeness during the first verification.</p>		

TÜV Rheinland validation team considers the project description of the project contained in the PDD to be complete and accurate. The PDD complies with the relevant methodology, tools, forms and guidance at the time of PDD submission for registration.

3.4 Baseline and Monitoring Methodology:

3.4.1 Applicability of the selected methodology to the project activity

The project activity is based on a wind farm located in Huasco province, in 3rd Region of Atacama, in the North of Chile, with an installed capacity of 170 MW and an expected average generation of 446,975MWh per year /2/. Once the wind farm is operational, it will produce renewable energy which will be consumed by the users of the SIC (Central Interconnected System), displacing the use of fossil fuel fired electricity sources. The project activity does not modify or retrofit an existing electricity generation facility. Hence, the baseline scenario is that the electricity delivered to the Chilean SIC (Central Interconnected System). In section B.1 of the PDD it is stated that methodology ACM0002 “Consolidated methodology for Grid-Connected Electricity Generation from Renewable Sources” version 13.0.0, the “Tool for the Demonstration and Assessment of Additionality” version 07.0.0 /9/, and the “Tool to Calculate the Emission Factor for an Electricity System” version 03.0.0 /10/ were applied to the project activity. The assessment of the use of the methodology and the tools was carried out by consulting the UNFCCC web page in order to check the latest days to submit PDDs that use the methodology and tools versions used in this project activity.

This version of the methodology also refers to the “Tool to calculate project of leakage CO₂ emissions from fossil fuel combustion” (version 2) /11/. However, this tool is not applicable due to fuel combustion is not

planned in the Project Activity, thus exclusion of the tool is reasonable and accepted by the validation team, since as stated on page 6/20 of the methodology /8/: “For most renewable power generation project activities, PE_y = 0. However, some project activities may involve project emissions that can be significant”; the only source of project emissions, related to this project, shall be emissions from fossil fuel consumption. Nevertheless, as demonstrated above, it is not planned to consume fossil fuel during the operation of the project activity, as correctly stated in the PDD section B.6.1 /2/.

Also the “Combined tool to identify the baseline scenario and demonstrate additionality” (version 04.0.0) /12/ was not included in the development of the PDD /2/ due to the methodology already defines the baseline scenario for a new grid-connected renewable power plant/unit as: “Electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in the “Tool to calculate the emission factor for an electricity system”/10/, thus methodological tools are applied correctly.

Approved baseline and monitoring methodology ACM0002 “Consolidated methodology for Grid-Connected Electricity Generation from Renewable Sources” (version 13.0.0) /8/ has been applied for the proposed project activity.

The “Tool for the Demonstration and Assessment of Additionality” version 7.0.0 /9/ is valid from 23 November 2012 00:00:00 GMT onwards. The “Tool to Calculate the Emission Factor for an Electricity System” version 3.0.0 /10/ is valid from 23 November 2012 00:00:00 GMT onwards.

The validation team determined the applicability of methodology ACM0002 (version 13.0.0) as follows:

Applicability criteria of the methodology (ACM0002), Version 13.0.0	Criteria fulfilled	Determination by the validation team
The project activity is the installation, capacity addition, retrofit or replacement of a power plant/unit of one of the following types: hydro power plant/unit (either with a run-of-river reservoir or an accumulation reservoir), wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	During the site visit it was verified that project activity will be a new power plant in a site where no renewable power plant was operated prior to the implementation of the project activity. According to the description provided in the PDD, the purpose of this facility is to displace electricity generated by fossil fuel fired power stations connected to the Chilean grid, thus the project activity is a grid connected renewable power generation facility. Since the project is new (b) (c) and (d) options are not applicable to the project activity.
In the case of capacity additions, retrofits or replacements (except for capacity addition projects for which the electricity generation of the existing power plant(s) or unit(s) is not affected): the existing plant started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity addition or retrofit of the plant has been undertaken between the start of this minimum historical reference period and the implementation of the project activity;	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	During the site visit it was confirmed that project activity will consist in the installation of a new facility. This condition does not apply to the project activity since it is not a capacity addition, retrofit or replacement in an existing power plant.
In case of hydro power plants, at least one of the following conditions must apply: <ul style="list-style-type: none"> The project activity is implemented in an existing single and multiple reservoirs, with no change in the volume of any of the 	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	These conditions do not apply to the project activity since it is not a hydropower plant.

Applicability criteria of the methodology (ACM0002), Version 13.0.0	Criteria fulfilled	Determination by the validation team
<p>reservoirs; or</p> <ul style="list-style-type: none"> • The project activity is implemented in an existing single and multiple reservoirs, where the volume of any of reservoirs is increased and the power density of each reservoir, as per definitions given in the Project Emissions section, is greater than 4 W/m² after the implementation of the project activity; or • The project activity results in new single or multiple reservoirs and the power density of each reservoir, as per definitions given in the Project Emissions section, is greater than 4 W/m² after the implementation of the project activity. <p>In case of hydro power plants using multiple reservoirs where the power density of any of the reservoirs is lower than 4 W/m² after the implementation of the project activity all the following conditions must apply:</p> <ul style="list-style-type: none"> • The power density calculated for the entire project activity using equation 5 is greater than 4 W/m²; • All reservoirs and hydro power plants are located at the same river and where are designed together to function as an integrated project that collectively constitutes the generation capacity of the combined power plant; • The water flow between the multiple reservoirs is not used by any other hydropower unit which is not a part of the project activity; • The total installed capacity of the power units, which are driven using water from the reservoirs with a power density lower than 4 W/m², is lower than 15MW; <p>The total installed capacity of the power units, which are driven using water from reservoirs with a power density lower than 4 W/m², is less than 10% of the total installed capacity of the project activity from multiple reservoirs.</p>		
<p>The methodology is not applicable to the following:</p> <ul style="list-style-type: none"> • Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity, since in this case the baseline may be the continued use of fossil fuels at the site; • Biomass fired power plants; • Hydro power plants that result in new reservoirs or in the increase in existing reservoirs where the power density of the 	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>Project activity does not involve switching from fossil fuels to renewable energy sources; it is not a biomass fired power plant and it is not a hydropower plant, therefore this criterion is fulfilled.</p>

Applicability criteria of the methodology (ACM0002), Version 13.0.0	Criteria fulfilled	Determination by the validation team
reservoir is less than 4 W/m ² .		
In the case of retrofits, replacements, or capacity additions, this methodology is only applicable if the most plausible baseline scenario, as a result of the identification of baseline scenario, is “the continuation of the current situation, i.e. to use the power generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance”.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	This condition is not applicable to the project activity because it is not a retrofit, replacement or capacity addition.

The assessment of the project's compliance with the applicability criteria of the methodology ACM0002 (version 13.0.0), as documented in the PDD part B and appendix 4, which are evaluated in detail under the validation protocol in Appendix A to this report based from the webhosted PDD.

3.4.2 Project Boundary:

Project boundary has been defined in the PDD as the power plant and all power plants connected physically for the electricity system that the proposed project activity is connected to the SIC (Central Interconnected Electric System) /2/.

The validation team reviewed several documents and cross-checked against the project description in order to validate the project boundary defined in the PDD. Additions to installed capacity in the Chilean grid were assessed through the following references such as 2001-2010 CDEC-SIC Operation Statistics Yearbook 2001-2010 (<http://www.cdecsic.cl/datos/anuario2011/espanol/index.html>) /4/, CDEC-SIC Central Interconnected Electric System Load Economic Dispatch Center, National Energy Balance, 2009 (<http://www.cne.cl/estadisticas/balances-energeticos>) /15/, CDEC- SIC Central Interconnected Electric System Load Economic Dispatch Center hourly generation 2008 /16/, CDEC- SIC Central Interconnected Electric System Load Economic Dispatch Center hourly generation 2009 /17/, CDEC- SIC Central Interconnected Electric System Load Economic Dispatch Center hourly generation 2010 /18/.

The geographical and physical project boundary of the project activity was determined by the validation team during the on-site assessment. The coordinates of the wind turbines were correctly documented in the section A.2.4. of the PDD /2/. The sources and sinks of greenhouse gas identified in the PDD are deemed to be appropriate. The coordinates were confirmed by the validation team through a handheld GPS device and Google Earth software.

Emissions	GHGs involved	Description
Baseline emissions	CO ₂	This GHG is the only identified source for the baseline emissions which is emitted by the fossil fuel power plants that are connected to the SIC: Central Interconnected System /14/
Project emissions	None	As the methodology ACM0002 version 13.0.0 /8/ establishes that project emissions from a wind farm are equal to zero. Nevertheless, small amount of emissions should be considered due to electricity utilized by the project (i.e. office issues, security...). Project activity will not include fossil fuel standby generator. Project emissions are considered to be zero.
Leakage	None	Methodology ACM0002 version 13.0.0 /8/ considers leakage emissions equal to zero.

In summary, the project boundary was correctly identified in accordance with the methodology ACM0002 (version 13.0.0) /8/. All greenhouse gas emissions occurring within the proposed project activity boundary as a result of the implementation of the proposed CDM project activity have been appropriately addressed in the PDD.

The identified project boundary and selected sources of emissions are justified for the project activity. The validation of the project activity did not reveal other greenhouse gas emissions occurring within the proposed CDM project activity boundary as a result of the implementation of the proposed project activity which are expected to contribute more than 1% of the overall expected average annual emission reduction, with respect to the methodology applied.

3.4.3 Baseline Identification:

According to the methodology applied by project participant, for new grid-connected renewable power plants, the baseline scenario is “electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculation described in the Tool to calculate the emission factor for an electricity system” /10/.

Project activity is a new facility for generating electricity by means of a renewable source (wind power). This facility will be connected to the grid for displacing electricity that otherwise would have been generated by new and grid-connected power plants. No assumptions have been done for identifying the baseline scenario for project activity. There are no relevant national or sector policies/regulations to be taken into account for project activity.

Thus, validation team confirms that the proposed project activity meets the above requirement. Therefore, the baseline scenario as prescribed in the ACM0002 (version 13.0.0) /8/ is applicable to the proposed project activity.

As per the applied methodology ACM0002 (version 13.0.0) /8/, “Consolidated baseline methodology for grid-connected electricity generation from renewable sources” /8/. The validation team confirms that the proposed project activity meets the above requirement. Therefore, the baseline scenario as prescribed in the ACM0002 (version 13.0.0) is applicable to the proposed project activity. The validation took cognizance of § Section 7.12 of VVS (version 04.0).

The approved baseline methodology applicable to the - project explicit criteria - implicit criteria (e.g. available scenarios, applicability of formulas for BE/PE/LE calculations)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The Baseline scenario is according to the baseline methodology procedure of ACM0002 version 13.0.0 /8/.
PDD includes all assumptions and data used by project participants	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The PDD includes the assumptions that confirm the Baseline scenario according to the baseline methodology procedure of ACM0002 version 13.0.0 /8/.
All the references and documents used are relevant for establishing the baseline scenario	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The Baseline scenario is according to the baseline methodology procedure of ACM0002 version 13.0.0 /8/.
All the references and documents used are correctly quoted and conservatively interpreted in the PDD	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The Baseline scenario is according to the baseline methodology procedure of ACM0002 version 13.0.0 /8/.
All relevant policies / regulations considered are listed in the PDD	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The Baseline scenario is according to the baseline methodology procedure of ACM0002 version 13.0.0 /8/. Since this methodology does not include a procedure to assess different alternatives, there is no need to include those in line with relevant policies / regulations.
Identified potential baseline scenarios reasonably	<input checked="" type="checkbox"/> Yes	The Baseline scenario is according to the

represent what would/could occur in the absence of the proposed project activity	<input type="checkbox"/> No	baseline methodology procedure of ACM0002 version 13.0.0 /8/.
The baseline scenario selection is appropriate and determined according to the methodology	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The Baseline scenario is according to the baseline methodology procedure of ACM0002 version 13.0.0 /8/.
The approved methodology used is applicable to the identified baseline scenario	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The Baseline scenario is according to the baseline methodology procedure of ACM0002 version 13.0.0 /8/.

The approved baseline methodology has been correctly applied to identify a realistic and credible baseline scenario, and the identified baseline scenario most reasonably represents what would occur in the absence of the proposed CDM project activity.

All the assumption and data used by the project participants are listed in the PDD and/or supporting documents. The relevant document for establishing the baseline scenario is the used baseline methodology (ACM0002, version 13.0.0) and is correctly quoted and interpreted in the PDD /2//8/. Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence and can be deemed reasonable. Since this methodology does not include a procedure to assess different alternatives, there is no need to include those in line with relevant policies / regulations..

3.4.4 GHG Emission Reductions:

The GHG emission reduction calculation was carried out and documented in a transparently manner /13/ according with the approved methodology ACM0002 version 13.0.0 /8/ and the “Tool to calculate the emission factor for an electricity system” version 03.0.0 /10/.

All data used for estimating greenhouse gases have been taken from available and trustworthy sources, e.g. data on the specific energy consumption by fuel type is directly taken from 2001-2010 CDEC-SIC Operation Statistics Yearbook 2001-2010 (<http://www.cdecsic.cl/datos/anuario2011/espanol/index.html>), CDEC-SIC Central Interconnected Electric System Load Economic Dispatch Center /14/ No assumptions are considered to be done for the estimating of GHG to be considered in calculations.

Formulas used in the estimation of GHG have been compared with the selected methodology used by project participant. Calculations performed by project participant are considered to be correct and totally traceable, thus the methodology has been applied correctly for the estimation of project emissions, baseline emissions and emission reductions. All the baseline emissions can be replicated by using the information provided by project participant in the PDD.

According to the selected methodology ACM0002 (version 13.0.0) /8/, the emission reductions (ER_y) achieved by the project activity during the crediting period are the difference between the baseline emissions (BE_y) and the project emissions (PE_y). No leakage emissions are considered for the project activity.

$$ER_y = BE_y - PE_y$$

Due to project activity used a renewable wind source for electricity generation where no auxiliary fuels were considered (as verified by the validation team during site visit please refer CAR 10) the project emissions are considered to be zero.

Since project emissions and leakage are zero, the baseline emissions are equal to the emission reductions due to the project activity. According to ACM0002 (version 13.0.0), the baseline emissions calculation procedure is shown in Section B.6 of PDD as follows:

$$BE_y = EG_{PJ,y} * EF_{grid,CM,y}$$

Where:

BE_y = Baseline emissions in year y (tCO₂e in year y);

$EG_{PJ,y}$ = Quantity of net electricity generation that is produced and fed to the grid as a result of the

$EF_{grid,CM,y}$ = implementation of the CDM project activity in year y (MWh/ in the year y);
 = Combined margin CO₂ emissions factor for grid connected power generation in year y calculated using the latest version of the “Tool to calculate the emission factor for an electricity system” (tCO₂/MWh).

The project activity involves the installation of a new wind power project, which is defined as a greenfield renewable energy power plant, therefore based in technical information of the project activity,

$$EG_{PJ,y} = EG_{facility,y}$$

Where:

$EG_{PJ,y}$ = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh);

$EG_{facility,y}$ = Quantity of net electricity generation supplied by the project plant/unit to the grid in year y (MWh).

Therefore, $EG_{facility,y}$ is equal to the net annual electricity generation to grid by the project, which is expected to be 446,975 MWh.

$$EG_{PJ,y} = EG_{facility,y} = 446,975 \text{ MWh/ in the year y.}$$

The baseline emission factor ($EF_{grid,CM,y}$) for the project was calculated using the “Tool to calculate the emission factor for an electricity system” (version 03.0.0) /10/ which describes by means of a step-wise procedure how to calculate the combined margin emission factor (CM):

Step	Choice adopted in PDD	Validation Comments
Step 1: Identify the relevant electricity systems	There are four grids in Chile: a) The Central Interconnected System (SIC, Sistema Interconectado Central), which serves the central part of the country. b) The Great North Interconnected System (SING, Sistema Interconectado del Norte Grande), which serves the desert mining regions in the North; and two local systems in the southern regions of Aysén and Magallanes.	All the four grids that exist in Chile are identified in the Chilean Power Generation structure. Source: CDEC-SIC Yearbook 2001-2010/, each grid lays down the geographical and system boundaries for proposed projects located within them. Thus the identification of the relevant electricity system is considered to be valid.
Step 2: Choose whether to include off-grid power plants in the project electricity system	Option 1 Only grid power plants are included in the calculation	The tool does not request a justification for choosing to include or not off-grid power plants, thus the selection is considered to be valid.
Step 3: Select a method to determine the operating margin (OM)	(b) Simple adjusted OM was selected. Ex-ante option was selected.	The Simple adjusted OM method was selected because low-cost/must-run resources constitute more than 50% of the SINC, thus the selection is considered to be valid. Ex-ante option was selected for simplicity and because of the time delay for the publication of the Electrical sector outlook reports,

		thus the selection is considered to be valid.
Step 4: Calculate the operating margin emission factor according to the selected method.	(a) Simple adjusted OM was selected. Option B (total net electricity generation of all power plants serving the system al fuel types and consumptions of the project electricity system) was selected.	The selection of this choice is based on the net electricity generation of each power unit and an emission factor for each power unit. Thus the selection is considered to be valid.
Step 5: Calculate the build margin (BM) emission factor	Option 1 (calculate for the first crediting period the BM emission factor ex-ante based on the most recent information available on units already built for sample group m at the time of CDM PDD submission to the DOE for validation) was selected. The sample group was calculated by means of steps (a), (b) and (c).	The selection of Option 1 is a consequence of the selection of the ex-ante choice of step 3, thus the selection is considered to be valid. Project participant identified the set of five power plants ($SET_{5-units}$) that started to supply electricity to the grid most recently and the set of power units that started to supply electricity to the grid most recently and comprise 20% of the annual electricity generation of the project electricity system ($SET_{\geq 20\%}$). In both cases CDM project activities were excluded. It was found that $SET_{\geq 20\%}$ has a larger production than $SET_{5-units}$, thus $SET_{sample} = SET_{\geq 20\%}$ and according to the methodology requirement, none of the plants that belongs to SET_{sample} started to supply electricity to the grid more than 10 years ago. Therefore steps (a), (b) and (c) are considered to be valid.
Step 6: Calculate the combined margin emission factor	Option (a), weighted average CM, was selected considering an ex-ante calculation.	The requirements for the simplified CM method (Least Developed Country or country with less than 10 CDM registered projects) are not fulfilled, thus weighted average CM was used to calculate the combined margin, considering $w_{OM}=0.75$ and $w_{BM}=0.25$.

Finally, the ex-ante estimation for project activity emission reductions is 305,956 tCO₂e per year in the PDD /2/:

$$ER_y = BE_y = EG_{PJ, y} * EF_{grid, CM, y} = 446,975 \text{ MWh} * 0.685 \text{ tCO}_2\text{e/MWh} = 305,956 \text{ tCO}_2\text{e. (yearly).}$$

Please notice the following considerations:

1. According to the Wind Resource Study by Altermia Asesores /21/ the estimated Annual Energy generation is 455,214 MWh/y, then the 1.81% transmission losses are deducted = 446,975 MWh
2. The excel file calculation includes the complete $EF_{grid, CM, y}$ figure, this is approx. $\approx 0.68450407\dots$, leading to $\approx 305,956.2066 \text{ tCO}_2\text{e/y}$ (rounded down for conservativeness)

The net energy supplied to the grid by the project will be calculated as the difference between the energy exported, imported and the transmission losses in the transmission line (L) of 1.81% of EG_{export} are taken into

account, as per transmission losses calculation /47/. Monitoring of energy will be carried out continuously by the main bidirectional meter and the secondary meter.

In summary, the calculation of emission reductions was correctly demonstrated by the PP according to the methodology ACM0002 (version 13.0.0) /8/ and its tool “Tool to calculate the emission factor for an electricity system” version 03.0.0 /84/. The table below summarizes validation team’s determination of emission reduction:

All assumptions made for estimating GHG are listed in the PDD	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	As per PDD Section B.6., assumptions were made for ex-ante GHG emissions
All data used by project participants are listed in the PDD	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	All data such as GHG emission, local power generation used by project participant for calculations are in PDD Appendix 4.
Their references and sources are also listed in the PDD	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Data provided by Project Participant are listed in the PDD Appendix 4.
Formulas, parameters, values are complete, accurate, transparent and conservative	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The validation checked all information used for the calculation of GHG emissions reductions and confirms that formulas, parameters, values applied in the PDD Appendix 4 to be complete, transparent and conservative.
All the references and documents used are correctly quoted and conservatively interpreted in the PDD	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The validation team checked the provided references and documents and confirms that these are correctly quoted and conservatively interpreted in the PDD Appendix 4.
Methodology has been applied correctly to calculate project emissions, baseline emissions, leakage emissions and emission reductions	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The ACM0002 Version 13.0.0 /8/ and the methodological tool, “Tool to calculate the emission factor for an electricity system” Version 03.0.0 /10/ are applied to calculate project emissions, baseline emissions, leakage emissions and emission reductions.
All the emissions of baseline emissions can be replicated using information provided in the PDD	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The validation team checked in the information provided in the PDD with the reference information, and all the emissions of baseline emissions can be replicated

Based on the calculations and results presented in the sections above the implementation of the project activity will result in an average ex-ante estimation of emission reduction conservatively calculated to be 305,956 tCO₂e per year for the selected crediting period.

All assumptions and data used by the project participants are listed in the PDD and/or supporting documents, including their references and sources. All documentation used by the project participants as the basis for assumptions and source of data is correctly quoted and interpreted in the PDD. All values used in the PDD are considered reasonable and conservative in the context of the proposed CDM project activity. The baseline methodology has been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions. All estimates of the baseline, project and leakage emissions can be replicated using the data and parameter values provided in the PDD.

3.5 Additionality:

The project applies the “Tool for demonstration and assessment of additionality” version 07.0.0 /9/ to demonstrate additionality following the step-wise procedure included in the tool and assessed in the table showed below.

Step	Adopted in the PDD	Validation Comments
Step 1. Identification of	As per VVS version 04.0	The alternative adopted in the PDD

<p>alternatives to the project activity consistent with mandatory laws and regulations.</p>	<p>identification of a credible alternatives to the project activity in order to determine the most realistic baseline scenario, unless the approved methodology that is selected by the proposed CDM project activity prescribes the baseline scenario and no further analysis is required.</p> <p>Based on the methodology ACM0002 (version 13.0.0) the baseline has been correctly identified “the baseline scenario is “electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in the Tool to calculate the emission factor for an electricity system”. Therefore the alternative would be the continuation of the current situation according to the baseline.</p>	<p>is: “Electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in the Tool to calculate the emission factor for an electricity system”, is considered to be realistic and credible and fulfils the tool and the methodology.</p>
<p>Step 2. Investment analysis.</p>	<p>Project participant decided to carry out the investment analysis for the project activity.</p> <p>Sub-step 2a. Benchmark analysis was selected by project participant.</p> <p>Sub-step 2b. Apply benchmark analysis (option III). This option is a consequence of the option selected in sub-step 2a.</p> <p>Sub-step 2c. Calculation and comparison of financial indicators.</p> <p>Sub-step 2d. Sensitivity analysis.</p>	<p>The Investment Analysis has been assessed for compliance with the “Guidelines on the Assessment of Investment Analysis”, version 5.0.</p> <p>Sub-step 2a Project participant chose this analysis method due to project activity will earn revenues from the CDM and electricity sales, thus it is considered that Sub-step 2a is correctly fulfilled.</p> <p>Sub-step 2b is tied to the selection made in Sub-step 2a, according to the “Guidelines on the assessment of investment analysis” (version 05), in cases of projects which could be developed by an entity other than the project participants, the benchmark should be based on parameters that are standard in the market. For these cases, the cost of equity should be determined either by:</p> <p>(a) Selecting the values provided in Appendix A of these guidelines; or by</p> <p>(b) Calculating the cost of equity using best financial practices,</p>

		<p>based on data sources that can be clearly validated by the DOE, while properly justifying all underlying factors.</p> <p>In this project option (a) has been chosen, thus it is considered that Sub-step 2b is correctly fulfilled.</p> <p>Sub-step 2c is tied to the selection made in Sub-step 2a, thus it is considered that Sub-step 2c is correctly fulfilled.</p> <p>Sub-step 2d is tied to the selection made in Sub-step 2a, thus it is considered that Sub-step 2d is correctly fulfilled.</p>
Step 3. Barrier Analysis.	According to the tool barrier analysis is optional if step 2 is followed for the additionality demonstration.	This step is not applicable.
Step 4. Common practice analysis.	<p>Since project activity is not the first of its kind then project participant carried out the common practice analysis.</p> <p>Sub-step 4a. Analyse other activities similar to the proposed project activity.</p> <p>Sub-step 4b. Discuss any similar options that are occurring.</p>	<p>Common practice is analysed in section 3.5.5, demonstrating that the proposed activity is not a common practice.</p> <p>Project participant carried out the step-wise procedure to determine if there are other activities similar to the proposed project activity and it was concluded that project activity is not a common practice in Chile. It is considered that Sub-step 4a is correctly fulfilled.</p> <p>Similar options were discussed by project participant and specific characteristics were discussed and analysed and compared with project activity. It is considered that Sub-step 4b is correctly fulfilled.</p>

3.5.1 CDM consideration:

The starting date of the project activity is 30/10/2013 /2/ which is the date estimated by the project participant for signing the wind turbines supply contracts, since the purchase of the wind turbines will be the first real action of the project activity. Furthermore due to expectstart date is in the future during this stage of validation FAR 1 has been raised in order to confirm it during the 1st verification. This information was confirmed through the PP chronogram of implementation /48/.

Since the start date of the project activity will occur after the publication of the GSP-PDD and both days are after 02/08/2008, then section II of the “Guidelines on the demonstration and assessment of prior consideration of the CDM (version 4.0)” is applicable. This section of the mentioned Guideline requires that project participant must inform a Host Party designated national authority (DNA) and the UNFCCC secretariat in writing of the commencement of the project activity and of their intention to seek CDM status. However, such

notification is not necessary if a project design document (PDD) has been published for global stakeholder consultation 29/05/2012 to 27/06/2012 or a new methodology proposed to the Executive Board for the specific project before the project activity start date.

The validation team reviewed the following documentation to assess the CDM prior consideration

Timeline	Milestone	Determination by the validation team
18/05/2011	Wind resource study	Project participant has provided the evidence that supports the mentioned milestone /21/.
07/06/2011	Request of the land	Project participant has provided the evidence that supports the mentioned milestone /29/.
12/09/2011	Interconnection agreement with Transelec	Project participant has provided the evidence that supports the mentioned milestone /42/.
23/09/2011	First contact with Garrigues Medio Ambiente consultant company for carrying out the project's PDD	Project participant has provided the evidence that supports the mentioned milestone /58/.
September 2011	Environment Impact Statement presented for approval	Project participant has provided the evidence that supports the mentioned milestone /43/.
23/05/2012	Contract with the selected DOE	Project participant has provided the evidence that supports the mentioned milestone /57/.
01/12/2011	Wind turbines offer reception	Project participant has provided the evidence that supports the mentioned milestone /32/.
12/12/2011	Contract with Garrigues Medio Ambiente consultant company for carrying out the project's PDD (Time of investment decision)	Project participant has provided the evidence that supports the mentioned milestone /41/.
29/05/2012	Publication of the PDD	Project participant has provided the evidence that supports the mentioned milestone /2/.
January 2012	Start of stakeholders consultation process (consultation letters to stakeholders)	Project participant has provided the evidence that supports the mentioned milestone /39/, /40/.
January 2012	Reception of stakeholders answers to the sent letters and modification of the project accordingly, and reception of definitive answers of agreement.	Project participant has provided the evidence that supports the mentioned milestone /39/, /40/.
21/03/2012	Favourable Environmental Assessment Qualification Resolution	Project participant has provided the evidence that supports the mentioned milestone /44/.

It is TÜV Rheinland validation team opinion that the proposed CDM project activity complies with the requirements of the guidance on prior consideration of CDM (VVS section 7.12.9).

Starting date of project	Justification of and evidences (references) on the starting date of project	Date of CDM consideration
30/10/2013 (estimated) as per chronogram of implementation, in which the operation start is planned to be on November 2014 /48/.	Original wind turbines offer reception and FSR performed/44/	06/04/2010

At the moment of the elaboration of this report, the start date of the project activity is in the future as the PP has not contracted/placed order for the equipment or construction. The PDD was web-hosted for public comments on 29/05/2012 i.e. before the start date of the project activity. Since the start date of the project activity is after PDD was web-hosted, and the communication regarding the project is been notified to DNA and UNFCCC, as

per paragraph 106/107 Section 7 of VVS version 04.0 /5/, project participant is not required to demonstrate prior consideration of CDM.

There was no commercial project operational from 10/07/2012 - 12/07/2012 (date of validation site visit) – The expected start date of the project activity is 30/10/2013.

The proposed project activity has a start date later from 2 August 2008, thus as requested by the guidelines:

1.- This project was published for global stakeholder consultation on 29/05/2012 – 27/06/2012 /1/ and the starting date of the proposed project activity is expected to happen on 30/10/2013, and is in the future during this stage of validation; FAR 1 has been raised in order to confirm it during the 1st verification. This information was confirmed through the PP's chronogram of implementation /48/. Thus, as indicated in the step 1 of the "Guidelines on the demonstration and assessment of prior consideration of the CDM (version 04)", the notification is not necessary if the PDD was published for global stakeholder consultation to the Executive Board for the project before the project activity start date.

2. The UNFCCC secretariat will maintain a publicly available list of such notifications.

As indicated before, notification is not necessary, thus this step is not applicable to the proposed project activity.

3. When validating a project activity with a start date on or after 2 August 2008, designated operational entities (DOEs) shall ensure by means of confirmation from the UNFCCC secretariat that such a notification had been provided. If such a notification has not been provided, the DOE shall determine that the CDM was not seriously considered in the decision to implement the project activity.

As indicated before, notification is not necessary for the proposed project activity.

4. Additionally for project activities for which a PDD has not been published for global stakeholder consultation or a new methodology proposed or request for revision of an approved methodology is requested, every subsequent two years after the initial notification the project participants shall inform the UNFCCC secretariat of the progress of the project activity.

The proposed project activity was published for global stakeholder consultation on /29/05/2012 – 27/06/2012 /1/, and initial notification is not necessary to the proposed project activity,

In conclusion, the starting dates of the project activity were later to 02/08/2008 as well as the date of publication of the PDD for global stakeholder process. Thus, the validation team took cognizance of § 107 Section 7.12.9 of VVS (version 04.0).

Based on the documented evidence as described above, it is clearly demonstrated that the CDM was seriously considered by the project owners prior to starting dates of the project activity. The real actions relating CDM development took place in parallel with the project's implementation and the gap between the documented evidence is less than 2 years. Therefore, the validation team confirms that the implementation of the proposed project activity as a CDM project is fully in line with the Annex 13 of EB 62 "Guidelines on the demonstration and assessment of prior consideration of the CDM (version 4.0)".

3.5.2 Alternatives:

As per described in the methodology /8/, only one alternative was considered by the project participant in the identification of plausible alternatives. The alternative identified was the continuation of the current situation, i.e. electricity that would be delivered to the grid by the project activity is generated by the current grid-connected power plants. As it was assessed previously, the alternative identified complies with all the applicable and enforced legislation.

TÜV Rheinland validation team considers the selected baseline is credible and complete.

3.5.3 Investment analysis:

The Investment Analysis has been assessed for compliance with the latest version (05) of the “Guidance on the Assessment of Investment Analysis” /51/.

The latest version of the Investment Analysis spread sheet /19/ has been reviewed and includes all the parameters that are critical to the financial calculations according to the latest guidelines, the underlying assumptions are appropriate and the financial calculations are correct.

The benchmark without the sales of CERs the after tax Equity IRR is 7.25%, which is lower than the default financial benchmark of 10.3%, an appropriate benchmark since the alternative to the project activity is the supply of electricity from the national grid.

3.5.3.1 Choice of approach:

Project participant decided to choose the benchmark analysis due to project activity will have revenues coming not only from the CDM but also from the electricity sales. This choice is considered to be appropriate for the project activity because as it is stated in the rationale section of paragraph 19 of the Guidelines on the assessment of investment analysis /51/, benchmark is suited to circumstances where the baseline does not require investment which is the case of the baseline scenario identified.

Thus, the choice for benchmark analysis is correct because:

- CDM project activity generates financial benefits other than CDM-related income.
- The alternative to the project activity is the supply of electricity from a grid.

Benchmark selection:

The Guidelines on the assessment of investment analysis version 5.0 states in paragraph 13 that in cases of project which could be developed by an entity other than the project participant the benchmark should be based on parameters that are standard in the market. The same guidelines also states in paragraph 15 that if the benchmark is based on parameters that are standard in the market, the cost of equity should be determined either by: (a) selecting the values provided in Appendix A; or by (b) calculating the cost of equity using best financial practices, based on data sources which can be clearly validated by DOE, while properly justifying all underlying factors.

This project activity could be carried out by other entity than the project participant because there are other CDM wind farm projects in Chile, therefore it is concluded that benchmark should be based on parameters that are standard in the market. The equity cost for the project activity was taken from the Appendix A of the Guidelines on the assessment of investment analysis version 5.0, which is 10.3% (after taxes value), this value was available at the time of the investment decision making, i.e. December 2011.

Input parameters:

Parameter:	Electricity Generation
Value applied for the IRR calculation:	<p>The estimated Output is 446,975 MWh/y based on the next inputs:</p> <ul style="list-style-type: none"> - Total installed capacity: 170 MW /2/ and /19/. - According to the Wind Resource Study by Altermia Asesores /21/ the estimated Annual Energy generation is 455,214 MWh/y, then the transmission losses are deducted, 1.81% = 446,975 MWh - Equivalent working hours: 2,678 /21/.

	<ul style="list-style-type: none"> - Load factor: 30.6% /21/.¹ - The net energy supplied to the grid by the project will be calculated as the difference between the energy exported, imported and the transmission losses in the transmission line (L) of 1.81% of EG_{export} are taken into account, as per transmission losses calculation /47/. Monitoring of energy will be carried out continuously by the main bidirectional meter and the secondary meter.
Source of the value:	<p>Two sets of documents were analysed in order to validate the values of equivalent working hours, load factor, total installed capacity and transmission losses.</p> <ol style="list-style-type: none"> 1) Cabo Leones Wind Farm Wind Resource Study, provided by Altermia, dated on 18/05/2011 /21/. 2) Transmissions losses calculation, prepared by Ibereólica /47/. The transmission line losses calculation evidence shows how this variable is calculated based in transmission line parameters and well known physical phenomena that affects a transmission line.
Consistency of the value:	<p>Value of 446,975 MWh is consistent with the installed capacity of 170 MW, operating for 2,678 hours per year and transmission losses deduction of 1.81%. Correct power generation value was used in Investment Analysis calculations.</p> <p>Value of 1.81% is consistent with transmission losses calculation /47/.</p>
Validity of input value at the time of investment decision making:	<p>Investment decision happened on December 2011 and decision was taken based on a sun study simulation performed by project participants dated on 18/05/2011 /21/, thus value was available during the investment decision.</p>
Justification by the validation team according to §120, 121 of VVS version (04.0) (cross checking and comparison as applicable)	<p>Power Generation calculations on Investment Analysis spread sheet were cross-checked with documents Cabo Leones Wind Farm Wind Resource Study, provided by Altermia, dated on 18/05/2011 /21/ and Transmissions losses calculation, prepared by Ibereólica /47/.</p>

Parameter:	Total investment
Value applied for the IRR calculation:	368,552.2 kUSD
Source of the value:	<p>The source value applied for the IRR calculation is based on the document Wind farm civil and electric works “Wind Turbines and EPC Gamesa Offer” dated on 01/12/2011 /32/, and Management technical operation Oferta Ing. Propiedad, D.I. Obra y Gestion Tecnica (Engineering Offer. Property, Construction and technical management), issued on 17/11/2011 /30/.</p>
Consistency of the value:	<p>Value of USD 368,552.2 is consistent with the documents “Wind Turbines and EPC Gamesa Offer” dated on 01/12/2011 /32, where is considered the amount of Wind farm civil and electric works is USD 359563.1 and the civil works</p>

¹ Please notice that in the mentioned Wind resource study Equivalent working hours and PLF is rounded when it is mentioned, however calculations were made considering the complete figure, i.e. ~2,677.729411 h/y or ~30.567687%

	management 2.5% of the total investment as per technical operation UNFCCC (Engineering Offer. Property, Construction and technical management), issued on 17/11/2011 /30/.
Validity of input value at the time of investment decision making:	The study was released in 2011, thus is valid at the time of the investment decision 12/12/2011 /41/.
Justification by the validation team according to §120, 121 of VVS version (04.0) (cross checking and comparison as applicable)	Information was cross checked with the documents “Wind Turbines and EPC Gamesa Offer” dated on 01/12/2011 /32/, and Management technical operation Wind Turbines and EPC Gamesa Offer (Engineering Offer. Property, Construction and technical management), issued on 17/11/2011 /30/.

Parameter:	Wind farm civil and electric works
Value applied for the IRR calculation:	359,563.1 kUSD
Source of the value:	The source of this value is based on the document Wind farm civil and electric works “Wind Turbines and EPC Gamesa Offer” dated on 01/12/2011 /32/
Consistency of the value:	Value of USD 359563.1 is consistent with the document “Wind Turbines and EPC Gamesa Offer” dated on 01/12/2011 /32/.
Validity of input value at the time of investment decision making:	The study was released in 2011, thus is valid at the time of the investment decision 12/12/2011 /41/.
Justification by the validation team according to §120, 121 of VVS version (04.0) (cross checking and comparison as applicable)	Information was cross checked with the documents “Wind Turbines and EPC Gamesa Offer” dated on 01/12/2011 /32/

Parameter:	Civil works management
Value applied for the IRR calculation:	2.5%
Source of the value:	The source of this value is based on the document Oferta Ing. Propiedad, D.I. Obra y Gestion Tecnica (Engineering Offer. Property, Construction and technical management), issued on 17/11/2011 /30/.
Consistency of the value:	Value of 2.5% is consistent with the Oferta Ing. Propiedad, D.I. Obra y Gestion Tecnica (Engineering Offer. Property, Construction and technical management), issued on 17/11/2011 /30/.
Validity of input value at the time of investment decision making:	The study was released in 2011, thus is valid at the time of the investment decision 12/12/2011 /41/.
Justification by the validation team according to §120, 121 of VVS version (04.0) (cross checking and comparison as applicable)	Information was cross checked with the documents Oferta Ing. Propiedad, D.I. Obra y Gestion Tecnica (Engineering Offer. Property, Construction and technical management), issued on 17/11/2011 /30/.

Parameter:	Operation and maintenance costs
Value applied for the IRR calculation:	<ul style="list-style-type: none"> • 0 kUSD/MW for years 1-2 • 35 kUSD/MW for years 3-5 • 40 kUSD/MW for years 6-20
Source of the value:	The source of this value is based on the document Operation and maintenance costs Gamesa O&M Offer, issued on 01/12/2011 /28/.
Consistency of the value:	Values applied are consistent with the O&M costs correctly stated in the document Operation and maintenance costs Gamesa O&M Offer, issued on 01/12/2011 /28/.
Validity of input value at the time of investment decision making:	Date of input values have been adopted within the Investment decision date happened on 12/12/2011, thus assumptions were valid at the time of investment decision 12/12/2011 /41/.
Justification by the validation team according to §120, 121 of VVS version (04.0) (cross checking and comparison as applicable)	O&M Cost calculations in the financial model spread sheet were cross-checked with document Operation and maintenance costs Gamesa O&M Offer, issued on 01/12/2011 /28/, and with information provided in Investment Analysis spread sheet.

Parameter:	Land lease
Value applied for the IRR calculation:	3.25%
Source of the value:	The source of this value is based on the document Land Lease Contract, between Aprovechamientos Energeticos S.A. and Agricola Konavle Limitada issued on 07/06/2011 /29/.
Consistency of the value:	Value of 3.25 is consistent based on the document Land Lease Contract, between Aprovechamientos Energeticos S.A. and Agricola Konavle Limitada issued on 07/06/2011 /29/, which refers that since the commissioning date which means from the start of generation and the transmission of energy to CDEC-SIC Central Interconnected Electric System Load Economic Dispatch Center, shall be paid the annual equivalent sum of 3.25%, of land lease.
Validity of input value at the time of investment decision making:	Date of input value has been adopted within the Investment decision date happened on 12/12/2011, and it is based on a study released on 07/06/2011 /29/, The land lease contract, which was signed in June 2011, was valid for 40 years, granting a testing period of 18 months from June 2011 to December 2012. Hence, it was valid at the time of investment decision.
Justification by the validation team according to §120, 121 of VVS version (04.0) (cross checking and comparison as applicable)	Information was cross checked with the document Land Lease Contract, between Aprovechamientos Energeticos S.A. and Agricola Konavle Limitada issued on 07/06/2011 /29/.

Parameter:	Management technical operation
Value applied for the IRR calculation:	980 kUSD/year

Source of the value:	The source of this value is based on the document Management technical operation Oferta Ing. Propiedad, D.I. Obra y Gestion Tecnica (Engineering Offer, Property, Construction and technical management), issued on 17/11/2011 /30/.
Consistency of the value:	Value of 980 kUSD/year is consistent with the document of Management technical operation. Documents refer that the amount of 81,670 UDS plus tax shall be paid each month as part of the maintenance support.
Validity of input value at the time of investment decision making:	Date of input value has been adopted within the Investment decision date on 12/12/2011, and it is based on a study released on 17/11/11 /30/, thus assumptions were valid at the time of investment decision.
Justification by the validation team according to §120, 121 of VVS version (04.0) (cross checking and comparison as applicable)	Information was cross checked with the document Management technical operation Oferta Ing. Propiedad, D.I. Obra y Gestion Tecnica (Engineering Offer, Property, Construction and technical management), issued on 17/11/2011 /30/.

Parameter:	Income taxes
Value applied for the IRR calculation:	17%
Source of the value:	The source of this value is in accordance with the Internal tax services article 20 Income tax law that stipulated the first category tax levied on income from capital, among others, the commercial, industrial, mining, services, etc. Internal services of tax in Chile, based on the following link web site (http://www.sii.cl/aprenda_sobre_impuestos/impuestos/imp_directos.htm#o2p1) /59/.
Consistency of the value:	Value is consistent with the Internal tax services article 20 Income tax law, from Internal services of tax in Chile, based on the following link web site (http://www.sii.cl/aprenda_sobre_impuestos/impuestos/imp_directos.htm#o2p1) /59/. The DOE verified that the value is correctly quoted in all the financial analysis.
Validity of input value at the time of investment decision making:	Date of input value has been adopted within the Investment decision date happened on 12/12/2011, and it is based on official publication for years 2004 to 2010, thus assumptions were valid at the time of investment decision.
Justification by the validation team according to §120, 121 of VVS version (04.0) (cross checking and comparison as applicable)	Information was cross checked with the Internal tax services article 20 Income tax law, from Internal services of tax in Chile, based on the following link web site (http://www.sii.cl/aprenda_sobre_impuestos/impuestos/imp_directos.htm#o2p1).

Parameter:	Amortisation Period
Value applied for the IRR calculation:	10 years
Source of the value:	The source of this value is in accordance with the Amortisation Period Exempt Resolution Nr. 43 from 26th December 2002, concept "Electrical equipment used for the generation"

	http://www.sii.cl/documentos/resoluciones/2002/reso43.htm /31/ from the Internal Taxes Services (SII for its original name in Spanish).
Consistency of the value:	The value is consistent for the electrical generation equipment used in generation.
Validity of input value at the time of investment decision making:	Date of input value has been adopted within the Investment decision date from on 12/12/2011, based on a study released during December 26 th 2002, which refers that the set value for lifetime of the equipment corresponds to “goods purchased new, constructed or placed the country (new or used)”, as of the date indicated in the resolution Nr. 43 from 26th December 2002 /31/.
Justification by the validation team according to §120, 121 of VVS version (04.0) (cross checking and comparison as applicable)	Information was cross checked with the Amortisation Period Exempt Resolution Nr. 43 from 26th December 2002” 10, concept “Electrical equipment used for the generation /31/.

Parameter:	Residual Value
Value applied for the IRR calculation:	3,825 kUSD
Source of the value:	The source of this value is in accordance with the documents Residual value_Decommissioning plan Hounsfield Wind Farm_ Aug 2008_p7 (3) /22/ and Residual value_Decommissioning Plan for the Marble River Wind Farm_ p1 (3) /38/. Which corresponds to the Furnish supervision, labour, equipment, and material required to complete the removal of (85) 2.0MW Vestas Wind Turbines known as the Hounsfield Wind Farm.
Consistency of the value:	The adopted value is consistent with the estimated \$45,000 salvage value of the each WTG (Wind Turbine Generators) was based upon the worst case scenario assuming the only salvage value of the WTG is from scrapping the steel.
Validity of input value at the time of investment decision making:	Date of input value has been adopted within the Investment decision date from 12/12/2011, The minimum expected operational lifetime of the Gamesa G97 wind turbines is 20 years /27/, thus assumptions were valid at the time of investment decision.
Justification by the validation team according to §120, 121 of VVS version (04.0) (cross checking and comparison as applicable)	Information was cross checked with Residual value_Decommissioning Plan for the Marble River Wind Farm, (without version number and date) /38/.

Parameter:	Depreciation per year
Value applied for the IRR calculation:	36,473 kUSD
Source of the value:	Depreciation is calculated based in the total investment Residual value_ Decommissioning plan Hounsfield Wind Farm_ Aug 2008_p7 (3) /22/ and Residual value_Decommissioning Plan for the Marble River Wind Farm_ p1 (3) /38/, and Resolution Nr. 43 from 26th December 2002” 10, concept “Electrical equipment

	used for the generation /31/. Which corresponds to the Furnish supervision, labour, equipment, and material required to complete the removal of (85) 2.0MW Vestas Wind Turbines known as the Hounsfield Wind Farm.
Consistency of the value:	This value is consistent with the calculation in the financial model spread sheet /19/.
Validity of input value at the time of investment decision making:	Date of input value has been adopted within the Investment decision date happened on 12/12/2011, the sources used for the calculation were valid at the time of investment decision.
Justification by the validation team according to §120, 121 of VVS version (04.0) (cross checking and comparison as applicable)	Calculation was correctly cross checked through the financial model /19/ and official sources /31/ and /38/.

Parameter:	CPI inter annual growth
Value applied for the IRR calculation:	0
Source of the value:	The source value
Consistency of the value:	The value for parameter CPI (Consumer Price Index) is zero for whole period; thus, it is not necessary to include the inflation rate in the default value utilized for the expected return on equity (10.3%), as indicated in point 7 of the Annex included on version 05 of the “Guidelines on the assessment of investment analysis”/51/.
Validity of input value at the time of investment decision making:	The determination of not to include inflation in the complete financial analysis was taken since the decision date happened on 12/12/2011.
Justification by the validation team according to §120, 121 of VVS version (04.0) (cross checking and comparison as applicable)	Equity IRR calculation was carried out in real terms, as can be confirmed in the financial model provided by project participants /19/, as indicated in the financial model, the value for parameter CPI (Consumer Price Index) is zero for whole period; thus, it is not necessary to include the inflation rate in the default value utilized for the expected return on equity (10.3%), as indicated in point 7 of the Annex included on version 05 of the “Guidelines on the assessment of investment analysis”/51/.

Parameter:	Percentage of capital to be financed
Value applied for the IRR calculation:	70%
Source of the value:	Santa Maria de Nieva Term sheet, issued by the Bank BBVA dated on 31/10/2011 /61/.
Consistency of the value:	The value is consistent in the financial model /19/. Percentage of capital to be financed: in Santa Maria de Nieva project, debt was fixed at a maximum of 80%. In order to be more conservative and due to the size of Cabo Leones project, debt percentage was slightly reduced to 70%.

Validity of input value at the time of investment decision making:	Date of input value has been adopted within the Investment decision date happened on 12/12/2011, the sources used for the calculation were valid at the time of investment decision.
Justification by the validation team according to §120, 121 of VVS version (04.0) (cross checking and comparison as applicable)	Information was cross checked through the calculation in the financial model /19/.

Parameter:	Interest Rate
Value applied for the IRR calculation:	3.25%
Source of the value:	The source of value is based on the Evidence for Interest Rate, provided by BBVA- Madrid treasury, dated on 24/11/2011 /25/.
Consistency of the value:	The value is consistent with the evidence for Interest Rate, provided by BBVA- Madrid treasury, dated on 24/11/2011 /25/.
Validity of input value at the time of investment decision making:	Date of input value has been adopted within the Investment decision date happened on 12/12/2011, and it is based on a study released on 24/11/2011 /24/, thus assumptions were valid at the time of investment decision.
Justification by the validation team according to §120, 121 of VVS version (04.0) (cross checking and comparison as applicable)	Information was cross checked with the Evidence for Interest Rate, provided by BBVA- Madrid treasury, dated on 24/11/2011 /24/.

Parameter:	Swap
Value applied for the IRR calculation:	3.71%
Source of the value:	The source of value is based on the Evidence for SWAP Rate, provided by the bank BBVA period 15/06/2011 to 15/12/2011 /25/.
Consistency of the value:	The value is consistent with the evidence for SWAP Rate, provided by the bank BBVA period 15/06/2011 to 15/12/2011 /25/.
Validity of input value at the time of investment decision making:	Date of input value has been adopted within the Investment decision date happened on 12/12/2011, and it is based on a study released during the period 15/06/2011 to 15/12/2011 /25/, thus assumptions were valid at the time of investment decision.
Justification by the validation team according to §120, 121 of VVS version (04.0) (cross checking and comparison as applicable)	Information was cross checked with the Evidence for SWAP Rate, provided by the bank BBVA period 15/06/2011 to 15/12/2011 /25/.

Parameter:	Grace Period
Value applied for the IRR calculation:	2 years

Source of the value:	18 years, based on Santa Maria de Nieva Term sheet, issued by the Bank BBVA dated on 31/10/2011 /61/.
Consistency of the value:	As in Santa Maria de Nieva, the grace period coincides with the construction period, which in this case is approximately 2 years.
Validity of input value at the time of investment decision making:	The value is consistent in the financial model /19/.
Justification by the validation team according to §120, 121 of VVS version (04.0) (cross checking and comparison as applicable)	Date of input value has been adopted within the Investment decision date happened on 12/12/2011, the sources used for the calculation were valid at the time of investment decision.
	Information was cross checked through the calculation in the financial model /19/.

Parameter:	Payback time
Value applied for the IRR calculation:	18 years
Source of the value:	Based on Santa Maria de Nieva Term sheet, issued by the Bank BBVA dated on 31/10/2011 /61/.
Consistency of the value:	The value is consistent in the financial model /19/. Payback time is not really and input but a result obtained by applying an DSCR of 2. A DSCR of 2 means that the annual incomes are half used for paying back the loan to the bank and half for shareholders. This is a conservative parameter that gives the highest profitability to the project. If DSCR was 1.5, the payback time would be 12 years and the Equity IRR would be 6.8%. In Santa Maria de Nieva project, payback time was 17 years, with a minimum average DSCR no lower than 1.3, which is in line with the conservative choice of 2 in Cabo Leones project.
Validity of input value at the time of investment decision making:	Date of input value has been adopted within the Investment decision date happened on 12/12/2011, the sources used for the calculation were valid at the time of investment decision.
Justification by the validation team according to §120, 121 of VVS version (04.0) (cross checking and comparison as applicable)	Information was cross checked through the calculation in the financial model /19/.

Parameter:	Debt-Service Coverage Ratio (DSCR)
Value applied for the IRR calculation:	2%
Source of the value:	Based on Santa Maria de Nieva Term sheet, issued by the Bank BBVA dated 31/10/2011, applying payback time to Base Case.

Consistency of the value:	The calculation is consistent in the financial model /19/. A DSCR of 2% means that the annual incomes are half used for paying back the loan to the bank and half for shareholders. This is a conservative parameter that gives the highest profitability to the project. If DSCR was 1.5, the payback time would be 12 years and the Equity IRR would be 6.8%. In Santa Maria de Nieva project, payback time was 17 years, with a minimum average DSCR no lower than 1.3, which is in line with the conservative choice of 2 in Cabo Leones project.
Validity of input value at the time of investment decision making:	Date of input value has been adopted within the Investment decision date happened on 12/12/2011, the sources used for the calculation were valid at the time of investment decision, please refer to /61/ dated on 31/10/2011.
Justification by the validation team according to §120, 121 of VVS version (04.0) (cross checking and comparison as applicable)	Santa Maria de Nieva Project is a similar project developed by the project participant therefore its Term sheet /61/ issued on 31/10/2011 supports the information as previous experience of the project participant in the implementation of Wind Project. The DSCR information was cross checked through the calculation in the financial model /19/.

Parameter:	Change currency
Value applied for the IRR calculation:	507.3421 USD/CLP
Source of the value:	Value based on the Currency your UK Currency and Exchange Rates Resource Average November 2011 (http://www.currency.me.uk/convert/usd/clp).
Consistency of the value:	The value is consistent with the Currency your UK Currency and Exchange Rates Resource Average November 2011.
Validity of input value at the time of investment decision making:	Date of input value has been adopted within the Investment decision date happened on 12/12/2011, and it is based on a study released during November, thus assumptions were valid at the time of investment decision.
Justification by the validation team according to §120, 121 of VVS version (04.0) (cross checking and comparison as applicable)	Information was cross checked with Currency your UK Currency and Exchange Rates Resource Average November 2011 (http://www.currency.me.uk/convert/usd/clp).

Parameter:	Emission factor
Value applied for the IRR calculation:	0.685tCO ₂ /MW
Source of the value:	The value is based on the calculation of Cabo Leones EF and ER ex-ante calculations spread sheet /13/ and the official sources from the grid 2001-2010 CDEC-SIC Operation Statistics Yearbook 2001-2010 (http://www.cdcsic.cl/datos/anuario2011/espanol/index.html) /14/.
Consistency of the value:	The value is consistent with the calculation EF and ER ex-ante calculations spread sheet /13/.

Validity of input value at the time of investment decision making:	The information which forms the basis of the Emission Factor calculation was available at the time of submission of the CDM-PDD to the DOE for validation (~ May 2012) and was the most recent data available at that time, i.e. data up-to-year 2010 was published.
Justification by the validation team according to §120, 121 of VVS version (04.0) (cross checking and comparison as applicable)	Information was cross checked with the Cabo Leones EF and ER ex-ante calculations spread sheet /13/ and the official sources from the grid 2001-2010 CDEC-SIC Operation Statistics Yearbook 2001-2010 (http://www.cdec-sic.cl/datos/anuario2011/espanol/index.html) /14/.

Parameter:	Energy Price
Value applied:	125.39 USD/MWh
Source of the value:	The source of value is based on the CDEC- SIC Central Interconnected Electric System Load Economic Dispatch Center, average price 2009- 2010 Marginal Costs in Maitencillo /23/ and /55/.
Consistency of the value:	Value of 125 USD/MWh is consistent with the CDEC- SIC Central Interconnected Electric System Load Economic Dispatch Center, average price 2009- 2010 Marginal Costs in Maitencillo /23/ and /55/.
Validity of input value at the time of investment decision making:	Value is based on a study of tariffs valid since 1999 to 2012. Thus, assumption at the time of investment decision was correct.
Justification by the validation team according to §113 of VVM: (cross checking and comparison as applicable)	Cross-checked through CDEC-SING public website, http://cdec2.cdec-sing.cl/pls/portal/cdec.pck_rpt_cne_pub.rpt_prom_cmng_mensual

Parameter:	Transmission costs
Value applied:	6.27 USD/MW
Source of the value:	The source of value is based CDEC-SIC: “Cálculo de Peajes por el Sistema de Transmisión Troncal Año 2010”. Annex 3 Table A3-3. Based on Average 2010 Data of Papos 220 substation.
Consistency of the value:	Value of 6.27 USD/MW is consistent with the “Cálculo de Peajes por el Sistema de Transmisión Troncal Año 2010”. Annex 3 Table A3-3. Based on Average 2010 Data of Papos 220 substation /62/.
Validity of input value at the time of investment decision making:	Value in \$/MW to the 30 th April 2011. Thus, assumption at the time of investment decision was correct.
Justification by the validation team according to §113 of VVM: (cross checking and comparison as applicable)	Cross-checked through CDEC-SING public website, http://cdec2.cdec-sing.cl/pls/portal/cdec.pck_rpt_cne_pub.rpt_prom_cmng_mensual

Parameter:	CER price
------------	-----------

Value applied for the IRR calculation:	10 USD/tCO ₂
Source of the value:	Project developer.
Consistency of the value:	Value of 10 USD/tCO ₂ is consistent with the information provided by the Project participants in the PDD and financial analysis Excel file./19/.
Validity of input value at the time of investment decision making:	As per source Point Carbon, between 13/06/2011 and 12/12/2011 (date of investment decision of Cabo Leones Wind Farm), spot CER price had been fluctuating between 4.89 and 12.56 euro/tCO ₂ . Hence, value of 10 USD/tCO ₂ has been used as an intermediate conservative value for CER price at the time of investment decision.
Justification by the validation team according to §120, 121 of VVS version (04.0) (cross checking and comparison as applicable)	Value was cross checked against the Cabo Leones Evidences of CER prices and exchange rates, provided by Point Carbon (http://www.pointcarbon.com/news/marketdata/euets/forward/eua/) /20/, (without version number), gathered between 13/06/2011 and 12/12/2011 (date of investment decision of Cabo Leones Wind Farm), thus value used to calculate the financial model is considered reliable.

Financial calculation and conclusion:

The financial spread sheet /19/ was received, verified and found to be correct by the DOE. The assumptions used in the financial calculations are correct. Financial analysis has been calculated over a period of 20 years.

The financial analysis is in accordance with the “Tool for demonstration and assessment of additionality” version 7.0.0” /9/ and the “Guidelines on the assessment of investment analysis” version 05 /51/. All input parameters used in the IRR calculation were valid at the time of investment decision making. The validation team confirms that the Equity IRR post tax without any CDM revenue works out to be 7.25% which is below benchmark of 10.3%. It is clearly demonstrated that the proposed project activity without CER revenues is financially unattractive. The validation took cognizance of § 119 of VVS (version 04.0).

3.5.3.2 Sensitivity analysis:

According to the “Guidelines on the assessment of investment analysis” (version 05) /51/, only variables including the initial investment cost, that constitute more than 20% of either total project costs or total project revenues should be subjected to reasonable variation and the results of this variation should be presented in the PDD and be reproducible in the associated spread sheets. The validation team thus confirms that the following parameters meet the requirement and these parameters have been subjected to variations in the range of +10% and -10% in the PDD.

Input Values	10%	5%	0%	-5%	-10%
Total Investment	5.45	6.44	7.25	8.55	9.63
Electricity Price	9.84	8.72	7.25	6.10	5.00
O&M cost	7.21	7.36	7.25	7.64	7.78
Electricity Generation (MWh)	9.73	8.66	7.25	6.18	5.09

The validation took cognizance of § 120 (e) of VVS (version 04.0). The table below summaries the situation where the IRR would reach the benchmark:

Input value	Variation	Validation team's opinion
Total Investment	If the investment cost decreases by 31.35 %, the	A decrease of 31.35% in the Investment is not probable because the technology required for this

Input value	Variation	Validation team’s opinion						
	IRR reaches the benchmark.	project – wind turbines and power generation control system – is highly specialized and requires advanced engineering design and materials that are in short supply.						
Electricity Price	If the electricity tariff increases by 12.21 %, the IRR reaches the benchmark.	As the electricity tariff is set in 125 USD/MW /23/ and assuming that the rest of the parameters remain fixed, an increase of 12.21% (135 USD/MW) is not probable, due to electricity tariff trends from 2006 to 2012 - show below- /55/.						
		<table><tr><td>Year</td><td>USD/MW (Average)</td></tr><tr><td>2009</td><td>116</td></tr><tr><td>2010</td><td>135</td></tr></table>	Year	USD/MW (Average)	2009	116	2010	135
		Year	USD/MW (Average)					
		2009	116					
		2010	135					
As per information above, during 2010 the price reached an historic value of 135 USD /MW caused by the shortage of Natural Gas in the Host Country /56/. As per the information showed above, an increase of 12.21% is not probable to happen.								
O&M cost	If the O&M cost decreases by 100%, the IRR reaches the benchmark.	If the rest of the parameters remain fixed, a decrease of 100% in O&M cost is not probable because highly specialized technologies require qualified operators that command a premium over other types of employees. Also these technologies require advanced materials for their maintenance and are usually in short supply. To have any operation and maintenance costs is not a real scenario.						
Electricity Generation (MWh)	If the annual electricity supply to the grid increases by 12.87 %, the IRR crosses the benchmark.	If the rest of parameters remain fixed, an increase of 12.87 % Electricity generated and supplied (which means 446,975 MWh/year) is not probable because the project’s output is estimated taking into consideration 85 wind turbines under normal operation. Additional output implies that wind turbines will not operate under normal conditions or beyond their design limits.						

The validation team thus confirms that the sensitivity analysis is in accordance with the “Tool for demonstration and assessment of additionality” version 07.0.0 /9/ and the “Guidelines on the assessment of investment analysis” version 05 /51/. All input parameters used for sensitive analysis constitute more than 20% of either total project costs or total project revenues. The justifications provided by the PP with the variations of these parameters are been analysed, clarified and accepted by the DOE.

Besides of this, the validation team has checked the investment analysis sheet presented at the time of CDM consideration on 12/12/2011 with the present scenario -April 2013-, in order to cross check if the project IRR remains additional, taking into account that the project activity has not started, and the estimate date of the project start date is 30/10/2013. Furthermore, in order to complete the investment analysis and verify that certain conditions have not changed from the first time this project was presented in 2011 until today, the validation team has taken into consideration the following factors independently:

- **The inflation rate** has not been used in the investment analysis as a post-tax equity IRR in real terms (without inflation) is calculated through the financial model provided, in order to be compared to the benchmark of 10.3% (which is a default value for the expected return on equity calculated after taxes and in real terms) provided by the “Guidelines on the assessment of investment analysis” version 05 /12/.

- **Tariff** In case of electricity price, according to forecasts from Systep's Electricity Report /35/, in a medium hydrology scenario, costs in 2013 are expected to be around 100 USD/MWh, and hence this parameter will not increase more than 12% but will probably decrease from 125 USD/MWh to 100 USD/MWh. See provided document "Electricity price at starting date_Systep reporte electrico 2012" figure 8 page 9
- According to the evidence provided for tax rate value (http://www.sii.cl/aprenda_sobre_impuestos/impuestos/imp_directos.htm#o2p1) /59/, taxes at the time of investment decision were 17%. According to the same evidence, tax for years 2012, 2013 and 2014 would be 20%, which is higher than 17% and hence will make the Equity IRR smaller. Hence, the project would still be additional despite the change of tax value.
- **Interest rate** of 3.25% was a fixed estimated value at the time of investment decision, based on previous experience in other projects and was ratified by the evidence already provided "Evidence for interest rate.pdf" from 24/11/2012. Moreover, this value is expected to increase as per new sent evidence of Banco Santander, where it can be seen that the interest rate, which is currently being negotiated, is expected to be 3.70% or higher. Hence, the additionality of the project is guaranteed as if the interest rate increases, the equity IRR decreases.

3.5.4 Barrier analysis

No barrier analysis was carried out by project participant because the investment analysis was selected for demonstrating additionality.

3.5.5 Common practice analysis

The project participant presented an analysis of the Common practice based in the "Guidelines of Common Practice" version 02.0 /63/ as explained below:

1. Assessment of criteria

No.	Criteria selected	Determination by the validation team	Criteria justified
STEP 1: Applicable capacity or output range			
1	<i>Calculate the applicable capacity/output, +/- 50% of total design capacity/output of the proposed project activity</i>	The proposed project activity has an installed capacity of 170 MW. The selected range of installed capacity for the discussion is between 85 MW to 229 MW which covers a variation of 50% of the output capacity as required by the Guidelines of Common practice version 2.0. This is correctly placed in the PDD	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
STEP 2: Identify similar projects			
1	<i>Name of area /region /state/province</i>	<i>Host country Chile is the identified area</i> Applicable geographical area covers the SIC interconnected electrical system in the Host country and goes in line with the applied methodology ACM0002 (version 13.0.0) and the Guidelines of Common Practice: "The spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system that the CDM project power plant is connected to."	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2	<i>Apply same measure as the proposed project activity, and using same energy source/fuel and feedstock as the proposed project activity</i>	As Guidelines of Common Practice version 02.0 /63/, the project activity applies to measure subscript (b) "Switch of technology with or without change of energy source including energy efficiency improvement as well as use of renewable energies (example: energy efficiency improvements, power generation based on renewable energy)".	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

No.	Criteria selected	Determination by the validation team	Criteria justified																																																														
3	Generation projects installed capacity between (range)	<table><tr><td>Alfalfal</td><td>178.0 MW</td></tr><tr><td>Machicura</td><td>96.0 MW</td></tr><tr><td>Canutillar</td><td>172.0 MW</td></tr><tr><td>Rucúe</td><td>178.0 MW</td></tr><tr><td>Cipreses</td><td>99.9 MW</td></tr><tr><td>Abanico</td><td>129.0 MW</td></tr><tr><td>Aconcagua</td><td>89.0 MW</td></tr><tr><td>La Confluencia</td><td>165.4 MW</td></tr><tr><td>La Higuera</td><td>154.7 MW</td></tr><tr><td>Chacayes</td><td>112.0 MW</td></tr><tr><td>Curillínque</td><td>85.5 MW</td></tr><tr><td>Ventanas 1</td><td>115.0 MW</td></tr><tr><td>Ventanas 2</td><td>218.5 MW</td></tr><tr><td>Los Vientos</td><td>125.0 MW</td></tr><tr><td>Santa Lidia</td><td>132.0 MW</td></tr><tr><td>Nehuenco 9B</td><td>103.0 MW</td></tr><tr><td>Antilhue TG</td><td>101.8 MW</td></tr><tr><td>Los Pinos</td><td>92.1 MW</td></tr><tr><td>Bocamina</td><td>127.0 MW</td></tr><tr><td>Taltal 1</td><td>120.0 MW</td></tr><tr><td>Taltal 2</td><td>120.0 MW</td></tr><tr><td>Termopacífico</td><td>99.0 MW</td></tr><tr><td>Cardones</td><td>153.0 MW</td></tr><tr><td>Los Es pinos</td><td>137.0 MW</td></tr><tr><td>Olivos</td><td>99.0 MW</td></tr><tr><td>Renca</td><td>100. MW</td></tr><tr><td>Dies el Tamaya</td><td>103.7 MW</td></tr><tr><td>Salta</td><td>229.0 MW</td></tr><tr><td>Termoeléctrica Hornitos</td><td>170.1 MW</td></tr><tr><td>Termoeléctrica Tarapacá</td><td>181.8 MW</td></tr><tr><td>Termoléctrica Andina</td><td>168.8 MW</td></tr></table> Data cross-checked with reference: /15/	Alfalfal	178.0 MW	Machicura	96.0 MW	Canutillar	172.0 MW	Rucúe	178.0 MW	Cipreses	99.9 MW	Abanico	129.0 MW	Aconcagua	89.0 MW	La Confluencia	165.4 MW	La Higuera	154.7 MW	Chacayes	112.0 MW	Curillínque	85.5 MW	Ventanas 1	115.0 MW	Ventanas 2	218.5 MW	Los Vientos	125.0 MW	Santa Lidia	132.0 MW	Nehuenco 9B	103.0 MW	Antilhue TG	101.8 MW	Los Pinos	92.1 MW	Bocamina	127.0 MW	Taltal 1	120.0 MW	Taltal 2	120.0 MW	Termopacífico	99.0 MW	Cardones	153.0 MW	Los Es pinos	137.0 MW	Olivos	99.0 MW	Renca	100. MW	Dies el Tamaya	103.7 MW	Salta	229.0 MW	Termoeléctrica Hornitos	170.1 MW	Termoeléctrica Tarapacá	181.8 MW	Termoléctrica Andina	168.8 MW	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Alfalfal	178.0 MW																																																																
Machicura	96.0 MW																																																																
Canutillar	172.0 MW																																																																
Rucúe	178.0 MW																																																																
Cipreses	99.9 MW																																																																
Abanico	129.0 MW																																																																
Aconcagua	89.0 MW																																																																
La Confluencia	165.4 MW																																																																
La Higuera	154.7 MW																																																																
Chacayes	112.0 MW																																																																
Curillínque	85.5 MW																																																																
Ventanas 1	115.0 MW																																																																
Ventanas 2	218.5 MW																																																																
Los Vientos	125.0 MW																																																																
Santa Lidia	132.0 MW																																																																
Nehuenco 9B	103.0 MW																																																																
Antilhue TG	101.8 MW																																																																
Los Pinos	92.1 MW																																																																
Bocamina	127.0 MW																																																																
Taltal 1	120.0 MW																																																																
Taltal 2	120.0 MW																																																																
Termopacífico	99.0 MW																																																																
Cardones	153.0 MW																																																																
Los Es pinos	137.0 MW																																																																
Olivos	99.0 MW																																																																
Renca	100. MW																																																																
Dies el Tamaya	103.7 MW																																																																
Salta	229.0 MW																																																																
Termoeléctrica Hornitos	170.1 MW																																																																
Termoeléctrica Tarapacá	181.8 MW																																																																
Termoléctrica Andina	168.8 MW																																																																
4	Construction start date	All the above plantscommenced commercial operation before 2011, consistent with the PDD-GSP (29/05/2012) Information cross checked with reference number /15/	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																																																														
STEP 3: Non-CDM related projects (N _{all})																																																																	
1	Non-CDM Projects	<p>As per stated in the step 2 identification of the CDM Projects (registered, submitted for registration or at validation) have been identified. Hence there are 28 projects that fulfil step 2 conditions and are not CDM projects.</p> <p>Activities that were not taken into account by project participant for the common practice analysis are listed below (all are CDM activities):</p> <ul style="list-style-type: none">La Confluencia Hydro Project 165.4 MWLa Higuera Hydro Project 154.7 MwChacayes Hydro Project 112.0 MW <p>Thus N_{all}= 28</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																																																														
STEP 4: Identify projects with different technologies (N _{diff.})																																																																	
1	Plants with different technology with proposed project	As per stated in the step 2 any of the project above stated has the same technology than the project. Hence, N _{diff} = 28.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																																																														
STEP 5: Confirmation on non-common practice																																																																	
1	Non-common practice	According to the analysis carried out by the project participant	<input checked="" type="checkbox"/> Yes																																																														

No.	Criteria selected	Determination by the validation team	Criteria justified
		for common practice, $N_{all} = 28$, $N_{diff} = 28$ therefore $F = 1$ and $N_{all} - N_{diff} = 28 - 28 = 0$. The Guidelines on common practice requires that a project fulfils the following conditions for being considered as common practice: F is 1 (> 0.2) and $N_{all} - N_{diff}$ is 0 (< 3). It was demonstrated that project activity is not a “common practice” since one condition is satisfied of the two conditions required by the guidelines for common practice.	<input type="checkbox"/> No

It is therefore accepted and concluded that the proposed project activity is not ‘common practice’ within a sector in the applicable geographical area as the factor F is smaller than 0.2 and $N_{all} - N_{diff}$ is smaller than 3.

3.5.6 Conclusion of assessment of Additionality

The CDM was seriously considered by the PP. The evidences were transparently reviewed by the validation team and considered to be effective. Investment analysis and sensitivity analysis clearly demonstrate that the proposed project activity is financially unattractive. Common practice analysis was carried out showing that the proposed project activity is financially unattractive. Therefore, the proposed project activity is not business-as-usual, i.e. the proposed project activity is additional.

3.6 Monitoring

Monitoring plan was assessed by means of a comparison of the description given in section B.7.3 of PDD and monitoring requests of methodology. Project is a greenfield project, thus the baseline emissions are calculated multiplying a grid emission factor calculated ex-ante and the quantity of net electricity generation supplied by the project plant to the grid in year y (MWh/y). Monitoring plan states that the annual emission reductions will be calculated as the product of project activity annual electricity dispatched to the grid and the emission factor calculated ex-ante, therefore it is only necessary to monitor the net electricity dispatched to the grid.

Monitoring plan state that data will be measured by two bidirectional energy meters (main and secondary) at the substation of the wind farm. Measures of the net generation will be taken continuously by the main bidirectional meter and the secondary meters, which will register daily the outgoing energy from the project to the SIC grid and the energy incoming from the SIC electric grid. The net energy supplied to the grid by the project will be calculated as the difference between the energy exported, imported and the transmission losses in the transmission line /47/. Data will be registered monthly in the CDM project office and stored.

It is DOE opinion that monitoring plan of project activity can be implemented without any kind of restriction. The project monitoring plan is in compliance with the monitoring methodology ACM0002 (version 13.0.0) /8/. It is DOE’s opinion, that the project participant is able to implement the monitoring plan.

3.6.1 Parameters determined ex-ante

Sl. No.	Parameters	Description / Evaluation
1	$FC_{i,m,y}$	$FC_{i,m,y}$ Data Unit: mass or volume unit Source: Source: 2001-2010 CDEC-SIC Operation Statistics Yearbook 2001-2010 /14/. (https://www.cdec-sic.cl/contenido_es.php?categoria_id=4&contenido_id=000034) /14/. Values used in the estimation emission reduction spread sheet /13/.
2	NCV_i	Net calorific value (energy content) of fossil fuel type i in year y . Data Unit: GJ/mass or volume unit. Source: National Energy Balance 2009 (made by the National Energy Commission, available at http://www.cne.cl/estadisticas/balances-

		energeticos), /15/. Value was utilised to determine the ex-ante Emission Factor (EF) of the project activity, please refer to section 3.4.4.
3	EF _{CO₂,i,y} and EF _{CO₂,m,i,y}	CO ₂ emission factor of fuel type i used in power unit m in year y Data Unit: tCO ₂ /TJ, tCO ₂ /m ³ Source: Default CO ₂ emission factors for combustion (lower value at the 95% confidence interval as provided in Table 1.4. of the chapter 1, volume 2 of the 2006 IPCC. Guidelines on National GHG Inventories, 2006 Chapter 1 of Vol. 2 (Energy) http://www.ipcc-nggip.iges.or.jp/public/2006gl/index.html /54/. Value was utilised to determine the ex-ante Emission Factor (EF) of the project activity, please refer to section 3.4.4.
4	EG _{m,y} and EG _{k,y}	EG _{m,y} and EG _{k,y} Data Unit: MWh Source: 2001-2010 CDEC-SIC Operation Statistics Yearbook 2001-2010 /14/. (https://www.cdec-sic.cl/contenido_es.php?categoria_id=4&contenido_id=000034),(https://www.cdec-sic.cl/contenido_es.php?categoria_id=4&contenido_id=000034), (https://www.cdec-sic.cl/contenido_es.php?categoria_id=6&contenido_id=000044), CDEC-SIC Central Interconnected Electric System Load Economic Dispatch Center. Value was utilised to determine the ex-ante Emission Factor (EF) of the project activity, please refer to section 3.4.4.
5	EF _{grid,CM,y}	EF _{grid,CM,y} Data Unit: tCO ₂ /MWh Source: Calculated as per stepwise “Tool to calculate the emission factor for an electricity system” version 03.0.0. Value was utilised to calculate the baseline emissions ex-ante and will be fixed during the netire crediting period, please refer to section 3.4.4.

The validation team confirms that all relevant parameters have been sufficiently considered and the values of the parameters are real, measureable and conservative.

3.6.2 Parameters monitored ex-post

According to the approved methodology ACM0002 “Consolidated baseline methodology for grid-connected electricity generation from renewable sources” version 13.0.0, the following parameters will be monitored:

Sl. No.	Parameters	Description/Evaluation
1	EG _{facility,y}	Net electricity supplied to the grid through continuous measurement. As per approved methodology the following parameters shall be measured: (i) The quantity of electricity supplied by the project plant/unit to the grid; and (ii) The quantity of electricity delivered to the project plant/unit from the grid - Data will be measured continuously by two bidirectional energy meters (main and secondary) located at the electrical wind farm substation, which will register daily energy export and import from the SIN grid. The net energy supplied to the grid by the project will be calculated as the difference between the energy exported, imported and the transmission losses in the transmission line (L) of 1.81% of EG _{export} are taken into account, as per transmission losses calculation /47/.Monitoring of energy will be carried out continuously by the main bidirectional meter and the secondary meter.

		<ul style="list-style-type: none"> - QA/QC procedures: Meters with accuracy class 0.2S precision class and calibrated every two years by the operative personnel, in line with national regulations /52/, /53/ related to electricity meters, which doesn't provide a specific calibration period but states that "meters could be verified in site every time that the Electrical Services Direction considers this action as convenient or when the electricity consumer or the electricity generators request this service". - Archived data kept during the crediting period and two years after by means of electronic and paper backup.
--	--	---

The set of parameters to be monitored ex-post is complete according to the methodology requirements. Meter accuracy class is 0.2S which represents a good practice for electrical energy metering devices.

In summary, the validation team is convinced of compliance of the monitoring plan with the requirements of the monitoring methodology of ACM0002 (version 13.0.0). During the on-site assessment, the validation team interviewed the PP that the monitoring arrangements described in the monitoring plan are feasible within the project design. The emission reductions resulting from the proposed CDM project activity can be reported ex post and verified.

3.6.3 Management system and quality assurance

The DOE validation team has assessed the proposed management system and how does the quality will be assured in the proposed project activity. Structure for monitoring responsibilities has been identified. The outline of the operational procedure was briefly described in the PDD including a monitoring operation and organizational chart that include a:

- General Procedure
- Responsibilities organization
- Maintenance and operation of the electricity meters.
- Administrative Personnel
- Staff training
- Failure or emergency procedure

General procedure

Data will be measured continuously by two bidirectional energy meters (main and secondary) located at the electrical wind farm substation, which will register daily energy export and import from the SIN grid. The net energy supplied to the grid by the project will be calculated as the difference between the energy exported, imported and the transmission losses in the transmission line (L) of 1.81% of EG_{export} are taken into account, as per transmission losses calculation /47/. Monitoring of energy will be carried out continuously by the main bidirectional meter and the secondary meter.

Responsibilities organization

The monitoring and recording of the required parameters will be carried out by trained personnel as the Administrative Personnel that will report to the Monitoring Manager. Operative personal will register collect and file the data, and will monitor and report de electricity generation of the project activity.

Net monthly generation will be approved by the CDM director and will be doubly checked with the electricity sales bills.

An organization chart has been correctly identified in the section B.7.3. Other elements of monitoring plan.

Maintenance and operation of the electricity meters.

All measurements will rely upon calibrated measurement equipment that will be maintained regularly, checked for its functioning and calibrated every two years by the operative personnel, in line with national regulations /52/, /53/ related to electricity meters, which doesn't provide a specific calibration period but states that "meters

could be verified in site every time that the Electrical Services Direction considers this action as convenient or when the electricity consumer or the electricity generators request this service. Hence, all indicators of importance for controlling and reporting of projects performance have been incorporated in the monitoring plan as well as indicated in the planned formal set of monitoring protocol and work instructions.

Staff training

Technical trainings will be provided for personnel directly involved in operation and maintenance, also CDM monitoring training will provided to key staff involved in to it. Trainings will be mandatory for new staff.

Failure or emergency procedure

In case of failure of the main meters, a repair action will be quickly started. Nevertheless, while failure and repair of the main are achieved, backup meters will be used for monitoring parameters. Moreover, as bidirectional meters are installed, in case of failure of meters reading energy export, meters reading energy import could be used for both measurements.

In case of failure of both meters and erroneous readings are detected in both meters a cross-check with bills can be performed. CDM Project Office Director should formulate a reasonable and conservative estimation of the energy production and energy consumption based on the historical or the nearest month of energy production or consumption data. The Data Management is responsible to provide a reliable source of information for these cases will be the project SCADA registered and stored data. In failure cases, the date and hour of the beginning and end of dysfunction of the metres will be carefully registered, and such data shall be reported to the DOE in charge of the verification.

It is concluded that the site has developed a strong and reliable management control system and quality assurance.

3.7 Sustainable Development

The project is considered to be contributing to sustainable development in the host country (Chile), by utilizing wind energy for electricity power generation, and mitigating the environmental pollution caused by operation of fossil fuel-fired power plants.

The project participant has submitted to the Environmental Authority the Environmental Impact Assessment with a positive resolution on August 2012 /44/.

The validation team concluded that the project contributes to sustainable development based on the DNA Letter of Approval and the EIA resolution /3/ and /44/.

3.8 Environmental Impacts

The PDD includes a comprehensive description of the environmental impact of the project activity. This description includes type of zone where the project activity will be located as well as the municipalities, the type of possible fauna that might be in the region, the protected areas closets to the project activity and the expected environmental impact considering all the mentioned issues. No significant impact is considered to be expected. However, in order to mitigate and prevent any possible impact seven measurements will be implemented by project participant /2/.

The closest protected areas are located 14 kilometres southwest (Pinguino de Humboldt National Reserve) and 45 kilometres north (Estuario de Huasco y Carrizal Priority Site for the Biodiversity Conservation). None of these two areas is affected by the project.

The main impacts of the Cabo Leones Wind Farm can be summarized as follows:

- eventual collision of birds and bats with the blades of the turbines
- soil removal needed to assemble the turbines
- dust lifting due to the vehicles
- solid waste generation
- noise generation

All of the impacts are considered as slight, and were correctly assessed through the Declaration of the Environmental Impact Assessment developed by AGEA, dated on September 2011 /43/.

Studies included Annex 2 Environmental Characterization, Annex 3 Landscape assessment, Annex 4 Noise Assessment, Annex 5 Emissions estimation, Annex 6 Archaeology, Annex 7 Archaeological assessment, Annex 8 Plant wastewater treatment, Annex 9 Flora management and Annex 10 consultancy in management and environment.

The validation team concludes that the environmental impact by the project activity is been assessed by the project proponent and the same is stated in the PDD. To confirm the impact associated with the project proponent, the validation team has physically inspected during the on-site visit and also through conducting the relevant stakeholders. It is validation team's opinion that the project activity does not cause the adverse environmental impacts and there are no regulations or requirement by the host country to conduct the EIA for the project activity. The same is confirmed through Favourable Environmental Assessment Qualification Resolution, issued by Republic of Chile dated on 21/03/2012.

3.9 Local Stakeholder Consultation

According to the local registration, project participant has to perform a stakeholder's consultation. The local consultation was posted at the town hall announcing the meeting.

Two local stakeholders consultation were carried out by the project participant in order to raise comments related to the proposed CDM project activity before the publication of the PDD in the UNFCCC web site.

The first one was developed in Freirina on 30/01/2012, /39/, while the second one 31/01/2012 in Chañaral de Aceituno village /40/.

Project participant has provided proper evidence of the people that attended to the local stakeholder consultations. The identification of the stakeholders is totally plausible. Invitations were published and distributed in the municipalities where the project activity will be carried out in order to call stakeholder to participate in the local consultation. These means are considered to be appropriate for the local consultation.

All comments were taken into account, taking special emphasis in the questions related to development and contributions to the community, specifically, environmental benefits and some concerns related to the energy generated in the wind farm.

The comments received by local stakeholders were very positive since they were related to the possible development that project activity can offer to the community. As observed thorough the stakeholder meeting announcement /39/, many stakeholders were invited in Freirina, however the next participants participated in the meeting:

- Germán Arriaza Torres, councillor of Freirina commune
- Mario Robles, mine worker and vice-president of Freirina Mine Workers Association
- Sergio Godoy Cuello, councillor of Freirina commune

In order to confirm the adequacy of the local stakeholder's consultation, the validation team performed the following steps:

- Reviewed the web page for checking the invitation hold in internet /2/.
- Checked that an advertisement of the local consultation had been posted at the town hall announcing the meeting /39/.

- Interviewed the stakeholders, in order to confirm their formal invitation to the local consultation and comments raised during the consultation /39/, /40/. During interviews, the local stakeholders referred that the project proponents correctly conducted the SHP.

In summary, the local stakeholder consultation was carried out in Freirina on January 30th, 2012, while the other was held the next day (January 31st, 2012) in Chañaral de Aceituno village. The stakeholders were posted at the town hall announcing the meeting. The stakeholders were from different indigenous villages which surrounded the project. The stakeholders meeting have resulted with 4 topics related to the environmental impact, possibility of building the transmission line underground, impacts on the quality of life of local inhabitants, and availability of the energy generated by local inhabitants. The projects participants have taken due account of all comments received by the stakeholders and description of the event stated in the PDD is correct.

By the activities followed above (documental and electronic review, as well as on-site interviews), the DOE can corroborate that the PP engage stakeholders and solicit comments for the proposed project activity, local stakeholders invited, i.e. councillors and vice-president, are relevant since they represent the commune, thus it is DOE opinion that the stakeholders process is suitable for the project activity. This is in line with paragraphs 138, 139 and 140 of the VVS, version 04.0.

TUV Rheinland considers the local stakeholder consultation carried out adequately.

3.10 Comments by Parties, Stakeholders and NGOs

The PDD version 1 of 09/05/2012 was made publicly available on <http://cdm.unfccc.int/Projects/Validation/DB/POYYSKXN2F9WG88QCBCNFJVGLOML0Q/view.html> from 29/05/2012 to 27/06/2012 in order to invite comments from public stakeholders. No public comments have been received during that period.

Appendix A

CDM Validation Protocol

Cabo Leones Wind Farm

In

Chile

Report No. 01 997 9105070150

Table 1: Validation requirements

(based on § 37 of the CDM Modalities and Procedures and on CDM Validation and Verification Standard version 04.0)

Checklist question	Ref.	MoV2	Findings, comments, references, data sources	Draft conclusion	Final conclusion
1. Approval(VVS Section 7.6, 7.7, 7.8 & 7.9)					
1.1 Have Letters of Approval have been provided from all involved Parties?	/3/	DR	CAR 1 As per VVS 04.0 paragraph 38 the PP shall be submitted the LoAs of each Party indicated as being involved in the proposed CDM project activity in section A.3.	CAR 1	O.K.
1.2 Are all Parties, who issued the LoA, Parties to the Kyoto Protocol and are this, stated in the LoA?	/3/	DR	Chile is a Party to the Kyoto Protocol, signed on 17/06/1998 and ratified on 26/08/2002. Nevertheless, please refer to CAR 1.	CAR 1	O.K.
1.3 Is every LoA from the Parties involved issued by an organization listed as Designated National Authority (DNA) on the UNFCCC web site?	/3/	DR	Chile's DNA is: Ministry of Environment of Chile. Contact person name: Ms. Andrea Rudnick García.	CAR 1	O.K.
1.4 Is the participation in the CDM project activity voluntary and is this stated in all LoAs?	/3/	DR	Please refer to CAR 1	CAR 1	O.K.
1.5 Is the LoA unconditional with respect to 1.2 to 1.4?	/3/	DR	Please refer to CAR 1	CAR 1	O.K.
1.6 Is the title of the CDM project activity as given in the PDD identical with the title given in all LoAs and Modalities of Communication?	/3/, /4/	DR	Please refer to CAR 1 CAR 2: The Letter MoC shall be submitted to the DOE	CAR 2	O.K.
1.7 If any of provided LoAs contains additional specification of the CDM project activity (PDD version number, validation report version number, amount of ER, etc.) are	/3/	DR	Please refer to CAR 1	CAR 1	O.K.

² MoV = Means of Validation, DR = Document Review, I = Interview, www = internet search.

those specifications valid and consistent with other documents?					
1.8 Does the project activity involve any public funding from Annex I Parties? If yes, has Annex I Party provided a written confirmation that the use of such funding does not lead to the diversion of the official development assistance.	/1/	DR	Project activity does not involve any public funding from Annex I.	O.K.	O.K.
1.9 Is the MOC provided in line with the latest template available from the UNFCCC?	/4/	DR	Please refer to CAR 2	CAR 2	O.K.
1.10 Is MOC correctly filled and signed by authorized signatories identifying the focal point?	/4/	DR	Please refer to CAR 2	CAR 2	O.K.
1.11 Is the written confirmation obtained by the PP's stating the authorization, specimen signatures and personal details are valid and accurate?	/4/	DR	Please refer to CAR 2	CAR 2	O.K.
2. Participation (VVS Section 7.6, 7.7 & 7.8)					
2.1 Are the Parties and project participants (PP) listed in the section A.3 of the PDD correctly and is this information consistent with the contact details provided in Annex 1 of the PDD?	/1/	DR	Yes, Parties and project participant are listed in Section A.4.	O.K.	O.K.
2.2 Has every Party involved approved the participation of each corresponding PP, either by means of a LoA or by a separate written document?	/3/	DR	Please refer to CAR 1	CAR 1	O.K.
2.3 Do all participating Parties fulfill the participation requirements as	/3/	DR	a) Please refer to 1.2 b) Please refer to 1.3	CAR 1	O.K.

follows: a) Party has ratified the Kyoto Protocol b) Party has designated a Designated National Authority c) The assigned amount has been determined			c) N/A		
2.4 Do the letters of approval meet the following requirements? a) LoA confirms that Party has ratified the Kyoto Protocol b) LoA confirms that participation is voluntary c) The LoA confirms that the project contributes to the sustainable development of the host country? d) The LoA refers to the precise project activity title in the PDD	/3/	DR	Please refer to CAR 1	CAR 1	O.K.
3. Project Design Document (VVS Section 7.10)					
3.1 Is the PDD presented for validation based on the latest template available at the UNFCCC website?	/1/	DR	Yes, the project developer applies the latest template as per Guidelines EB 66 annex 08, for completing PDD, available at UNFCCC web page.	O.K.	O.K.
3.2 Has the PDD been established in accordance with the CDM requirements for completing PDDs issued by the CDM EB?	/1/	DR	Yes, The PDD has followed the "Guidelines for completing PDD" as established by the EB 66 Annex 08. Nevertheless, please refer the following requirement: CAR 3: The PP is requested to revise whole document, reference sources stated in the PDD shall be corrected accordingly.	CAR 3	O.K.
4. Project Description (VVS Section 7.11)					
4.1 Does the PDD contain a description, which provides the reader with a clear understanding of the precise nature of the project activity and the technical aspects of its implementation?	/1/, /45/	DR	Yes, Description in the PDD states the objective and planning of the project activity. Nevertheless, please refer the following requirement: CAR 4: 4.1) As per informed by the PP. the model of the turbines will be changed, Hub height stated in the GSP-PDD is 90m and it will be changed to 78m. Hence the PP is requested to correct the related	CAR 4	O.K.

<p>4.1b) Is the description (incl. any process flow-charts, Spreadsheets etc.) complete, coherent and consistent with the provisions of the monitoring plan?</p> <p>4.1c) Is the project's location clearly defined?</p>			<p>documentation and provide the manufacturer offer in accordance with this kind of model.</p> <p>- Further Technical characteristics of the turbines shall be added in section A.3 of the PDD:</p> <ul style="list-style-type: none"> • Power generation expected • Turbine model • Turbine installed capacity • Hub Height • Rotor Diameter • Generator specification <p>4.1b) The PP is requested to provide reliable evidence related to the distance of the transmission line 220 Kv.</p> <p>- The PP is requested to provide reliable evidence related to the percentage defined for the transmission losses 2%, and a clarification is required how this discount is in line with the methodology ACM0002.</p> <p>4.1c) - The PP is requested to include in the PDD section A.2.4 the coordinates of each turbine, as well as the measurement tower used to get the plant load factor.</p> <p>- Coordinates defining the perimeter where the wind farm will be installed shall be corrected, as per verified in the on-site visit.</p> <p>- Lay out of the total hectares expected to be used in the project shall be addressed in the PDD.</p>		
<p>4.2 In the case of greenfield project activity, is the project design described sufficiently by means of specifications, drawings and manuals?</p>	/1/	DR	<p>Yes, as per observed during the site visit Project activity is a Greenfield where the current scenario prior its implementation is a semi-desert, sparse vegetated, coastal winded pasture and shrub land, where neither facilities nor crops existed previously. Nevertheless, please refer the following requirement:</p> <p>CAR 5: Drawings and manuals regarding to the project design should be submitted to the DOE.</p>	CAR-5	O.K.
<p>4.3 Does the project activity reflects current good practices, uses state of the art technology or would the technology result in a significantly better performance, than any commonly used technologies in the</p>	/1/	DR	<p>Yes, as clearly described the PDD section A.1 the project activity reflects current good practices through the use of Technologies to produce clean electricity and reduce dependence of fossil fuel as energy sources.</p> <p>CAR 6:</p>	CAR-6	O.K.

host country?			<p>a) The PP is requested to provide reliable evidence, related to provisions of the operational lifetime “20 years” of the technology to be employed.</p> <p>b) Analysis of the technologies used in the host country for the electricity production shall be provided to the DOE. This information shall be correctly addressed in the PDD, as part of the section “Contribution to sustainable development”. a) The PP is requested to provide reliable evidence, related to provisions of the operational lifetime “20 years” of the technology to be employed.</p>		
4.4 In cases where the project activity involves the alteration of an existing installation or process, does the PDD provide a clear description of the differences between the project and the pre-project scenario?	/1/	DR	N/A	O.K.	O.K.
<p>4.5 What type is the project? Is it a microscale, or small scale: If small scale – whether is it Type I or type II or type III? Type I – is maximum output capacity is equal or less then 15MW Type II – is maximum output equal or less then 60GWh/year Type III – is maximum output exceeds 60GWh/year</p> <p>i) Project in existing facility or utilizing existing equipment(s) ii) Project is either a large scale project or a non-bundled small scale project with emission reductions exceeding 15,000 tCO₂e per year. In this case, a site visit must be performed. iii) Project is a bundled small scale</p>	/1/, /9/	DRI	<p>The project corresponds to Type III, the proposed project has a total installed capacity of 170 MW and it is expected to supply to the grid 458.14 GWh per year.</p> <p>i) N/A ii) The project is a large scale with emission reductions exceeding 15 000 tCO₂e per year. A site visit was performed by the assessment team. iii) N/A iv) N/A v) Yes, the project is a Greenfield.</p>	O.K.	O.K.

<p>project, with each project in the bundle with emission reductions not exceeding 15,000 tCO₂e per year. In such case the number of physical site visits may be based on sampling, if the sampling size is appropriately justified through statistical analysis.</p> <p>iv) The project is an individual small scale project activity with emission reductions not exceeding 15,000 tCO₂e per year. In this case, DOE may not conduct a physical site visit as appropriate.</p> <p>v) Greenfield project</p> <p>For small scale biomass, biofuel and biogas project activity – the maximal limit is 15MW (e) and 45MWth thermal output.</p> <p>For small scale solar energy projects with exceptional of parabolic and trough type collectors – rest all shall have maximum output eligibility limit in terms of aperture area is 64,000m².</p> <p>If microscale – whether is it Type I or type II or type III?</p> <p>Type I – is maximum output capacity is equal or less then 5MW, or</p> <p>Type II – is maximum output equal or less then 20GWh/year, or</p> <p>Type III – is maximum emission reductions at a scale of no more than 20kt CO₂e/year.</p>					
<p>4.6 How was the design of the project assessed?</p> <p>i) Physical site inspection</p> <p>ii) Reviewing available designs and</p>	/13/	DR	<p>i) The design of the project has been assessed through physical inspection.</p> <p>ii) CAR 7: The PP is requested to provide the feasibility study to get the 'plant load factor determined by a third party "Altermia Asesores</p>	CAR 7	O.K.

feasibility studies			company engineering”.		
4.7 Does the project qualify as a small scale CDM project activity as defined in paragraph 6(c) of decision 17/CP.7 on the modalities and procedures for the CDM?	/1/	DR	N/A	O.K.	O.K.
4.8 In case of small scale project – is the project a bundle project activity? In this case the bundle output shall not exceed the small scale project activity limit Refer « general principles for bundling»	/1/	DR	N/A	O.K.	O.K.
4.9 Is the small scale project activity a debundled component of a larger project activity in accordance with the rules defined in appendix C of the simplified modalities and procedures for small-scale CDM project activities? Refer «guidelines on assessment of debundling for SSC project activities»	/1/	DR	N/A	O.K.	O.K.
5. Baseline and Monitoring methodology(VVS Section 7.12)					
5.1 General requirements (VVS Section 7.12.1)					
5.1.1 Is the methodology used in the project activity approved by the CDM EB and is the selected version still valid?	/9/	DR	The followed methodology is ACM0002 version 13.0.0 and valid through the validation process.	O.K.	O.K.
5.2 Applicability of the selected methodology (VVS Section 7.12.2)					
5.2.1 How was it validated that the project complies with the applicability criteria set out in the methodology	/1/,/9/		The methodology ACM0002, version 13.0.0 has the following applicability criteria: This methodology is applicable to grid-connected renewable power generation project activities that: (a) install a new power plant at a site where no renewable power plant	CAR-8	O.K.

		<p>was operated prior to the implementation of the project activity (greenfield plant); (b) involve a capacity addition; (c) involve a retrofit of (an) existing plant(s); or (d) involve a replacement of (an) existing plant(s).</p> <p>The methodology is applicable under the following conditions:</p> <ul style="list-style-type: none"> • The project activity is the installation, capacity addition, retrofit or replacement of a power plant/unit of one of the following types: hydro power plant/unit (either with a run-of-riverreservoir or an accumulation reservoir), wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit; • In the case of capacity additions, retrofits or replacements (except for wind, solar, wave or tidal power capacity addition projects which use Option 2: on page 10 to calculate the parameter EGPI,y): the existing plant started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity expansion or retrofit of the plant has been undertaken between the start of this minimum historical reference period and the implementation of the project activity. <p>In case of hydro power plants:</p> <ul style="list-style-type: none"> • One of the following conditions must apply: <ul style="list-style-type: none"> o The project activity is implemented in an existing single or multiple reservoirs, with no change in the volume of any of reservoirs; or o The project activity is implemented in an existing single or multiple reservoirs, where the volume of any of reservoirs is increased and the power density of each reservoir, as per the definitions given in the project emissions section, is greater than 4 W/m²; or o The project activity results in new single or multiple reservoirs and the power density of each reservoir, as per the definitions given in the project emissions section, is greater than 4 W/m². <p>In case of hydro power plants using multiple reservoirs where the power density of any of the reservoirs is lower than 4 W/m² all the following conditions must apply:</p> <ul style="list-style-type: none"> • The power density calculated for the entire project activity using equation 5 is greater than 4 W/m²; • Multiple reservoirs and hydro power plants located at the same river 		
--	--	--	--	--

			<p>and where are designed together to function as an integrated project1 that collectively constitute the generation capacity of the combined power plant;</p> <ul style="list-style-type: none"> • Water flow between multiple reservoirs is not used by any other hydropower unit which is not a part of the project activity; • Total installed capacity of the power units, which are driven using water from the reservoirs with power density lower than 4 W/m2, is lower than 15 MW; • Total installed capacity of the power units, which are driven using water from reservoirs with power density lower than 4 W/m2, is less than 10% of the total installed capacity of the Project activity from multiple reservoirs. <p>The methodology is not applicable to the following:</p> <ul style="list-style-type: none"> • Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity, since in this case the baseline may be the continued use of fossil fuels at the site; • Biomass fired power plants; • A hydro power plant2 that results in the creation of a new single reservoir or in the increase in an existing single reservoir where the power density of the power plant is less than 4 W/m2. <p>In the case of retrofits, replacements, or capacity additions, this methodology is only applicable if the most plausible baseline scenario, as a result of the identification of baseline scenario, is .the continuation of the current situation, i.e. to use the power generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance.</p> <p>However please refer to CAR 8</p>		
5.2.2 Are all applicability conditions of the selected baseline and monitoring methodology and all tools involved satisfied by the project activity?	/1/ /9/	DR	<p>CAR 8:</p> <p>a) The PP is requested to amend the section B.2 of the PDD in accordance with the characteristics of the project and approved methodology ACM0002 Version 13.0.0</p> <p>b) All Applicability Conditions as per methodology ACM0002 Version</p>	CAR 8	O.K.

			13.0.0 shall be assessed and justified in the PDD.		
5.2.3 Is the selection of the applied baseline and monitoring methodology justified?	/1/ /9/	DR	Please refer to CAR 8	CAR 8	O.K.
5.2.4 Is the selected methodology correctly quoted in all related documents?	/1/ /9/	DR	Yes, the selected methodology ACM0002 Version 13.0.0 has been correctly quoted in all documents as required.	O.K.	O.K.
5.3 Project boundary (VVS Section 7.12.5)					
5.3.1 Does the PDD correctly describe the project boundary? Are they clearly defined and in accordance with the methodology?	/1/ /9/	DR	The project boundary is correctly identified in the PDD. According to ACM0002, “the spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system “SIC (Central Interconnected System, Sistema Interconectado Central), that the CDM project power plant is connected to.	O.K.	O.K.
5.3.2 Does the PDD correctly indicate and describe the emission sources and sinks of GHG gases that are included in the project boundary?	/1/	DR	Yes, the only GHG to be taken on account for renewable energy projects is the CO ₂ Baseline Emission due to fossil fuel consumption for energy generation in the National Grid. Nevertheless, please refer the following requirement: CAR 9: Table 5 related to the Emissions and sources included in or excluded from the project boundary shall be corrected by the PDD, as applicable to the project. • CO ₂ emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity. • Emissions from electricity generation.	CAR 9	O.K.
5.3.3 In cases where the methodology allows project participants to choose whether a source or gas is to be included in the project boundary, is the choice explained and justified by PPs?	/1/ /9/	DR	As per Methodology this condition does not apply.	O.K.	O.K.
5.3.4 Does the project involve other emissions sources not foreseen by the methodologies that may	/1/ /9/	DR	This project is not planned to implement a source of emissions which contribute to more than 1% of the estimated emission reductions.	O.K.	O.K.

question the applicability of the methodology? Do these sources contribute with more than 1% of the estimated emission reductions of the project?					
5.4 Baseline identification (VVS Section 7.12.6)					
5.4.1 Has the procedure contained in the selected methodology to identify the most reasonable baseline scenario been applied correctly and documented in the PDD?	/1/ /9/	DR	The methodology does not contain a specific procedure to determine baseline scenario in the cases where the project activity consist on the installation of a new grid-connected renewable plant. The baseline scenario is indicated in the PDD as definition in the methodology.	O.K.	O.K.
5.4.1.1 Is the identified baseline scenario plausible?	/1/ /9/	DR	Yes, since the energy generation in the Chilean SIC by the project would otherwise been generated by the operation of grid-connected power plants.	OK	OK
5.4.1.2 Are all assumptions stated in a transparent and conservative manner?	/1/ /9/	DR	Yes, baseline is the power plants connected to the grid that have been supplying energy to the grid by the consumption of fossil fuels	O.K.	O.K.
5.4.2 Does the selected methodology require the use of tools and does PDD reflects that correctly?	/1/ /9/	DR	<p>The selected methodology (ACM0002) requires the use of other tools.</p> <ul style="list-style-type: none"> - “Tool to Calculate the Emission Factor for an Electricity System” version 2.2.1“ - Tool to Calculate Project or Leakage CO2“Emissions from Fossil Fuel - Combustion” (version 02). - “Combined tool to identify the baseline - scenario and demonstrate additionality” (version 04.0.0). <p>CAR 10: Section B.6.1 of the PDD shall be amended as applicable for this kind project, in accordance with the methodology ACM0002 Version 13.0.0 the use of fossil fuels for back up or emergency purposes can be neglected for geothermal and solar thermal projects only. Thus the PDD shall be corrected by the PP accordingly.</p>	CAR 10	O.K.
5.4.2.1 Were all the tools applied correctly	/1/ /11/	DR	<p>Yes, information is described in the PDD.</p> <p>The selected methodology (ACM0002) requires the use of other tools.</p>	CAR 10 CL 11	O.K.

			<ul style="list-style-type: none"> - “Tool to Calculate the Emission Factor for an Electricity System” version 2.2.1“ - Tool to Calculate Project or Leakage CO2“Emissions from Fossil Fuel - Combustion” (version 02). - “Combined tool to identify the baseline - scenario and demonstrate additionality” (version 04.0.0). <p>Nevertheless, please refer CAR 9 and the following requirement:</p> <p>CL 11: The PP is requested to clarify whether the calculation of the emission factor, mainly the calculation of the build margin (BM) emission factor, is based on the most recent information available on units already built for sample group m at the time of CDM-PDD submission to the DOE for validation.</p>		
5.4.3 In case the methodology requires several alternative scenarios to be considered in the identification of the most reasonable baseline scenario, have all scenarios supplying comparable output and services that are to be supplied by the proposed project activity been considered and have no reasonable alternative scenario been excluded?	/1/ /9/	DR	No, the methodology is clear in the baseline scenario for wind farms. Do not need to assess alternatives.	O.K.	O.K.
5.4.3.1 Has the choice of the baseline scenario been done using conservative assumptions?	/1/ /9/	DR	Yes, the baseline scenario is described as in the methodology	O.K.	O.K.
5.4.4 Is the identified baseline scenario reasonable according to the assumptions, calculations and rationales used in the PDD and other reference sources?	/1/ /11/	DR	Please refer to CAR 10	CAR 10	O.K.
5.4.6 Does the PDD describe how the national and sectoral policies,	/1/ /7/	DR	CAR 12: As per CDM PS paragraph 45 analysis of sectoral policies and circumstances shall be addressed in the PDD.	CAR 12	O.K.

macro-economic trends and political aspirations relevant to the baseline scenario have been identified and considered in the PDD? Refer CDM PS para 45					
5.4.7 Does the PDD provide a verifiable description of the identified baseline scenario, including a description of the technology that would be employed and/or the activities that would take place in the absence of the project activity?	/1/ /13/	DR	CAR 13: As per "Combined tool to identify the baseline scenario and demonstrate additionality" (version 04.0.0), the PPs shall define realistic and credible alternatives to the project activity, including a description of the technology that would be employed and/or the activities that would take place in the absence of the project activity. Furthermore a clearly justification shall be added in the PDD to assess the Consistency with mandatory laws and regulations.	CAR 13	O.K.
5.5 Algorithm and/or formulae used to determine emission reductions (VVS Section 7.12.7)					
5.5.1 Are all calculations applied and documented according to the selected methodology and in a complete and transparent manner to calculate emission reductions from the project activity?	/1/ /9/	DR	Please refer to CL 11	CL 11	O.K.
5.5.2 In case the methodology allows a selection between different options for equations or parameters, has adequate justification been given and have the correct equations and parameters been used, in accordance with the methodology selected?	/1/ /11/	DR	Please refer to CL 11	CL 11	O.K.
5.5.3 In case some data and parameters will not be monitored throughout the crediting period, but have already been determined and fixed, are all data sources,	/1/ /11/	DR	Please refer to CL 11	CL 11	O.K.

assumptions and calculations correct, applicable to the proposed CDM project activity and conservative?					
5.5.3.1 Parameter: $FC_{i,m,y}$	/1/ /13/ /14/	DR	$FC_{i,m,y}$ Data Unit: mass or volume unit Source: Source: 2001-2010 CDEC-SIC Operation Statistics Yearbook 2001-2010 /14/. (https://www.cdec-sic.cl/contenido_es.php?categoria_id=4&contenido_id=000034) /14/. Values used in the estimation emission reduction spread sheet /13/.	O.K.	O.K.
5.5.3.2 Parameter: NCV_i	/1/ /15/	DR	Net calorific value (energy content) of fossil fuel type i in year y. Data Unit: GJ/mass or volume unit. Source: National Energy Balance 2009 (made by the National Energy Commission, available at http://www.cne.cl/estadisticas/balances-energeticos), /15/. Value was utilised to determine the ex-ante Emission Factor (EF) of the project activity, please refer to section 3.4.4.	O.K.	O.K.
5.5.3.3 Parameter: $EF_{CO_2,i,y}$ and $EF_{CO_2,m,i,y}$	/54/	DR	CO_2 emission factor of fuel type i used in power unit m in year y Data Unit: tCO_2/TJ , tCO_2/m^3 Source: Default CO_2 emission factors for combustion (lower value at the 95% confidence interval as provided in Table 1.4. of the chapter 1, volume 2 of the 2006 IPCC. Guidelines on National GHG Inventories, 2006 Chapter 1 of Vol. 2 (Energy) http://www.ipcc-nggip.iges.or.jp/public/2006gl/index.html /54/. Value was utilised to determine the ex-ante Emission Factor (EF) of the project activity, please refer to section 3.4.4.	O.K.	O.K.
5.5.3.4 Parameter: $EG_{m,y}$ and $EG_{k,y}$	/14/	DR	$EG_{m,y}$ and $EG_{k,y}$ Data Unit: MWh Source: 2001-2010 CDEC-SIC Operation Statistics Yearbook 2001-2010 /14/. (https://www.cdec-sic.cl/contenido_es.php?categoria_id=4&contenido_id=000034),(https://www.cdec-sic.cl/contenido_es.php?categoria_id=4&contenido_id=000034),(https://www.cdec-sic.cl/contenido_es.php?categoria_id=6&contenido_id=000044), CDEC-	O.K.	O.K.

			SIC Central Interconnected Electric System Load Economic Dispatch Center. Value was utilised to determine the ex-ante Emission Factor (EF) of the project activity, please refer to section 3.4.4.		
5.5.3.5 Parameter: EF _{grid,CM,y}	/1/	DR	Combined margin CO2 emission factor for grid connected power generation in year y Data Unit: tCO ₂ /MWh Source: Calculated as per stepwise “Tool to calculate the emission factor for an electricity system” version 03.0.0. Value was utilised to calculate the baseline emissions ex-ante and will be fixed during the netire crediting period, please refer to section 3.4.4.	O.K.	O.K.
5.5.4 In case data and parameters will be monitored on implementation and hence become available only after validation of the project activity, are the estimates provided in the PDD for these data and parameters reasonable?	/1/ /11/	DR	Yes. Estimates of ex-ante calculations are provided in the GSP PDD, such as: - Plant Load Factor (31.4%) evidenced with the Wind assessment developed by a third party Altermia Asesores company engineering company - Emission Factor estimation is publically available. Nevertheless, please refer to CAR 6 and CL 11	CAR-6 CL-11	O.K.
5.5.5 Have the major risks and uncertainties, which can influence the emission reduction estimates, been identified and addressed in the PDD?	/1/ /9/	DR	Yes, since the ex-ante are based on studies and public information.	O.K.	O.K.
5.5.6 Are the calculations documented according to the approved methodology and in a complete and transparent manner in calculating the project emissions? Have conservative assumptions been used when calculating the project emissions?	/1/ /9/	DR	The project activity is the installation of a wind farm. In accordance to ACM0002 (version 13.0.0), for most renewable power generation project activities, PE _y = 0.	OK	OK
5.5.7 Are uncertainties in the project emission estimates properly addressed?	/1/ /9/	DR	Yes, all the steps of the methodology were followed thus emission reduction calculation is considered to be complete.	OK	OK
5.5.8 Does any of the parameters require	/1/	DR	Not applicable for renewable project activity (installation of a wind farm	O.K.	O.K.

the use of sampling? If yes – how the sampling is been carried out	/9/		facility).		
5.6 Leakage					
5.6.1 Has the leakage been identified and calculated according to the approved methodology?	/1/ /9/	DR	According to the applied methodology no leakage has to be considered.	O.K.	O.K.
5.6.2 Have the leakage been addressed in complete, conservative and substantiated manner?	/1/ /9/	DR	According to the applied methodology no leakage has to be considered.	O.K.	O.K.
5.6.3 Are uncertainties in the leakage emission estimates properly addressed?	/1/ /9/	DR	According to the applied methodology no leakage has to be considered.	O.K.	O.K.
6. Methodology-related issues for afforestation or reforestation CDM project activities					
Add specific A/R requirements – if applicable!			Not applicable for this CDM project activity	O.K.	O.K.
7. Additionality (VVS Section 7.12.8)					
7 a) What approach/tool does the project use to assess additionality? Is this in line with the methodology? In case of small-scale CDM project activities, is Attachment A to Appendix B of the simplified modalities and procedures for small-scale CDM project activities applied considering also the “Non-binding best practice examples to demonstrate additionality for SSC project activities” with any applicable additionality tools.	/1/ /10/ /13/	DR	PP uses Investment analysis as stated in the “Combined tool to identify the baseline scenario and demonstrate additionality “ (version 04.0.0) & “Tool for the demonstration and assessment of additionality” (version 07.0.0)	O.K.	O.K.
7 b) Have the regulatory requirements correctly been taken into account to evaluate the project activity and	/1/ /13/	DR	Please refer CAR 12	CAR 12	O.K.

the alternatives? Is sufficient evidence provided to support the relevance of the arguments made?					
7 c) What is the project additionality mainly based on (Investment analysis or barrier analysis)?	/1/ /10/	DR	The project is based on investment analysis based on the “Tool for the demonstration and assessment of additionality” (version 07.0.0)	O.K.	O.K.
7.1 Prior consideration of the CDM (VVS Section 7.12.9)					
7.1.1 Is there documented evidence provided by the project participants on how and when the decision to proceed with the project activity was taken?	/1/ /15/	DR	CAR 14: The PP is requested to clarify how the starting date stated in the GSP- PDD is line with the “Glossary of CDM terms” and CDM VVS (§105). The PP is requested to provide reliable evidence, and clarify whether the timeline as prior CDM consideration submitted in the GSP- PDD, is in line with the project implementation history.	CAR 14	O.K.
7.1.2 Is the starting date of the project activity, reported in the PDD, in accordance with the “Glossary of CDM terms” and VVS (§106)?	/1/ /15/	DR	Please refer to CAR 14	CAR 14	O.K.
7.1.3 Is the date stated in the provided evidence consistent with other available real action evidence (e.g. dates of construction, purchase orders for equipment)?	/1/ /15/	DR	Please refer to CAR 14	CAR 14	O.K.
7.1.4 If the project was not published and the starting date is on or after 2nd August 2008, was it possible to receive from UNFCCC secretariat and DNA a written confirmation that PPs previously informed the above entities on commencement of the project activity and of their intention to seek CDM status?	/1/	DR	The project was published from 29/05/2012 to 27/06/2012, and the starting date is after, i.e. 01/09/2012, thus notification is not necessary, complying with the EB49 Annex 22.	O.K.	O.K.
7.1.5 For the project activities with a starting date before 2nd August 2008 and before the actual	/1/	DR	N/A	O.K.	O.K.

publication, was there enough evidence presented to prove that PPs were previously aware of CDM?					
7.1.6 For the project activities with a starting date before 2nd August 2008 and before the actual publication, was there enough evidence presented to prove that CDM benefits have been a decisive factor in the decision to proceed with the project activity?	/1/	DR	N/A	O.K.	O.K.
7.1.7 Does the individual or body that took the decision to proceed with the project activity have/had the authority to do so?	/1/	DRI	Yes. Gregorio Álvarez, (President from Grupo Ibereólica, who took the decision to develop the CDM is a Project Participant, therefore he have the authority to develop the CDM Project.	O.K.	O.K.
7.1.8 For the project activities with a starting date before 2nd August 2008 and before the actual publication, was there enough evidence presented to prove that PPs were taking continuing and real actions to secure CDM status for the project in parallel with its implementation?	/1/	DR	N/A	O.K.	O.K.
7.1.7 In case there is a significant gap between the start date of the project activity and the commencement of validation, how was it possible for the project participant to commit funds to the project in advance of receiving a positive validation opinion?	/1/	DR	N/A Validation began before starting date of the project activity.	O.K.	O.K.
7.1.8 How has the starting date of the project activity been determined?	/1/, /15/	DR	Please refer to CAR 14	CAR 14	O.K.

What are the dates of the first contracts for the project activity? When was the first construction activity?					
7.1.9 Is the stated expected operational lifetime of the project activity reasonable?	/1/	DR	Please refer to CAR 7	CAR 7	O.K.
7.1.10 Is the crediting period start date, the type (renewable/fixed) and the length of the crediting period clearly defined and reasonable?	/1/ /8/	DR	Yes, the PP has selected a renewable period of 7 years 0 months in accordance with the "Guidelines for completing the CDM-PDD" established in the EB 66 Annex 8.	O.K.	O.K.
7.2 Identification of alternatives(VVS Section 7.12.10)					
7.2.1 Does the PDD identify and list credible alternatives to the CDM project activity in order to determine the most realistic baseline scenario, unless selected approved methodology prescribes/identifies the baseline scenario and no further analysis is required?	/1/ /13/	DR/I	The selected approved methodology identifies the baseline scenario and no further analysis is needed. Nevertheless the "Tool for the demonstration and assessment of additionality" required the identification of such alternatives.	OK	OK
7.2.2 Does the list of alternatives include as one of the options that the project activity is undertaken without being registered as a CDM project activity?	/1/ /13/	DR/I	Yes, the alternative 3 is the project activity without CDM benefits.	OK	OK
7.2.3 Does the list contain all realistic/credible alternatives that the DOE, on the basis of its local and sectoral knowledge, considers to be viable means of supplying the outputs or services that are to be supplied by the project activity?	/1/ /13/	DR	Please refer to CAR 12	CAR 12	O.K.

7.2.4 Is the exclusion of the alternatives for legal reasons justified?	/1/ /13/	DR	Please refer to CAR 12	CAR 12	O.K.
7.3 Investment Analysis(VVS Section 7.12.11)					
7.3.1 Are all sources of revenues (including savings) have been considered in the PDD and all calculations?	/1/ /14/ /16/	DR	CAR 15: Regarding the presented investment analysis, the PP is requested to clarify or correct the following issues accordingly: <ul style="list-style-type: none"> a) No fair (residual) value was considered at the end of year 20 as a positive cash flow. b) Depreciation is calculated as part of the project Costs, yet it is not added back to net profits as an adjustment for the purpose of calculating Equity IRR. c) Depreciation and Interest Expense must be calculated separately. d) PP must provide supporting information regarding Depreciation of assets during the lifetime of the project, which may have a direct impact on the project's residual value. 	CAR 15	O.K.
7.3.2 Is the type of investment analysis selected correctly in the PDD? Is the choice of benchmark analysis, investment comparison or simple cost analysis correct and justified?	/1/ /10/ /13/	DR	Yes, the benchmark analysis was chosen which is in accordance to the "Combined tool to identify the baseline scenario and demonstrate additionality " (version 04.0.0) & "Tool for the demonstration and assessment of additionality" (version 07.0.0)	O.K.	O.K.
7.3.3 Is the selected financial indicator chosen and applied correctly? Is it on equity/project basis? Before/after tax? Is the financial indicator in correspondence with the benchmark?			CAR 16: As per Assessment of investment analysis based on the "Guidelines on the assessment of investment analysis, version 05", the PP is requested to clarify or correct the following issues: <ul style="list-style-type: none"> a) Discount rate was calculated taking into consideration Interest Expense. b) PP must decide whether to base its analysis on Project IRR or Equity IRR, especially since the benchmark provided in the guidelines is also comparable with Equity IRR. c) IRR calculations in Investment Analysis spread sheet are not consistent with the information provided in PDD. d) In order to be consistent, PP must use WACC as a benchmark for Project IRR, or Cost of Equity as a benchmark for Equity IRR. e) PP must decide whether to base its analysis on Project IRR or Equity IRR, especially since the benchmark provided in the 	CAR 16	O.K.

			<p>guidelines is also comparable with Equity IRR.</p> <p>f) As per the Investment Analysis spread sheet, the Debt / Equity Ratio is 70/30. Per the guidelines for Investment Analysis, the following must apply:</p> <ul style="list-style-type: none"> - In the calculation of equity IRR, only the portion of investment costs which is financed by equity should be considered as the net cash outflow, the portion of the investment costs which is financed by debt should not be considered a cash outflow. 		
7.3.4 Is the guidance on IRR calculation and assessment correctly applied?.	/1/, /14/, 16	DR	<p>CAR 17: As per Assessment of investment analysis based on the “Guidelines on the assessment of investment analysis, version 05”, the PP is requested to clarify or correct the following issues:</p> <ul style="list-style-type: none"> a) Interest Expense and financing expenditures should not be included in the calculation of project IRR. b) Project IRR or Equity IRR, especially since the benchmark provided in the guidelines is also comparable with Equity IRR. c) PP must decide whether to base its analysis on Project IRR or Equity IRR. 	CAR 17	O.K.
7.3.5 In case project participants use values from Feasibility Study Reports (FSR) is it possible to verify that the period between the FSR date and investment decision was reasonably short and FSR values did not change materially?	/1/	DR	N/A, FSR was not part of the investment analysis	O.K.	O.K.
7.3.6 Are all the values consistent between FSR and PDD and are inconsistencies properly justified?	/1/	DR	N/A, FSR was not part of the investment analysis	O.K.	O.K.
7.3.7 Were all the values from FSR applicable and valid at the time of the investment decision?	/1/	DR	N/A, FSR was not part of the investment analysis	O.K.	O.K.
7.3.8 Is it reasonable to assume that no investment would be made at a rate of return lower than the	/1/, /14/, 16	DR	Please refer to CAR 14	CAR 14	O.K.

benchmark by, for example, assessing previous investment decisions by the project participants or some verifiable circumstances that have led to a change in the benchmark?					
7.3.9 Is the Investment Analysis prepared in compliance with the latest version of the “Guidance on the Assessment of Investment Analysis” as provided by the CDM EB?	/1/	DR	Yes, please refer to the table: “Assessment of investment analysis based on the Guidelines on the assessment of investment analysis version 05 established in the EB 62 Annex 5 attached.	O.K.	O.K.
7.3.10 Do the project include all the data sources used (input & output / loss & profit) and list all the projects that have been used for cross-checking in accordance with VVS paragraph 123: a. Explain, how was the total investment cost accepted, and if it was available at the time of decision, b. Does the income tax calculation take depreciation into account? Is the depreciation year in accordance with normal accounting practice in the host country? c. Has salvage value been taken into account? Is working capital returned in the last year of operation? d. How are the PLF of the project assessed? e. How are output price assessed? f. How are O&M cost assessed?	/1/, /14/, 16	DR	Please refer to CAR 14	CAR 14	O.K.

7.3.11 Sensitivity analysis: Have the key parameters contributing to more than 20% of the revenue/costs during operating or implementation been identified? Has possible correlation between the parameters been considered? Is the range of variations (10% in default) is reasonable in the project context? Have the key parameters been vary to reach or cross the benchmark and have the likelihood of this to happen been justified?	/1/ /14/ 16	DR	CAR 18: As per PDD, the variables subject to the sensitivity analysis are: <ul style="list-style-type: none"> - Construction Investment - Electricity Price - O&M Cost - Electricity Generation Nevertheless, the sensitivity calculations in Investment Analysis are not consistent with the information provided in PDD. Thus the PDD shall be corrected by the PP accordingly.	CAR 18	O.K.
7.4 Barrier analysis(VVS Section 7.12.12)					
7.4.1 Are there any issues addressed in the barrier analysis that have a clear impact on the financial viability of the project activity and that shall be assessed by an investment analysis?	/1/	DR	Additionality was not analysed through Barrier Analysis.	O.K.	O.K.
7.4.2 Do the listed barriers exist and is their existence substantiated?	/1/	DR	N/A	O.K.	O.K.
7.4.3 Would any of the identified barriers prevent the implementation of the project activity but not equally prevent the implementation of the possible alternatives, in particular the implementation of the identified baseline scenario?	/1/	DR	N/A	O.K.	O.K.
7.5 Common practice analysis(VVS Section 7.12.13)					
7.5.1 If the PPs claim in the PDD that CDM project activity is not	/1/		Yes, the PDD followed the stepwise procedure under Guideline on common practice to demonstrate the project is not a common practice in	OK	OK

common practice, is it justified? Refer «guideline on common practice». Assess that: PDD provide similar projects within the region with similar measure and energy source/fuel and feedstock with comparable quality/properties/application areas as the proposed project activity?			the host country. The geographical boundaries of the project have been correctly identified. According to ACM0002, “the spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system that the CDM project power plant is connected to”.		
7.5.2: Step 1: How is the assessment done on capacity output within the applicable range, is it within (+/- 50%) of the proposed projects	/2/		The proposed project activity has an installed capacity of 170 MW. The selected range of installed capacity for the discussion is between 85 MW to 229 MW which covers a variation of 50% of the output capacity as required by the Guidelines of Common practice version 2.0. This is correctly placed in the PDD	OK	OK
7.5.3: Step 2: How have similar projects (both CDM and non-CDM) projects been identified, confirm data source and information: - Located at applicable geographical area, - Apply the same measure as the proposed project activity, - Use same energy source/fuel and feedstock as the proposed project activity, if a technology switch measure is implemented by the proposed project activity, - The plants in which the projects are implemented produce goods or services with comparable quality, proporeties and application areas (e.g. clinker) as the proposed project plant, - The capacity or output of the projects is within the applicable	/1/ /15/	DR	Host country Chile is the identified area Applicable geographical area covers the SIC interconnected electrical system in the Host country and goes in line with the applied methodology ACM0002 (version 13.0.0) and the Guidelines of Common Practice: “The spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system that the CDM project power plant is connected to.” As Guidelines of Common Practice version 02.0 /63/, the project activity applies to measure subscript (b) “Switch of technology with or without change of energy source including energy efficiency improvement as well as use of renewable energies (example: energy efficiency improvements, power generation based on renewable energy)”.	CL-19	O.K.
			Alfalfal 178.0 MW Machicura 96.0 MW Canutillar 172.0 MW Rucúe 178.0 MW Cipreses 99.9 MW Abanico 129.0 MW Aconcagua 89.0 MW La Confluencia 165.4 MW La Higuera 154.7 MW		

capacity or output range calculated (+/- 50%) of the proposed projects, - The projects started commercial operation before the CDM-PDD is published for GSC or before the start date of the proposed project activity, whichever is earlier for the proposed project activity.				<table><tr><td>Chacayes</td><td>112.0 MW</td></tr><tr><td>Curillinque</td><td>85.5 MW</td></tr><tr><td>Ventanas 1</td><td>115.0 MW</td></tr><tr><td>Ventanas 2</td><td>218.5 MW</td></tr><tr><td>Los Vientos</td><td>125.0 MW</td></tr><tr><td>Santa Lidia</td><td>132.0 MW</td></tr><tr><td>Nehuenco 9B</td><td>103.0 MW</td></tr><tr><td>Antilhue TG</td><td>101.8 MW</td></tr><tr><td>Los Pinos</td><td>92.1 MW</td></tr><tr><td>Bocamina</td><td>127.0 MW</td></tr><tr><td>Taltal 1</td><td>120.0 MW</td></tr><tr><td>Taltal 2</td><td>120.0 MW</td></tr><tr><td>Termopacífico</td><td>99.0 MW</td></tr><tr><td>Cardones</td><td>153.0 MW</td></tr><tr><td>Los Es pinos</td><td>137.0 MW</td></tr><tr><td>Olivos</td><td>99.0 MW</td></tr><tr><td>Renca</td><td>100. MW</td></tr><tr><td>Dies el Tamaya</td><td>103.7 MW</td></tr><tr><td>Salta</td><td>229.0 MW</td></tr><tr><td>Termoeléctrica Hornitos</td><td>170.1 MW</td></tr><tr><td>Termoeléctrica Tarapacá</td><td>181.8 MW</td></tr><tr><td>Termoléctrica Andina</td><td>168.8 MW</td></tr></table>	Chacayes	112.0 MW	Curillinque	85.5 MW	Ventanas 1	115.0 MW	Ventanas 2	218.5 MW	Los Vientos	125.0 MW	Santa Lidia	132.0 MW	Nehuenco 9B	103.0 MW	Antilhue TG	101.8 MW	Los Pinos	92.1 MW	Bocamina	127.0 MW	Taltal 1	120.0 MW	Taltal 2	120.0 MW	Termopacífico	99.0 MW	Cardones	153.0 MW	Los Es pinos	137.0 MW	Olivos	99.0 MW	Renca	100. MW	Dies el Tamaya	103.7 MW	Salta	229.0 MW	Termoeléctrica Hornitos	170.1 MW	Termoeléctrica Tarapacá	181.8 MW	Termoléctrica Andina	168.8 MW		
	Chacayes	112.0 MW																																																
Curillinque	85.5 MW																																																	
Ventanas 1	115.0 MW																																																	
Ventanas 2	218.5 MW																																																	
Los Vientos	125.0 MW																																																	
Santa Lidia	132.0 MW																																																	
Nehuenco 9B	103.0 MW																																																	
Antilhue TG	101.8 MW																																																	
Los Pinos	92.1 MW																																																	
Bocamina	127.0 MW																																																	
Taltal 1	120.0 MW																																																	
Taltal 2	120.0 MW																																																	
Termopacífico	99.0 MW																																																	
Cardones	153.0 MW																																																	
Los Es pinos	137.0 MW																																																	
Olivos	99.0 MW																																																	
Renca	100. MW																																																	
Dies el Tamaya	103.7 MW																																																	
Salta	229.0 MW																																																	
Termoeléctrica Hornitos	170.1 MW																																																	
Termoeléctrica Tarapacá	181.8 MW																																																	
Termoléctrica Andina	168.8 MW																																																	
			Data cross-checked with reference: /15/																																															
			All the above plants commenced commercial operation before 2011, consistent with the PDD-GSP (29/05/2012) Information cross checked with reference number /15/																																															
			However, please refer to the following CL.																																															
			CL 19: According to the CDEC-SING “Central Interconnected Electric System Load Economic Dispatch Center” only 162.2 MW of installed wind energy capacity, distributed in 4 Wind Farms have identified. Thus Wind Farms with large installed capacity are not common in Chile. However, the PP is requested to clarify whether all of these wind farms belong to off grid local consumption.																																															

7.5.4: Step 3: Within the projects identified in Step 2, how many have been identified : are neither registered CDM project activities, project activities submitted for registration, nor project activities undergoing validation. Note N_{all} .	/3/		<p>As per stated in the step 2 identification of the CDM Projects (registered, submitted for registration or at validation) have been identified. Hence there are 28 projects that fulfil step 2 conditions and are not CDM projects.</p> <p>Activities that were not taken into account by project participant for the common practice analysis are listed below (all are CDM activities):</p> <ul style="list-style-type: none"> • La Confluencia Hydro Project 165.4 MW • La Higuera Hydro Project 154.7 Mw • Chacayes Hydro Project 112.0 MW <p>Thus $N_{all} = 28$</p>	OK	OK
7.5.5: Step 4: Within similar projects identified in Step 3; has it been identified those that apply technologies that are different to the technology applied in the proposed project activity. Note N_{diff} .	/4/		<p>As per stated in the step 2 any of the project above stated has the same technology than the project. Hence, $N_{diff} = 28$.</p>	OK	OK
7.5.6: Step 5: Assess the calculation of $F = 1 - N_{diff}/N_{all}$ and confirm if it is acceptable.	/5/		<p>According to the analysis carried out by the project participant for common practice, $N_{all} = 28$, $N_{diff} = 28$ therefore $F = 1$ and $N_{all} - N_{diff} = 28 - 28 = 0$. The Guidelines on common practice requires that a project fulfils the following conditions for being considered as common practice: F is 1 (> 0.2) and $N_{all} - N_{diff}$ is 0 (< 3). It was demonstrated that project activity is not a “common practice” since one condition is satisfied of the two conditions required by the guidelines for common practice.</p>	OK	OK
7.5.7: Conclusion: Is the assessment of common practice completed with evaluation of N_{all} , N_{diff} and F and concluded that the proposed project activity is not a common practice: $F < 0.2$, and $N_{all} - N_{diff} < 3$			<p>It is therefore accepted and concluded that the proposed project activity is not ‘common practice’ within a sector in the applicable geographical area as the factor F is smaller than 0.2 and $N_{all} - N_{diff}$ is smaller than 3.</p>	OK	OK
7.6 First-of-its-kind (VVS Section 7.12.13)					

<p>If the PPs claim in the PDD that CDM project activity is the “first of its kind”, is it justified?</p> <p>Refer «guideline on additionality of first-of-its-kind activities»</p> <p>Assess that:</p> <p>a. Applicable geographical area covering entire host country unless justification on essential distinction between the identified specific geographical area and rest of the Project is the first in the applicable host technologies that are implemented by any other project, which are able to deliver the same output and have started commercial operation country has been distinctly justified,</p> <p>b. geographical area that applies in the applicable geographical area before the CDM-PDD is published for GSC or before the start date of the proposed project activity, whichever is earlier,</p> <p>c. The project implements one or more of the measures (refer definition in «guideline on additionality of first-of-its-kind activities»),</p>	/1/	DR	NA, the PP does not claim the project is first of its kind.	O.K.	O.K.
---	-----	----	---	------	------

d. The project participants selects crediting period of a maximum of 10 years with no option of renewal.					
8. Conclusion					
8.1 What is the conclusion with regard to the additionality of the project activity.	/6/		The CDM was seriously considered by the PP. The evidences were transparently reviewed by the validation team and considered to be effective. Investment analysis and sensitivity analysis clearly demonstrate that the proposed project activity is financially unattractive. Common practice analysis was carried out showing that the proposed project activity is financially unattractive. Therefore, the proposed project activity is not business-as-usual, i.e. the proposed project activity is additional.	OK	OK
9. Monitoring plan (VVS Section 7.12.14)					
9.1 Are all parameters required by the selected approved methodology or tool identified and listed in the PDD? Note: All parameters indicated in the methodology and applicable to the project must be listed in the PDD, omissions due to non-applicability be justified.	/1/ /9/	DR	Yes, all the monitoring parameters from the methodology and tool are included in the PDD.	O.K.	O.K.
9.2 Are the parameters in the PDD clearly described and that the measurement method clearly stated for each value to be monitored and deemed appropriate:	/1/ /9/	DR	CL 20: The PP is requested to clarify how the measurement method is in line with the methodology ACM0002 / Version 13.0.0 and how the consideration of Transmission losses (L) of 2% of EG _{export} is in compliance with the calculation stated in the methodology.	CL 20	O.K.
8.2.1 Parameter: EG _{facility,y}	/1/	DR	Net electricity supplied to the grid through continuous measurement. As per approved methodology the following parameters shall be measured: (i) The quantity of electricity supplied by the project plant/unit to the grid; and (ii) The quantity of electricity delivered to the project plant/unit from the	O.K.	O.K.

			<p>grid</p> <ul style="list-style-type: none"> - Data will be measured continuously by two bidirectional energy meters (main and secondary) located at the electrical wind farm substation substation, which will register daily energy export and import from the SIN grid. The net energy supplied to the grid by the project will be calculated as the difference between the energy exported, imported and the transmission losses in the transmission line (L) of 1.81% of EG_{export} are taken into account, as per transmission losses calculation /47/. Monitoring of energy will be carried out continuously by the main bidirectional meter and the secondary meter. - QA/QC procedures: Meters with accuracy class 0.2S precision class and calibrated every two years by the operative personnel, in line with national regulations /52/, /53/ related to electricity meters, which doesn't provide a specific calibration period but states that "meters could be verified in site every time that the Electrical Services Direction considers this action as convenient or when the electricity consumer or the electricity generators request this service". - Archived data kept during the crediting period and two years after by means of electronic and paper backup. 		
8.2 Does the monitoring plan record data in the original form as generated, providing QA/QC procedures to be used on the measurement method?	/1/, /9/	DR	<p>CAR 21:</p> <ul style="list-style-type: none"> a) The PP is requested to clarify the difference in the precision class between the main meter 0.2 S and the secondary meter 05.S, as well as the confirmation which meter will be used for the ERs calculation. b) The PP is requested to provide further information related to the calibration frequency of meters which will be employed, and whether the calibration will be consistent with the methodology ACM0002 Version 13.0.0, where is stated that all measurements should be conducted with calibrated measurement equipment according to relevant industry standards. 	CAR 21	O.K.
9.4 Is the measurement equipment for each parameter described and deemed appropriate?	/1/, /8/	DR	Please refer to CAR 21	CAR 21	O.K.

	Are the locations of all measurement equipment clearly identified and consistently described, incl. process flow-charts contained in the PDD?					
9.5	Is the measurement accuracy addressed and deemed appropriate?	/1/ /8/	DR	Please refer to CAR 21	CAR 21	O.K.
9.6	Are procedures in place on how to deal with erroneous measurements and are the corrective actions identified?	/1/ /9/	DR	CAR 22: Please include in the monitoring plan the day-to-day monitoring procedures including: <ul style="list-style-type: none"> a) QA/QC measures b) How to deal with erroneous measures and identified corrective actions. c) How to deal with emergencies in case of failure of the meter or other unexpected situations? 	CAR 22	O.K.
9.7	Is the frequency of measurement identified and deemed appropriate?	/1/ /9/	DR	Please refer to CAR 21	CAR 21	O.K.
9.8	Is the monitoring plan documented according to the approved methodology and in a complete and transparent manner?	/1/ /9/	DR	Please refer to CL 20	CL 20	O.K.
9.9	Are the sampling, measurement methods and procedures defined?	/1/ /9/	DR	N/A	O.K.	O.K.
9.10	Are procedures identified for maintenance of monitoring equipment and installations?	/1/ /9/	DR	Please refer to CAR 22	CAR 22	O.K.
9.11	Are the equipment calibration intervals identified and justified? Is the calibration conducted by accredited person or intuition?	/1/ /9/	DR	Please refer to CAR 21	CAR 21	O.K.
9.12	Are procedures identified for day-	/1/	DR	Please refer to CAR 22	CAR 22	O.K.

to-day records handling (including what records to keep, storage area of records and how to process performance documentation)?	/9/					
9.13 Are the monitoring arrangements described in the monitoring plan feasible within the project design?	/1/, /9/	DR	Yes, the parameters and equipment are consistent with the project activity to be developed.	O.K.	O.K.	
9.14 Are the means of implementation of the monitoring plan, including the data management and quality assurance and quality control procedures, sufficient to ensure that the emission reductions achieved by / resulting from the project activity can be reported ex post and verified?	/1/, /9/	DR	Please refer to CAR 22	CAR 22	O.K.	
9.15 Do the PPs make provisions for personnel training needs?	/1/, /8/	DR	Yes, provisions for personnel have been considered in section B.7.3 of the PDD.	O.K.	O.K.	
9.16 Is the authority and responsibility of overall project management clearly described?	/1/, /9/	DR	Yes, an organization chart has been considered in section B.7.3 of the PDD	O.K.	O.K.	
9.17 Are procedures identified for emergency preparedness for cases where emergencies can cause unintended emissions?	/1/, /8/	DR	Please refer to CAR 22	CAR 22	O.K.	
9.18 Are procedures identified for review of reported results/data?	/1/, /8/	DR	Yes, data handling is established in section B.7.3 of the PDD.	O.K.	O.K.	
9.19 Does responsibilities and institutional arrangements for data collection and archiving in place? Is the data archiving period for this project activity stated in the PDD and appropriate?	/1/, /8/	DR	Yes, responsibilities organization have been correctly addressed in the PDD, through the monitoring organization chart added in section B.7.3 of the PDD.	O.K.	O.K.	

9.20 Is the monitoring parameters for all project emissions captured?	/1/ /8/	DR	Yes, all the monitoring parameters are stated in section B.7.3 of the PDD	O.K.	O.K.
9.21 Will all monitored data required for verification and issuance be kept for two years after the end of the crediting period or the last issuance of CERs, for this project activity, whichever occurs later?	/1/ /8/	DR	Yes, the PDD states that monitoring data will be kept until two years of the end of the whole crediting periods.	O.K.	O.K.
9.22 Are the data management and quality assurance and quality control procedures sufficient to ensure that the emission reductions achieved by/resulting from the project can be reported ex post and verified?	/1/ /9/	DR	Please refer to CAR 21	CAR 21	O.K.
9.23 Is operational and management structure in place to implement the monitoring plan?	/1/ /9/	DR	Yes, an organization chart has been considered in section B.7.3 of the PDD	O.K.	O.K.
9.2 Monitoring of the leakage					
9.2.1 Does the monitoring plan provide for the collection and archiving of all relevant data necessary for determining leakage?	/1/	DR	NA, leakage is not considered by the Methodology	O.K.	O.K.
9.2.2 Is the choice of project leakage indicators made according to selected methodology in a reasonable and conservative manner?	/1/	DR	NA, leakage is not considered by the Methodology	O.K.	O.K.
9.2.3 Is the measurement method clearly stated and deemed appropriate for each leakage value?	/1/	DR	NA, leakage is not considered by the Methodology	O.K.	O.K.
10. Sustainable development (VVS Section 7.5)					
10.1 Does the LoA from the Host	/3/	DR	Please refer to CAR 1	CAR 1	O.K.

country DNA contain the confirmation that the proposed CDM project activity contributes to the sustainable development of the host Party?					
10.2 If PDD indicates any additional environmental benefits of the project, other than GHG emission reductions, were those benefits properly substantiated?	/1/	DR	No, the PDD does not include additional environmental benefits	O.K.	O.K.
11. Stakeholders' consultation and comments (VVS Section 7.5 & 7.14)					
11.1 Were the stakeholders identified in appropriate and complete manner?	/1/	DR	<p>Yes, Chilean Laws requires the PP to make stakeholders meetings with citizen's participation.</p> <p>CAR 23: The DOE shall, by means of document review and interviews whether the local stakeholders has been performed as per as per VVS Version 04.0.</p> <p>(a) Comments have been invited from local stakeholders that are relevant for the proposed project activity;</p> <p>(b) The summary of the comments received as provided in the PDD is complete;</p> <p>(c) The project participants have taken due account of all comments received and have described this process in the PDD.</p> <p>Due to above mentioned the PP is requested to provide reliable evidence related to the local stakeholder process.</p>	CAR 23	O.K.
11.2 Are the identified stakeholders plausible?	/1/	DR	Please refer to CAR 23	CAR 23	O.K.
11.3 Does PDD describe the means being used to invite local stakeholder's comments?	/1/	DR	Please refer to CAR 23	CAR 23	O.K.
11.4 Were those means appropriate?	/1/	DR	Please refer to CAR 23	CAR 23	O.K.
11.5 Was the project presented to the stakeholders in unbiased manner?	/1/	DR	Please refer to CAR 23	CAR 23	O.K.
11.6 If a stakeholder consultation	/1/	DR	CL 24: Stakeholder consultation is a requirement in Chile, so the PP is	CL 24	O.K.

process is required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws?			requested to clarify how the stakeholder consultation process been carried out in accordance with such regulations/laws		
11.7 Is a summary of the stakeholder comments provided in the PDD?	/1/	DR	Please refer to CAR 23	CAR 23	O.K.
11.8 Has due account of any stakeholder comments been taken by PPs and reflected in the PDD?	/1/	DR	Please refer to CAR 23	CAR 23	O.K.
12. Environmental impacts (VVS Section 7.13)					
12.1 Is the documentation supplied by the PPs regarding environmental impacts relevant and accurately reflected in the PDD?	/1/	DR	Yes, information is stated in the PDD. The EIA of the project is approved and considers the project environmentally safe.	O.K.	O.K.
12.2 Is an environmental impact assessment (EIA) required for the CDM project activity?	/1/	DR	Yes, information is stated in the PDD. The EIA of the project is approved and considers the project environmentally safe.	O.K.	O.K.
12.3 In case an EIA is required, has the EIA has been approved by local authorities and is the outcome accurately reflected in the PDD?	/1/ /16/	DR	CL 25: As per stated in the PDD the project has obtained a Favourable Environmental Impact Assessment Qualification dated on March, 26 th 2012. However, EIA provided by “Republica de Chile Comision de Evaluacion Region de Atacama” has been dated on March 21 st 2012. Thus the PP is requested to correct the PDD accordingly.	CL 25	O.K.
12.4 Does the PDD include a brief description of the environmental effects of the project, including transboundary?	/1/	DR	Yes the PDD includes a brief description of the effects of the project, any transboundary effect was identified.	O.K.	O.K.
12.5 Are those effects properly addressed in the design of the project activity?	/1/	DR	Effects are properly addressed in the design of the project activity.	O.K.	O.K.
12.6 Does the project comply with environmental legislation in the host country?	/1/	DR	Yes, the project is in line with current legislation.	O.K.	O.K.

Table 2: List of Requests for Corrective Action (CAR) and Clarification (CL)

Validation / Verification Standard

(25) The DOE shall raise a corrective action request (CAR) if one of the following occurs:

(a) The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions;

(b) The CDM requirements have not been met;

(c) There is a risk that emission reductions cannot be monitored or calculated.

(26) The DOE shall raise a clarification request (CL) if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

The wording of CAR/CL shall clearly address nonconformity or seek clarification, and avoid instructive / consultative language in order to prevent actual or perceived consultancy.

No.	CAR/CL	Observation (CAR/CL)	Reference	Summary of project owner response	Validation team conclusion
1	X	CAR 1 As per VVS 30 paragraph 38 the PP shall be submitted the LoAs of each Party indicated as being involved in the proposed CDM project activity in section A.3.	1.2, 1.3, 1.4, 1.7, 1.8, 2.2, 9.1	<p>Letter of Approval of the Chilean Designated National Authority will be provided as soon as possible.</p> <p><u>Further request from the DOE:</u> The PP is requested to provide the letter of approval for next assessment of the DOE. CAR 1 remains open.</p> <p><u>Further answer from the PP:</u> Letter of approval was already requested and is expected to be obtained on the week 19th – 23rd November.</p> <p><u>Further request from the DOE:</u> Letter of approval was not included</p>	<p>Letter of approval from the Chilean Designated National Authority dated on 03/12/2012, has been correctly provided to the DOE, in compliance with the VVS 04.0 paragraph 38.</p> <p>Hence the CAR is closed.</p>

					in the package sent by project participant. CAR 1 remains open.	
2	X		CAR 2: The Letter MoC shall be submitted to the DOE	1.6, 1.9, 1.10, 1.11	<p>The MoC will be provided with the response of this validation report.</p> <p><u>Further request from the DOE:</u></p> <p>a) As per "Procedures for Modalities of Communication between Project Participants and the Executive Board. The PP is requested to be in line with paragraph 9 of such procedure, in accordance with the following:</p> <ul style="list-style-type: none"> Is defined as an agreed means of authentication of an MoC statement by a project participant, or a given communication from a focal point entity, as the context requires. It may be either an authenticated handwritten signature, accompanied with a company seal or stamp if appropriate, or a cryptographic electronic signature enrolled in the CDM Information System. <p>b) The PP is requested to provide the format F-CDM-MOC in a complete manner, including the table history of document.</p>	<p>The MoC has been provided and correctly assessed by the audit team in accordance with the "Procedures for Modalities of Communication between Project Participants and the Executive Board".</p> <p>Hence the CAR is closed.</p>

				<p>CAR 1 remains open.</p> <p><u>Further answer from the PP:</u> MoC is provided.</p> <p><u>Further request from the DOE:</u> The format F-CDM-MOC was not found in the package sent by project participant. As per “ Procedures for Modalities of Communication between Project participants and the Executive Board the MoC shall be in line with the following paragraph :</p> <p>9 Signature is defined as an agreed means of authentication of an MoC statement by a project participant, or a given communication from a focal point entity, as the context requires. It may be either an authenticated handwritten signature, accompanied with a company seal or stamp if appropriate, or a cryptographic electronic signature enrolled in the CDM Information System. Written confirmation obtained by the PP’s stating the authorization, specimen signatures and personal details, employment status is valid and accurate" would be acceptable. CAR 2 remains open.</p>	
--	--	--	--	---	--

					<u>Further response from the PP</u> MoC is provided.	
3	X		CAR 3: The PP is requested to revise whole document, reference sources stated in the PDD shall be corrected accordingly.	3.2	<p>Reference sources stated in the PDD have been corrected.</p> <p><u>Further request from the DOE:</u> Link in footnote 2 does not lead to the web reference (an error message is displayed). Link in footnote 12 leads to web page where the average marginal costs 2009-2010 in Maitencillo Substation are not found. Hence the Project participant is requested to correct the web address of the reference. Link in footnote 18 does not lead to the web reference (an error message is displayed). Link in footnote 21 does not lead to the web reference (an error message is displayed). Link in page 37 do not lead to the web address (an error message is displayed). Third link in page 40 does not exist. Link in footnote 28 does not lead to the web reference (an error message is displayed). Link in footnote 29 does not lead to the web reference (an error message is displayed). Project participant is requested to correct all the web addresses mentioned.</p>	<p>All footnotes have been properly updated by project participant and there are no broken links in the updated PDD.</p> <p>Project participant has also provided digital copies of the documents whose links were not operational or broken. Hence the CAR is closed.</p>

					<p>CAR 3 remains open.</p> <p><u>Further answer from the PP:</u> All the web addresses are correct.</p> <ul style="list-style-type: none"> - Footnotes 2, 28 and 29 as well as links in page 37 work correctly. Nevertheless those documents are provided to the DOE for them to be reviewed. See: <ul style="list-style-type: none"> • “Footnote 2_ Cameco Corporation - Report on GHG Emissions_nov 2010” • “Footnote 28_ seia” • “Footnote 29_Parque_eolico_Cabo_Leones” • “Footnote 26_Manual_CDEC_Medicion_Supervision” • “Footnote 27_NSEG3_71” - Links in footnotes 18 and 21 which are the same, work correctly. In the web page, document for 2009 must be opened. Nevertheless, this document is provided to the DOE. <ul style="list-style-type: none"> • “Footnote 18 and 21_BNE2009-1” - Page 40 of the previous version of PDD does not include any links. - Link in footnote 12 has been updated, see Costo Marginal, station Maitencillo 220. See also 	
--	--	--	--	--	---	--

					excel spread sheet "Electricity Price Evidence" provided.	
4	X		<p>CAR 4: 4.1) As per informed by the PP. the model of the turbines will be changed, Hub height stated in the GSP-PDD is 90m and it will be changed to 78m. Hence the PP is requested to correct the related documentation and provide the manufacturer offer in accordance with this kind of model.</p> <ul style="list-style-type: none"> - Further Technical characteristics of the turbines shall be added in section A.3 of the PDD: • Power generation expected • Turbine model • Turbine installed capacity • Hub Height • Rotor Diameter • Generator specification <p>4.1b) The PP is requested to provide reliable evidence related to the distance of the transmission line 220 Kv.</p> <ul style="list-style-type: none"> - The PP is requested to provide reliable evidence related to the percentage defined for the transmission losses 2%, and a clarification is required how this discount is in line with the methodology ACM0002. <p>4.1c) - The PP is requested to include in the PDD section A.2.4 the coordinates of each turbine, as well as the measurement tower used to get the plant load factor.</p> <ul style="list-style-type: none"> - Coordinates defining the perimeter where the wind farm will be installed shall be corrected, as per verified in the on-site visit. 	4.1	<p>4.1)</p> <ul style="list-style-type: none"> - PDD has been updated with the new turbines model (G97- 78 m hub height). Manufacturer offer is provided to the DOE, see "WIND TURBINES AND EPC GAMESA OFFER.pdf". - The required technical characteristics of the turbines have been included in section A.3 of the PDD. <p>4.1.b)</p> <ul style="list-style-type: none"> - Transmission line length is 54.572,0 meters. See transmission line situation maps provided as: <ul style="list-style-type: none"> ○ "Evidence transmission line length_ PLANO DE SITUACIÓN 1" ○ "Evidence transmission line length_ PLANO DE SITUACIÓN 2" ○ "Evidence transmission line length_ PLANO DE SITUACIÓN 3" ○ "Evidence transmission line 	<p>All issues related to CAR4 have been properly addressed by project participant in the PDD and evidence has been provided.</p> <p>Hence the CAR is CLOSED.</p>

			<p>- Lay out of the total hectares expected to be used in the project shall be addressed in the PDD.</p>		<p>length_ PLANO DE SITUACIÓN 4”</p> <ul style="list-style-type: none"> ○ “Evidence transmission line length_ PLANO DE SITUACIÓN 5” <p>- Transmission losses are estimated at 1.81%. See provided evidence “Transmission losses evidence”.</p> <p>4.1.c)</p> <ul style="list-style-type: none"> - The required coordinates have been included in section A.2.4 of the PDD. - The coordinates defining the perimeter have been corrected. <p>Layout of the total hectares expected to be used in the project shall be addressed in the PDD _ see provided evidence “CABO LEONES WIND FARM LAY OUT.pdf”.</p> <p><u>Further request from the DOE 1:</u></p> <p>The PP is requested to provide a separate file which lists all the set of coordinates, indicating the geometrical middle/center point of the area, this information shall be correctly addressed in section A.4.1.4. of the PDD.</p>	
--	--	--	--	--	--	--

					<p><u>Further answer from the PP:</u> A separate file which lists all the set of coordinates is provided to the DOE. Coordinates of the geometrical middle/center point of the area is included in PDD section A.2.4.</p>	
5	X		<p>CAR 5: Drawings and manuals regarding to the project design should be submitted to the DOE.</p>	4.2	<p>See provided evidences for drawing and manuals: “Descripción_Proyecto_- _DIA_PE_Cabo_Leones”.</p> <p><u>Further request from the DOE 1:</u> Technical drawing has been provided in the mentioned document. However, Operation manuals have not been included in the documentation provided by project participant. CAR 5 remains open.</p> <p><u>Further answer from the PP:</u> The provided document “Descripción_Proyecto_- _DIA_PE_Cabo_Leones” already contained a description of the project design as well as the drawings. Nevertheless the operational manual is provided. See provided document: “PROYECTO EJECUCION_Cabo leones”.</p>	<p>The PP has submitted the technical documentation and the PP have been corrected in order to be in line with the technical documentation. Hence the CAR is closed.</p>

					<p><u>Further request from the DOE 2:</u> The document “PROYECTO EJECUCION_Cabo leones” was not found in the package sent by project participant. CAR 5 remains open.</p> <p><u>Further response from the PP</u> Document “PROYECTO EJECUCION_Cabo leones” is provided.</p> <p><u>Further request from the DOE 3:</u> Inconsistencies figure between the document “PROYECTO EJECUCION_Cabo leones and the technical specification added in the PDD. Value of the rotor diameter corresponds to the rotor blade length, rotor diameter should be 87m, 94m or 97m as per turbine model Gamesa G97-2.0MW. Hence the PP is requested to correct or clarify accordingly.</p> <p><u>Further response from the PP</u> PDD has been updated. See Table 6.</p>	
6	x		<p>CAR 6: a) The PP is requested to provide reliable evidence, related to provisions of the operational lifetime “20 years” of the technology to be employed. b) Analysis of the technologies used in the</p>	4.3	<p>a) Lifetime: “GAMESA G97 2MW DNV Type Certificate.pdf” b) PDD has been updated. See “Contribution to sustainable development”.</p>	Evidence has been properly provided by project participant. Analysis of technology in the host country has been included in the “Contribution to

			host country for the electricity production shall be provided to the DOE. This information shall be correctly addressed in the PDD, as part of the section "Contribution to sustainable development".			sustainable development section". Hence the CAR is closed.
7	X		ii) CAR 7: The PP is requested to provide the feasibility study to get the 'plant load factor determined by a third party "Altermia Asesores company engineering".	4.6, 5.5.4	See provided evidence for load factor and energy generation of the plant: "Cabo Leones Wind Farm Wind Resource Study.pdf" (page 28).	The plant load factor was not found in the document provided by project participant. Hence the CAR is closed.
8	X		CAR 8: a) The PP is requested to amend the section B.2 of the PDD in accordance with the characteristics of the project and approved methodology ACM0002 Version 13.0.0 b) All Applicability Conditions as per methodology ACM0002 Version 13.0.0 shall be assessed and justified in the PDD.	5.2.2, 5.2.3	The section B.2 of the PDD has been amended in accordance with the characteristics of the project and approved methodology ACM0002 Version 13.0.0.	The section B.2 of the PDD has been amended according to project characteristics and approved methodology. All applicability and non-applicability conditions have been addressed in section B.2 of the PDD. Hence the CAR is closed.
9	X		CAR 9: Table 5 related to the Emissions and sources included in or excluded from the project boundary shall be corrected by the PDD, as applicable to the project. • CO ₂ emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity. - Emissions from electricity generation.	5.3.2	Table related to the emissions and sources included in or excluded from the project boundary has been corrected in the PDD, as applicable to the project. (Table 7 in the updated version of PDD).	Table 9 (former table 5) has been amended as per methodology considering the CO ₂ emissions from electricity generation in fossil fuel fired power plants that are displaced by the project activity. Hence the CAR is closed.
10	X		CAR 10: Section B.6.1 of the PDD shall be amended as applicable for this kind project,	5.4.2, 5.4.2.1,	Section B.6.1 of the PDD has been modified, pointing that no fossil fuel	Section B.6.1 of the PDD has addressed the use of fossil

			in accordance with the methodology ACM0002 Version 13.0.0 the use of fossil fuels for back up or emergency purposes can be neglected for geothermal and solar thermal projects only. Thus the PDD shall be corrected by the PP accordingly.	5.4.4	consumption will take place in the project wind farm for electricity generation, backup or emergency purposes. Hence, although in accordance with ACM0002 v. 13.0.0 the use of fossil fuels for back up or emergency purposes can be neglected for geothermal and solar thermal projects only but not for wind farms, the project activity will not have project emissions from fuel consumption. See updated PDD.	fuels for back up or emergency purposes. The electricity used for those purposes will be getting from the grid, as stated in the PDD, thus project emissions can be considered to be zero (considering that imported electricity of project activity will be subtracted of the electricity exported by the project activity and in both cases the emission factor is the same). Hence the CAR is closed.
11		X	CL 11: The PP is requested to clarify whether the calculation of the emission factor, mainly the calculation of the build margin (BM) emission factor, is based on the most recent information available on units already built for sample group m at the time of CDM-PDD submission to the DOE for validation.	5.4.2.1, 5.5.1, 5.5.2, 5.5.4	<p>The Combined Margin Emission Factor calculation (as well as the BM calculation) was based on the most recent information available at CDEC-SIC webpage at the time when the PDD was uploaded in UNFCCC web page for public information the 29/05/2012.</p> <p>Since at that time, the most recent fuel consumption data, which are needed to determine the OM, were 2010 data, 2010 data for BM calculation were also used. And hence the CM is calculated for 2008-2010.</p> <p>Furthermore, it shall be pointed that the 2011 Emission Factor will only</p>	<p>Project participant has provided evidence of the most recent data available for the BM margin calculation at the time when the PDD was uploaded to the UNFCCC web page.</p> <p>Hence the CL is closed.</p>

					be calculable when 2011 fuel consumption data will be available. By the time of baseline emissions calculation, this data, which only appears in CDEC-SIC Operation Statistics Yearbooks, were not available. Please see the CDEC-SIC staff e-mail as evidence provided of the unavailability of the data “RE: CDEC-SIC FUEL CONSUMPTION DATA”.	
12	X		CAR 12: As per CDM PS paragraph 45 analysis of sectoral policies and circumstances shall be addressed in the PDD.	5.4.6, 7.2.3, 7.2.4	The baseline scenario is being defined according to ACM0002 (see CAR 13), so this analysis is not required according to methodology requirements, being the project a greenfield type.	According to the methodology ACM0002, the assessment of alternative scenarios to the proposed project activity does not apply to this methodology. Hence the CAR is closed.
13	X		CAR 13: As per ”Combined tool to identify the baseline scenario and demonstrate additionality” (version 04.0.0), the PPs shall define realistic and credible alternatives to the project activity, including a description of the technology that would be employed and/or the activities that would take place in the absence of the project activity. Furthermore a clearly justification shall be added in the PDD to assess the Consistency with mandatory laws and regulations.	5.4.7	According to paragraph 4 of “Tool for the demonstration and assessment of additionality” project activities that apply this tool on context of approved consolidated methodology ACM0002, only need to identify that there is at least one credible and feasible alternative that would be more attractive than the proposed project activity. As it is shown in the description of the baseline scenario, a credible and feasible alternative could be the generation with the current mix	Since according to the ACM0002 methodology there is no need to identify potential alternative scenarios, thus the only alternative would be the current baseline scenario, whose power plants can be considered to have consistency with mandatory laws and regulations. Hence the CAR is closed.

					<p>since the Project is a greenfield and the electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants.</p> <p>The alternative to the project (baseline scenario) takes into account relevant national and sectoral policies. Therefore, if the Project would not be developed and without the support from the CDM, equivalent electricity would be delivered from the mix in the Chilean grid.</p>	
14	X		<p>CAR 14: The PP shall provide to the DOE reliable evidence to assess whether the start date of the project activity, reported in the PDD, has been established as per the “Glossary of CDM terms”, and in line with the project implementation history.</p>	7.1.1, 7.1.2, 7.1.3, 7.3.10	<p>The starting date of the project activity is in line with definition in the “Glossary of CDM terms”, since the purchase of the wind turbines will be the first real action of the project activity.</p> <p>Moreover, CDM VVS (§105) states that “The DOE shall determine whether CDM benefits were considered necessary in the decision to undertake the project as a proposed project activity if the starting date of the proposed project activity is prior to the start of validation, which is the date of publication of the PDD</p>	<ul style="list-style-type: none"> - Based on the “Glossary of CDM terms” and correct assessment related to the factors Inflation Rate, Tariff - Tax rate, Interest Rate the project still remains additional. Based on the estimated date of the project start date April 2013 <p>Hence the CAR is closed.</p>

					<p>for global stakeholder consultation.” Since the starting date of this project (01/09/2012) will take place after than the start of validation, CDM VVS (§105) does not apply.</p> <p>As it was stated in the PDD Section B.5, the prior CDM consideration is in line with the implementation history of the project. Reliable evidences of each milestone is provided:</p> <ul style="list-style-type: none">- Wind resource study (May 2011) _ “Cabo Leones Wind Farm Wind Resource Study”- Request of the land (June 2011) _ “LAND LEASE CONTRACT”- Interconnection agreement with Transelec (September 2011)_ “INTERCONNECTION AGREEMENT WITH TRANSELEC”- First contact with Garrigues Medio Ambiente consultant company for carrying out the project’s PDD (September 2011) _ “First contact with Garrigues Medio Ambiente consultant company for carrying out the project's	
--	--	--	--	--	--	--

					<p>PDD”</p> <ul style="list-style-type: none"> - Environment Impact Statement presented for approval (September 2011) – “DIA_Parque_Eolico_Cabo_Leones” - Contract with the selected DOE (October 2011) – “Contract with the selected DOE” - Wind turbines offer reception (December 2011) – “GAMESA O&M OFFER” - Contract with Garrigues Medio Ambiente consultant company for carrying out the project’s PDD (December 2011) – “Contract with Garrigues Medio Ambiente consultant company for carrying out the project's PDD” - Start of stakeholders consultation process (consultation letters to stakeholders) (January 2012) – “Invitation to stakeholders meeting at Freirina” - Reception of stakeholders answers to the sent letters and modification of the project accordingly, and reception of 	
--	--	--	--	--	---	--

					<p>definitive answers of agreement (January 2012) – “Questionnaires stakeholders meeting Freirina 30-1-12”</p> <ul style="list-style-type: none"> - Favourable Environmental Assessment Qualification Resolution (March 2012) – “RCA (DIA) - PE Cabo Leones” <p><u>Further request from the DOE 1:</u></p> <ul style="list-style-type: none"> - Even though project participant has provided evidence to support the project timeline, it is advisable to identify in the milestones table the activity associated to the starting date of the project activity and the date of publication of the PDD, in order to clarify that CDM VVS (§105) does not apply, as project participant claims. - The PP is requested to clarify and provide reliable evidence concerning to the adopted starting date 01/12/2012. A report (planning project implementation) shall be provided to the DOE, describing the reasons to change the expected starting date indicated in the GSP-PDD 01/09/2012 to 01/12/2012 stated in the latest version of the CDM-PDD, in 	
--	--	--	--	--	--	--

					<p>order to assess the correct selection of it.</p> <ul style="list-style-type: none"> - The input data for investment analysis should be the latest at the time of project starting date. As per addressed by the PP the investment decision was in December 2009 and the starting was changed to December 2012. PP's investment decision could be changed any time before project starting date. Hence the PP is requested to submit an analysis for the predicted situation at the time of expected project start date (December 2012), in order to ensure that the IRR is not exceeded the benchmark at the time of expected start date. - Starting date shall be added in section B.5 in table 14 "CDM Consideration." <p>CAR 14 remains open.</p> <p><u>Further answer from the PP:</u></p> <ul style="list-style-type: none"> - The activity associated to the starting date and the date of publication of PDD has been included in the milestone table of PDD. - The starting date of the project, corresponding to the estimated 	
--	--	--	--	--	--	--

					<p>date when the final wind turbines supply contract will be signed <u>has been delayed to 31/01/2013</u> because:</p> <ul style="list-style-type: none">- The environmental approval of the transmission line was not obtained until October 17, 2012 (please check www.seia.cl).- The operation contract with Transelec has not been signed yet.- And, above all, financing has not been obtained yet, although negotiations with banks are in process. An evidence regarding the delay on the financing agreement is provided, see "Financing delay evidence _ Santander Bank e-mail". A planning project justifying dates is provided, see document "Cabo leones project planning".- The input data in the financial analysis are the latest at the time of decision investment, when the financial model was made, which was in <u>December 2011</u> (and not <u>December 2009</u>). The variation of main parameter values in one year (as start date is expected to be in January 2013) is considered not to be	
--	--	--	--	--	--	--

					<p>significant and not affecting the additionality of the project. Although, evidences justifying this fact are provided:</p> <ul style="list-style-type: none">- <u>Total investment and O&M costs</u>: initial EPC and O&M contracts (subjected to obtaining financing) have already been signed with Gamesa. Those contracts (which are not binding until project obtains financing), show higher values than the initially estimated for the financial model. Hence additionality will not be affected by those costs. See provided documents “Pages from Contrato EPC Cabo Leonés firmado 120803” page 17 of 23), “Addendum contrato EPC Cabo Leonés I 120927 final firmado” and “Pages from Contrato O&M Cabo Leonés firmado 120803” page 9 of 13.- <u>Electricity price</u>: according to forecasts from Systep’s Electricity Report, in a medium hydrology scenario, costs at the beginning of 2013 are expected to be around 100USD/MWh, and hence additionality will not be affected. See provided document “Electricity price at	
--	--	--	--	--	--	--

					<p>starting date_Systep reporte electrico 2012” figure 8 page 9.</p> <ul style="list-style-type: none"> - <u>Energy generation:</u> as wind study is based on long term analysis of the wind resource, a variation of one year will not change the estimations significantly. - Starting date has been included in milestones table. <p><u>Further request from the DOE 2:</u></p> <p>Even though project participant has addressed:</p> <ul style="list-style-type: none"> - The inclusion of the project activity starting date and PDD publication date in the milestone table - To show proper evidence to justify the delay for signing the turbines supply contract - The request to add the starting date in section B.5 of the PDD <p>The document “Electricity price at starting date_Systep reporte electrico 2012” was not found in the information package sent by project participant. Also, the requested analysis for securing that the IRR will not exceed the benchmark was not found.</p>	
--	--	--	--	--	---	--

					<p>CAR 14 remains open.</p> <p><u>Further response from the PP</u></p> <ul style="list-style-type: none">- “Electricity price at starting date_Systep reporte electrico 2012” evidence is provided.- The analysis and evidences for securing that the IRR will not exceed the benchmark was already provided at the last round (please see answer above). As it is stated in PDD, for equity IRR to exceed benchmark, <u>total investment</u> has to decrease 31%, <u>O&M costs</u> has to disappear and <u>electricity price</u> and <u>energy generation</u> have to increase in more than 12%. Hence, as per evidences already provided, initial EPC and O&M contracts (subjected to obtaining financing) have already been signed with Gamesa and those contracts show higher values than the initially estimated for the financial model. Hence <u>total investment is not expected to decrease in 31%</u> (as it will probably increase) and <u>O&M costs will not disappear</u>. See provided documents “Pages from Contrato EPC Cabo	
--	--	--	--	--	--	--

					<p>Leonés firmado 120803” (page 17 of 23), “Addendum contrato EPC Cabo Leonés I 120927 final firmado” and “Pages from Contrato O&M Cabo Leonés firmado 120803” (page 9 of 13). In case of <u>electricity price</u>, according to forecasts from Systep’s Electricity Report, in a medium hydrology scenario, costs in 2013 are expected to be around 100USD/MWh, and hence this parameter <u>will not increase more than 12% but will probably decrease</u> from 125 USD/MWh to 100 USD/MWh. See provided document “Electricity price at starting date_Systep reporte electrico 2012” figure 8 page 9. Regarding <u>energy generation</u>, as wind study is based on long term analysis of the wind resource, <u>a variation of more than +12.8% in one year is not expected</u>.</p> <p>Hence, the requested analysis and evidences for securing that the equity IRR will not exceed the benchmark is provided.</p> <p><u>Further request from the DOE 3:</u> In order to assess if the project IRR</p>	
--	--	--	--	--	---	--

				<p>still remains additional as since the project activity is not started and the estimate date of the project start date is April 2013. Further assessment in the investment analysis should be completed to verify that certain conditions have not changed from the time of investment decision (December 2011) until today. Thus the PP should take into account whether the following factors have not changed until today such as:</p> <ul style="list-style-type: none"> - Inflation Rate - Tariff - Tax rate - Interest Rate <p><u>Further response from the PP</u> The mentioned factors have not changed significantly and does not affect the additionality of the project:</p> <ul style="list-style-type: none"> - <u>The inflation rate</u> has not been <u>used</u> in the investment analysis as a post-tax equity IRR in real terms (without inflation) is calculated through the financial model provided, in order to be compared to the benchmark of 10.3% (which is a default value for the expected return on equity 	
--	--	--	--	--	--

					<p>calculated after taxes and in real terms) provided by the “Guidelines on the assessment of investment analysis” version 05.</p> <ul style="list-style-type: none"> - <u>Tariff</u> was already justified and evidenced previously. Please see previous answer “<i>In case of electricity price, according to forecasts from Systepe’s Electricity Report, in a medium hydrology scenario, costs in 2013 are expected to be around 100 USD/MWh, and hence this parameter will not increase more than 12% but will probably decrease from 125 USD/MWh to 100 USD/MWh. See provided document “Electricity price at starting date_Systepe reporte electrico 2012” figure 8 page 9.</i>” - According to the evidence provided for tax rate value (http://www.sii.cl/aprenda_sobre_impuestos/impuestos/imp_directos.htm#o2p1), tax at the time of investment decision was 17%. According to the same evidence, tax for years 2012, 2013 and 2014 would be 20%, which is higher than 17% and hence will make the Equity IRR 	
--	--	--	--	--	---	--

					<p>smaller. <u>Hence, the project would still be additional despite the change of tax value.</u></p> <ul style="list-style-type: none"> - Interest rate of 3.25% was a fixed estimated value at the time of investment decision, based on previous experience in other projects and was ratified by the evidence already provided "Evidence for interest rate.pdf" from 24/11/2012. Moreover, this value is expected to increase as per new sent evidence of Banco Santander, where it can be seen that the interest rate, which is currently being negotiated, is expected to be 3.70% or higher. Hence, the additionality of the project is guaranteed as if the interest rate increases, the equity IRR decreases. 	
15	X		<p>CAR 15: Regarding the presented investment analysis, the PP is requested to clarify or correct the following issues accordingly:</p> <ul style="list-style-type: none"> a) No fair (residual) value was considered at the end of year 20 as a positive cash flow. b) Depreciation is calculated as part of the project Costs, yet it is not added back to net profits as an adjustment for the purpose of calculating Equity 	7.3.1	<ul style="list-style-type: none"> a) Fair value has been included at the end of year 20. See "Cabo Leones Wind Farm Investment Analysis". b) Depreciation of assets has not been considered within investment analysis. c) Regarding depreciation, it is possible that a misunderstanding of nomenclature has occurred. Cells called "Interest + depreciation (kUSD)" (for 	<ul style="list-style-type: none"> a) Information that supports residual value of \$45kUSD per wind turbine has been correctly provided by the PP. Documents such as "Residual value_Decommissioning plan Hounsfield Wind Farm_ Aug 2008_p7" (page 7)

			<p>IRR.</p> <p>c) Depreciation and Interest Expense must be calculated separately.</p> <p>d) PP must provide supporting information regarding Depreciation of assets during the lifetime of the project, which may have a direct impact on the project's residual value.</p>		<p>instance, cell B25 in "CF (base case)") refer to "interest and debt repayment" and not depreciation of assets. Hence depreciation and interest expense can be calculated jointly.</p> <p>d) Evidence was provided to the DOE.</p> <p><u>Further request from the DOE:</u></p> <p>The PP is requested to provide supporting information regarding Depreciation of assets during the lifetime of the project, which may have a direct impact on the project's residual value.</p> <p>CAR 15 remains open.</p> <p><u>Further answer from the PP:</u></p> <p>Financial model has been updated with a depreciation of 10 years, according to "Resolución Exenta N°43 del 26 de Diciembre del 2002" (http://www.sii.cl/documentos/resoluciones/2002/reso43.htm), concept "Equipos de generación y eléctricos utilizados en la generación."</p> <p><u>Further request from the DOE 2:</u></p> <p>a) PP must provide further information that supports residual value of \$45kUSD per wind turbine.</p>	<p>and "Residual value_Decommissioning Plan for the Marble River Wind Farm_p1" (page 1) have been correctly assessed by the audit team.</p> <p>b) Investment analysis has been improved, new version is provided. Servicing debt calculation is now detailed in a traceable manner</p> <p>c) and d) Supporting information related to the depreciation of assets has been correctly provided and assessed through "Resolución Exenta N°43 del 26 de Diciembre del 2002".</p> <p>Hence the CAR is closed.</p>
--	--	--	--	--	--	---

					<p>b) Per Investment Analysis Spread sheet, <i>Depretiation</i> (sic) is defined in Assumptions and Results tab, and the value is used as <i>Amortization</i> in CF (base case), see cell B26. Amortization is taken into account for the calculation of <i>Income Taxes (kUSD)</i>. If the concept of <i>Amortization</i> is not the depreciation of the 85 wind turbines, then PP must explain the difference between this concept and <i>Servicing debt (kUSD)</i>, on cell B25. PP must provide calculation and supporting information for <i>Servicing debt (kUSD)</i>.</p> <p><u>Further response from the PP</u></p> <p>a) Evidences for residual costs are provided, see documents: “Residual value_Decommissioning plan Hounsfield Wind Farm_ Aug 2008_p7” (page 7) and “Residual value_Decommissioning Plan for the Marble River Wind Farm_ p1” (page 1).</p> <p>b) Investment analysis has been</p>	
--	--	--	--	--	---	--

					<p>improved, new version is provided. Servicing debt calculation is now detailed in a traceable manner. Debt amortization calculation is based on the Debt-Service Coverage Ratio (DSCR), which is obtained iteratively to maintain payback time at 18 years. Please see Investment analysis spread sheet provided and updated PDD.</p> <p><u>Further request from the DOE 3:</u></p> <p>b) Improved investment analysis was not reflected in the updated PDD "table 11 financial general parameters", data of Cabo Leones Wind Farm was not updated in line with the final spread sheet. Hence the PP is requested to correct the PDD accordingly.</p> <p><u>Further response from the PP</u></p> <p>Table 11 in PDD has been completed with all the base case parameters.</p>	
16	X		CAR 16: As per Assessment of investment analysis based on the “Guidelines on the assessment of investment analysis, version	7.3.3	<p>a) Discount rate is not used is not used in the financial model. Only Equity IRR is used as financial</p>	Cost of Equity IRR is used in the investment analysis. Only the portion of investment

		<p>05", the PP is requested to clarify or correct the following issues:</p> <ul style="list-style-type: none"> a) Discount rate was calculated taking into consideration Interest Expense. b) PP must decide whether to base its analysis on Project IRR or Equity IRR, especially since the benchmark provided in the guidelines is also comparable with Equity IRR. c) IRR calculations in Investment Analysis spread sheet are not consistent with the information provided in PDD. d) In order to be consistent, PP must use WACC as a benchmark for Project IRR, or Cost of Equity as a benchmark for Equity IRR. e) PP must decide whether to base its analysis on Project IRR or Equity IRR, especially since the benchmark provided in the guidelines is also comparable with Equity IRR. f) As per the Investment Analysis spread sheet, the Debt / Equity Ratio is 70/30. Per the guidelines for Investment Analysis, the following must apply: <ul style="list-style-type: none"> - In the calculation of equity IRR, only the portion of investment costs which is financed by equity should be considered as the net cash outflow, the portion of the investment costs which is financed 	<p>parameter to be compared with investment analysis benchmark. Adjoined is the formula for the calculation of the equity IRR and thus no discount rate is needed.</p> $\sum_{t=1}^n \frac{(Equity\ Cash\ Flow)_t}{(1 + Equity\ IRR)^t} - \%Equity * Investment = 0$ <p>n: years of cash flows</p> <ul style="list-style-type: none"> b) PP has decided to base its analysis on Equity IRR as it is stated in section B.5, step 2 in the PDD and in the investment analysis (G6 in assumptions and results). c) Investment analysis and PDD have been updated. See "Cabo Leones Wind Farm Investment Analysis". d) Since investment analysis is based on Equity IRR, Cost of Equity as a benchmark shall be used. The selected benchmark for Chile is obtained from Appendix A of the latest version of "Guidelines on the assessment of investment analysis". See sub step 2.b in the PDD. e) PP has decided to base its analysis on Equity IRR as it is stated in the PDD. f) Equity FCF consider only the % of CAPEX which is put forward as equity. See cell D28 of "CF (base case)" sheet in excel financial 	<p>costs which is financed by equity is considered as the net cash outflow.</p> <p>Hence the CAR is closed.</p>
--	--	---	--	--

			by debt should not be considered a cash outflow.		<p>model.</p> <p>Further request from the DOE: In the calculation of equity IRR, only the portion of investment costs which is financed by equity should be considered as the net cash outflow, the portion of the investment costs which is financed by debt should not be considered a cash outflow. Hence the PP is requested to clarify or correct accordingly. CAR 16 remains open.</p> <p>Further answer from the PP: In the financial model, only the portion of investment costs which is financed by equity has been included in the “free cash flows to equity” calculations. See financial model cells D28 and E28 where total investment is multiplied by $(100\% - 70\% = 30\%)$, which is the equity stake). It is worth pinpointing that initial investment is split in 2 in the years 2013 and 2014. Thus cells D28 and E28 contain 15% of such initial investment, every year.</p>	
17	X		CAR 17: As per Assessment of investment analysis based on the “Guidelines on the assessment of investment analysis, version 05”, the PP is requested to clarify the next	7.3.4	<p>a) PP has decided to base its analysis on Equity IRR.</p> <p>b) PP has decided to base its analysis on Equity IRR as it is</p>	Cost of Equity IRR is used in the investment analysis, instead of a company’s internal benchmark.

			<p>parameters:</p> <ul style="list-style-type: none"> a) Interest Expense and financing expenditures.. b) Project IRR or Equity IRR.. c) Interest Expense in equity IRR. d) Project IRR or Equity IRR, especially since the benchmark provided in the guidelines is also comparable with Equity IRR. e) PP must decide whether to base its analysis on Project IRR or Equity IRR. The benchmark provided in the guidelines is also comparable with Equity IRR. 		<p>stated in the PDD.</p> <p>c) Investment analysis has been changed according to guidelines for investment analysis.</p> <p>d) PP has decided to base its analysis on Equity IRR as it is stated in the PDD.</p> <p><u>Further request from the DOE:</u></p> <p>PP must decide whether to base its analysis on Project IRR or Equity IRR according to the Guideline on the assessment of Investment Analysis.</p> <p><u>Further answer from the PP:</u></p> <p>Analysis is based on Equity IRR as it is stated in PDD as well as in the financial model and previous answers. Hence, the Equity IRR is compared to benchmark provided in the guidelines.</p>	<p>Debt/Equity ratio is 70/30. Hence the CAR is closed.</p>
18	X		<p>CAR 18: As per PDD, the variables subject to the sensitivity analysis are:</p> <ul style="list-style-type: none"> - Construction Investment - Electricity Price - O&M Cost - Electricity Generation <p>Nevertheless, the sensitivity calculations in Investment Analysis are not consistent with the information provided in PDD. Thus the PDD shall be corrected by the PP accordingly.</p>	7.3.11	<p>The sensitivity analysis has been updated in order to be consistent with the PDD. See “Cabo Leones Wind Farm Investment Analysis” and section B.5 in the PDD.</p> <p><u>Further request from DOE:</u></p> <ul style="list-style-type: none"> a) Total investment addressed in the PDD is not consistent with neither with the financial model nor with the GAMESA Wind turbines 	<p>The PP has submitted the technical documentation and the PDD have been corrected in order to be in line with the technical documentation. Hence the CAR is closed.</p>

					<p>and EPC offer.</p> <p>b) The PP is requested to clarify the section where the O&M costs are referred in the document GAMESA O&M offer</p> <p>c) The PP is requested to clarify the reason to use a sensitivity analysis or CERs price, in accordance with EB 69 paragraph 76 CERs revenues in the demonstration additionality should not be considered any more.</p> <p><u>Further answer from the PP:</u></p> <p>a) As it is shown in the financial model, total investment included in PDD is calculated as the value from “GAMESA Wind turbines and EPC offer” of 359,563 kUDS plus a 2.5% from “OFERTA ING. PROPIEDAD, D.I.OBRA Y GESTION TECNICA” (2.5% increase). See financial model “Assumptions and results” sheet, cells D18, D19 and D20. PDD has been updated with this second source.</p>	
--	--	--	--	--	--	--

					<p>b) O&M costs are referred in the document “GAMESA O&M offer” in page 8 of 11, section called “Precio”.</p> <p>c) Sensitivity analysis for CERs price has been removed from the financial model and the PDD.</p> <p><u>Further request from DOE 3:</u> Sensitivity calculations in Investment Analysis are consistent with the information provided in PDD.</p> <p>O&M costs are referred in the document “GAMESA O&M offer”</p> <p>However, PP must provide the following supporting documents:</p> <ul style="list-style-type: none"> - “GAMESA Wind turbines and EPC offer” - “OFERTA ING. PROPIEDAD, D.I.OBRA Y GESTION TECNICA” <p><u>Further response from the PP</u> Inconsistencies figure in the technical specification added in the PDD and the document “PROYECTO EJECUCION_Cabo leones, please answer the CAR 5 to ensure the correct documentation provided.</p>	
--	--	--	--	--	--	--

					<u>Further response from the PP</u> CAR 5 has been solved.	
19		X	CL 19: According to the CDEC-SING “Central Interconnected Electric System Load Economic Dispatch Center” only 162.2 MW of installed wind energy capacity, distributed in 4 Wind Farms have identified. Thus Wind Farms with large installed capacity are not common in Chile. However, the PP is requested to clarify whether all of these wind farms belong to off grid local consumption.	7.5.4	<p>The electricity generated by the proposed project will be supplied to the Central Interconnected Electricity System (SIC). Wind power plants are included in the emission factor calculation.</p> <p><u>Further request from the DOE:</u> Project participant has stated that the 162.2 MW of installed wind energy capacity are included in the emission factor calculation. However, the PP is requested to clarify whether these wind generators are not off grid. CL 19 remains open.</p> <p><u>Further answer from the PP:</u> The wind farms included in the emission factor calculation are not off grid plants as they export electricity to the SIC grid. Moreover, those plants are included in CDEC-SIC available data as it can be seen in “CDEC-SIC Generating companies” document that was already provided to the DOE.</p> <p><u>Further request from DOE 2:</u></p>	<p>Based on the data for power plant’s capacity were provided by "CDEC-SIC 2001-2010 OPERATION STATISTICS YEARBOOK" (page 30-32) (https://www.cdec-sic.cl/datos/anuario2011_ing.pdf).</p> <p>Hence the CL is closed.</p>

				<p>“CDEC-SIC Generating companies” spread sheet contains 98 wind units with an installed capacity of 172.15 MW (electrical). This information does not match with the 165.8 MW included by project participant for the emission factor calculation.</p> <p>Project participant is requested to clarify this mismatch. CL 19 remains open.</p> <p><u>Further response from the PP</u> There is incoherence between the different documents published by CDEC-SIC. In this sense, "CDEC-SIC 2001-2010 OPERATION STATISTICS YEARBOOK" (https://www.cdec-sic.cl/datos/anuario2011_ing.pdf) in page 29, Installed capacity table, provided 38MW for Monte Redondo Wind Farm, while “CDEC-SIC Generating companies” shows 48MW (summing all units). According to press release (http://www.cuantaenergiatienes.com/blog/espanol/ampliacion-de-parque-eolico-monte-redondo-en-chile/), Monte Redondo Wind farm had 19 2MW-turbines (=38MW) installed until February 2011 when an increase of capacity of 5 more</p>	
--	--	--	--	--	--

				<p>2MW-turbines was made reaching the total capacity of 48MW. As last available data were 2010 data and EF was calculated for year 2010, Monte Redondo capacity was to be included in the calculations is 38MW.</p> <p>Please see provided documents:</p> <ul style="list-style-type: none">- Press release Monte Redondo- CDEC-SIC 2001-2010 OPERATION STATISTICS YEARBOOK <p><u>Further request from DOE 3:</u></p> <ul style="list-style-type: none">- The PP is requested to clarify the Inconsistencies between the document "CDEC-SIC Generating companies" and the information from the CDEC-SIC 2001-2010 OPERATION STATISTICS YEARBOOK used for the emission factor calculation. <p><u>Further response from the PP</u></p> <p>As it is mentioned in the EF and ER calculation excel spread sheet, data for power plant's capacity were provided by "CDEC-SIC 2001-2010 OPERATION STATISTICS YEARBOOK" (page 30-32)</p> <p>https://www.cdec-</p>	
--	--	--	--	--	--

					sic.cl/datos/anuario2011_ing.pdf).	
20		x	<p>CL 20: The PP is requested to clarify how the measurement method is in line with the methodology ACM0002 / Version 13.0.0 and how the consideration of Transmission losses (L) of 2% of EG_{export} is in compliance with the calculation stated in the methodology.</p>	8.2, 8.8	<p>The measurement method is in line with the methodology since the following parameters will be measured:</p> <ul style="list-style-type: none"> • The quantity of electricity supplied by the project plant/unit to the grid. • The quantity of electricity delivered to the project plant/unit from the grid. <p>As it is shown in Figure 7 in the PDD, meters are located con wind farms SET and thus, before 220 kV transmission line. Hence, transmission line losses should be taken into account to calculate the quantity of net electricity generation supplied by the project plant to the grid. See evidence provided for transmission line losses: “Transmission losses evidence”, (page 1). For further information, see section B.7.3 of the PDD.</p>	<p>Project participant has explained that features of the electricity meter are in accordance with the methodology since meter is designed for metering the same variable required by the methodology (electrical energy measured in Wh, kWh, MWh, etc.). The transmission line losses calculation evidence shows how this variable is calculated based in transmission line parameters and well known physical phenomena that affects a transmission line. Hence the CL is closed.</p>
21	X		<p>CAR 21:</p> <p>a) The PP is requested to clarify the difference in the precision class between the main meter 0.2 S and the secondary meter 05.S, as well as the confirmation which meter will be used for the ERs calculation.</p> <p>b) The PP is requested to provide further</p>	8.2, 8.4, 8.5, 8.7, 8.11	<p>Both main and secondary meters will be 0.2 S precision class, which is the precision required by the applicable Chilean regulation (please, see attached evidence “Manual de procedimientos para los sistemas de medición y sistemas de supervisión en el</p>	<p>Project participant has amended the PDD as requested. Hence the CAR is closed.</p>

			<p>information related to the calibration frequency of meters which will be employed, and whether the calibration will be consistent with the methodology ACM0002 Version 13.0.0, where is stated that all measurements should be conducted with calibrated measurement equipment according to relevant industry standards.</p>	<p>CDEC-SIC.pdf” and updated PDD).</p> <p>For the ER calculation, the main meter readings will be used, although in case of failure of main meter, secondary meter readings will be used, as it has been indicated in section B.7.3 and Appendix 5 of the PDD.</p> <p>As it is stated in Sections B.7.1 and B.7.3 of the PDD, the calibration will be performed once each two years. Since this implies a more frequent calibration than that required by Chilean Law (please, see attached evidence “Normas Técnicas sobre Medidores NSEG E.n.71.pdf”) and the precision class is that required by the Chilean regulations, measurements will be conducted with calibrated measurement equipment according to relevant and legal standards in Chile and in a consistent way with ACM0002 (version 13.0.0).</p> <p><u>Further request from the DOE:</u> Project participant has amended the PDD in order to state that main and back-up meters are 0.2S precision class. Calibration period of two years for each meter is considered to</p>	
--	--	--	---	---	--

					<p>be valid for CDM purposes. Statement included in the PDD "... according to the applicable national law²⁷, which requires a calibration each ten years" should be amended due to the mentioned law (included as evidence) states that "metering devices could be verified in site every time that the Electrical Services Direction considers this action as convenient or when the electricity consumer or the electricity generator request this service". Furthermore the ten years' time interval mentioned is related to how often the current meters (meters that measure in Amperes-hour, not electrical energy in kWh) should be removed from the grid.</p> <p>CAR 21 remains open.</p> <p><u>Further answer from the PP:</u> Statement about calibration has been amended in PDD.</p>	
22	X		<p>CAR 22: Please include in the monitoring plan the day-to-day monitoring procedures including:</p> <ul style="list-style-type: none"> a) QA/QC measures b) How to deal with erroneous measures and identified corrective actions. c) How to deal with emergencies in 	8.6, 8.10, 8.12, 8.14, 8.17	<p>a) PDD has been changed including quality assurance and quality control procedures. b) and c) Failure, emergency procedure and corrective actions are explained in Appendix 5 of the PDD.</p> <p><u>Further request from the DOE:</u></p>	<p>Procedure for dealing with erroneous readings has been correctly added in sections B.7.3 and Appendix 5 of the PDD.</p> <p>Hence the CAR is CLOSED.</p>

			case of failure of the meter or other unexpected situations?		<p>The QA/QC measures were not found in the amended PDD. , in such case why in case of failure of the main meter a repair action is not conducted and why while failure and repair of the main meter are achieved, the backup meter is not considered for the continues measurement. Furthermore, there is no procedure to indicate how to deal with erroneous measures and which will be the corrective actions.</p> <p>CAR 22 remains open.</p> <p><u>Further answer from the PP:</u> QA/QC measures are the cross checking of monitored data with electricity bills. They were already included in PDD.</p> <p>The PDD also stated that “The readings of the main meter will be used in the calculation of the emissions reductions, expect in case of failure, in which the readings of the secondary meter will be employed.” Hence, while the main meter is repaired, back-up or secondary meter will be used in order to not have a lack of measures.</p> <p>In case of erroneous measures in the main meter, back-up meter will be used, and in case of erroneous</p>	
--	--	--	--	--	---	--

					<p>measures in both meters, estimation will be made based on the historical or the nearest month of energy production or consumption data.</p> <p><u>Further request from the DOE:</u> Project participant is requested to include in the PDD the procedure for dealing with erroneous readings in both meters and to highlight the QA/QC procedures in the “Electricity meters” section of the PDD. CAR 22 remains open.</p> <p><u>Further response from the PP</u> Procedure for dealing with erroneous readings in both meters was already included in Appendix 5 of PDD. Nevertheless, it has also been included in “Electricity meters” section of the section B.7.2 of PDD.</p>	
23	X		<p>CAR 23: The DOE shall, by means of document review and interviews whether the local stakeholders has been performed as per as per VVS Version 04.0. (a) Comments have been invited from local stakeholders that are relevant for the proposed project activity; (b) The summary of the comments received as provided in the PDD is complete; (c) The project participants have taken due</p>	10.1, 10.2, 12.3, 12.4, 12.5, 12.7, 12.8	<p>Please, see attached evidences:</p> <ul style="list-style-type: none"> • “Questionnaires stakeholders meeting Chañaral 31-1-12.pdf” • “Questionnaires stakeholders meeting Freirina 30-1-12.pdf” • “Invitation to stakeholders meeting at Freirina.jpeg” 	<p>Project participant has provided evidence of the questionnaires filled by the stakeholders, as well as the evidence of the invitation to the stakeholders meeting. The comments received were summarized in the PDD. Hence the CAR is closed.</p>

			account of all comments received and have described this process in the PDD. Due to above mentioned the PP is requested to provide reliable evidence related to the local stakeholder process.		<ul style="list-style-type: none"> “Invitation to stakeholders meeting at Freirina II.jpeg” “Invitation to stakeholders meeting at Freirina III.jpeg” 	
24		X	CL 24: Stakeholder consultation is a requirement in Chile, so the PP is requested to clarify how the stakeholder consultation process been carried out in accordance with such regulations/laws	12.6	<p>All environmental impact aspects required by legislation have been followed. See history of the project’s environmental approval, according to government sources. http://seia.sea.gob.cl/expediente/expedientesEvaluacion.php?modo=ficha&id_expediente=6079443</p> <p>Furthermore, according to DNA of Chile, no stakeholders consultation process is required to obtain Chilean Letter of Approval http://www.mma.gob.cl/1304/w3-article-44986.html</p> <p>Nonetheless, see evidence provided:</p> <ul style="list-style-type: none"> - Start of stakeholders consultation process (consultation letters to stakeholders) (January 2012) – “Invitation to stakeholders meeting at Freirina” - Reception of stakeholders answers to the sent letters and modification of the 	<p>According with the links provided by project participant, a CDM project in Chile does not require a public stakeholder consultation in order to get the LoA. Furthermore, only the Environmental Impact Assessments and the Environmental Impact Statements do require a stakeholder consultation. However, in the case of the Environmental Impact Statement (which is the case of the project activity), it is not mandatory to carry out the stakeholder consultation, depending of the decision of the Regional Director. Since project activity got a favourable Environmental Impact Statement qualification on 21 March 2012 it is considered that the project has satisfied all the Chilean regulations related to the stakeholder consultation.</p>

					<p>project accordingly, and reception of definitive answers of agreement (January 2012) – “Questionnaires stakeholders meeting Freirina 30-1-12”</p> <p><u>Further request from the DOE:</u> Project participant has provided the link to the timeline of the environmental impact assessment. Also, according to the web page of the Environment Ministry, it is not mandatory a public consultation in order to get the approval letter of the DNA. The PP is requested to provide reliable evidence that the project public consultation has been carried out according to the Chilean legislation CAR 24 remains open.</p> <p><u>Further answer from the PP:</u> The Chilean DNA does not require a public consultation in order to provide its approval through the LoA (see LoA requirements at http://www.mma.gob.cl/1304/w3-article-44986.html). Neither does the Environmental Assessment Service “Servicio de Evaluación Ambiental” of the</p>	<p>Hence the CL is CLOSED.</p>
--	--	--	--	--	--	---------------------------------------

					Chilean Government, for projects that are subjected to the <i>Declaración de Impacto Ambiental</i> (DIA) process (and not to <i>Estudio de impacto ambiental</i> (EIA) process) and where the Regional Directors (<i>Direcciones Regionales</i>) have not asked for citizen participation (see http://www.sea.gob.cl/contenido/qu-e-entendemos-por-participacion-ciudadana-en-el-sistema-de-evaluacion-de-impacto-ambienta). Hence, the project public consultation has been carried out according to the Chilean legislation for this kind of projects and according to CDM guidelines.	
25		X	CL 25: As per stated in the PDD the project has obtained a Favourable Environmental Impact Assessment Qualification dated on March, 26 th 2012. However, EIA provided by “Republica de Chile Comision de Evaluacion Region de Atacama” has been dated on March 21 st 2012. Thus the PP is requested to correct the PDD accordingly.	11.3	PDD has been corrected.	PDD has been properly amended by project participant. Hence the CL is CLOSED.
26	X		CAR 26: The PP is requested to remove all the references related to the VVM (version 3.0).	3.1	The reference to VVM (v.3.0) has been removed from section B.5 of PDD.	References of VVM-Track has been removed from PDD and correctly assessed by the audit team- Hence the CAR is CLOSED.
27	X		CAR 27: Missing to mention Leakage=0	8.2	PDD has been amended by	As per addressed in the

			according to methodology after Baseline Emission description. Hence PDD shall be amended accordingly.		including leakage definition provided by methodology after baseline definition in section B.4.	approved methodology ACM0002 version 13.0.0 no leakage emissions are considered. This information has been correctly addressed in the PDD. Hence the CAR is CLOSED.
28	X		CAR 28: Sub index “2” in formula CO2 is not correctly writing in some sections of the PDD. Hence the PP is requested to correct the PDD accordingly.	5.4	Sub index “2” in formula CO2 has been corrected along the PDD.	Sub index has been corrected along the PDD and correctly assessed by the audit team. Hence the CAR is CLOSED.
29		X	CL 29: The PP is requested to clarify the use of values from 2008-2010 to calculate the EF if the PDD GSP was in 2012.	5.4	<p>The Emission Factor is based on the most recent information available at CDEC-SIC webpage at the time when the PDD was uploaded in UNFCCC web page for public information (29/05/2012).</p> <p>Since at that time, the most recent fuel consumption data needed to determine the OM were 2010 data, EF was calculated for period 2008-2010, as 2010 were the last available data.</p> <p>2011 EF could only be calculated when 2011 fuel consumption data would be available and they weren't at the time of public information of PDD. Please see the already provided CDEC-SIC staff e-mail “RE: CDEC-SIC FUEL CONSUMPTION DATA”, saying</p>	<p>As per tool to calculate the emission factor for an electricity system version 03.0.0, if the ex-ante option is chosen, the emission factor has been determined once at the validation stage, thus the emission factor shall be based on the most recent data available at the time of submission of the CDM-PDD to the DOE for validation. Hence based on the above stated and the response provided by the PP, the assessment team has been concluded that the emission factor has been calculated correctly. Hence the CL is CLOSED.</p>

					that 2011 data were going to be published in August 2012, while EF was calculated on May 2012, as evidence provided of the unavailability of the data. Please also refer to CL 11.	
30		X	CL 30: Regarding the Start Date of the Project Activity, clarify: How it is ensured that the chosen date is the FIRST serious commitment? Clarify this with contract documentation please.	7.1.2	<p>The start date of the project activity was established on 30/06/2013, as the estimated date when the final wind turbines supply contract will be signed.</p> <p>This will be the first serious economical commitment as the turbine purchase represents the first big amount of money spent. Until the signature of turbines contract the project could eventually be stopped at any moment.</p> <p>As it was explained in the PDD, a previous non-binding contract was signed before with the turbines supplier, although the contract is expected to be ratified later.</p> <p>As this final contract has not been signed yet, it cannot be provided to the DOE.</p>	<p>The starting date of the project activity is in line with definition in the “Glossary of CDM terms”, since the purchase of the wind turbines will be the first real action of the project activity.</p> <p>Furthermore due to the start date is in the future during this stage of validation; FAR 1 has been raised in order to confirm it during the 1st verification. This information was confirmed through the PP chronogram of implementation /48/. Hence the CL is CLOSED. (Please see further discussion under CL 38)</p>
31		X	CL 31: The PP is requested to include the information of the EIA and not only the EIA Qualification.	11.1	<p>The date when the EIA was presented for approval has been included in section D.1. of PDD.</p> <p>Information from the EIA was already included.</p>	<p>Information of the EIA has been correctly added in the section D.1 of the latest version of the PDD. The Environment Impact Statement was presented for approval on September 2011</p>

						and the Project obtained the Favourable Environmental Impact Assessment Qualification in March, 21th 2012. Hence the CL is CLOSED.
32		X	<p>CL 32: The PP is requested to clarify the reason to perform the local SHP (30 Jan 2012) before the project starting date.</p> <ol style="list-style-type: none"> Clarify if the local SHP procedure form Freirina was the necessary for the project characteristics as only 3 persons attend the meeting. As only 3 person attend, clarify how the SHO was promoted, the reason to do it in that way, check in the site visit if any additional comment was done in that regard. Information related to SHP held in Chañaral de Aceituno are included as well, clarify. 	10.1	<p>The stakeholder process started as soon as possible in order to correctly fulfil the CDM-PDD section E.</p> <ol style="list-style-type: none"> Only 3 persons attended, but the meeting was held anyway to inform the interested stakeholders no matter how numerous they were. As mentioned in PDD, an advertisement was posted at the Freirina city hall announcing the meeting, as it was suggested by the city hall. <p>Freirina and Chañaral de Aceituno are the nearest communities to the Project site. Hence meeting was held in both places.</p>	Local Stakeholder process has been carried out in line with the VVS version 04.0 paragraph 139. Hence CL is CLOSED.
33		X	<p>CL 33: The PP is requested to Confirm if Mr. Cristián Arévalo Leal is the same legal representative for Ibereólica.</p>	5.4	<p>Mr. Cristián Arévalo is the legal representative of Aprovechamientos energéticos SA as well as Ibereólica Cabo Leonés I, S.A. See companies power of attorney documents provided: “Acta Primera Sesión de directorio 1” and “Acta Primera</p>	As per attorney documents provided: “Acta Primera Sesión de directorio 1” and “Acta Primera Sesión ICL1 (escritura)”. Mr Christian Arevalo is the Legal Representative. Hence the

					Sesion ICL1 (escritura)".	CL is CLOSED.
34	X		CAR 34: The baseline closing date and the person/organization evaluating the baseline addresses along with their relation with the project activity is missing.	3.1	According to "Guidelines for completing the project design document form" from EB 66, new VVS track PDD form does not include this data. Nevertheless, data has been included in section B.6.1.	Information related to the date of completion of the last baseline update has been correctly addressed in the section B.6.1 of the latest version of the PDD. Hence the CAR is CLOSED.
35	X		CAR 35: The links: http://www.iea.org/Textbase/nppdf/free/2010/etp2010_part2.pdf https://www.cdec-sic.cl/datos/anuario2011_ing.pdf https://www.cdec-sic.cl/contenido_es.php?categoria_id=4&contenido_id=000034 cannot be open, please check.	3.1	<ul style="list-style-type: none"> - Link has been updated by http://www.iea.org/publications/freepublications/publication/etp2010.pdf. Also pdf document is provided in case that link will broke again, see "Energy technologies perspective 2010_ IEA" - The link https://www.cdec-sic.cl/datos/anuario2011_ing.pdf does work correctly. Nevertheless, pdf document was already provided as evidence. Please see provided document "CI 19_ CDEC-SIC 2001-2010 OPERATION STATISTICS YEARBOOK". The link https://www.cdec-sic.cl/contenido_es.php?categoria_id=4&contenido_id=000034 does work correctly. Nevertheless a pdf of the web page were data can be found is provided, see document "https___www.cdec-sic.cl_contenido_es"	Links have been corrected along the document. Hence the CAR is CLOSED.

36	X	<p>CAR 36: Inconsistencies figure in the financial investment analysis. Hence the PP is requested to correct or clarify accordingly:</p> <p>a) Value of 3.25 is consistent based on the document Land Lease Contract, between Aprovechamientos Energeticos S.A. and Agricola Konavle Limitada issued on 07/06/2011 /, which refers that since the commissioning date which means from the start of generation and the transmission of energy to CDEC-SIC Central Interconnected Electric System Load Economic Dispatch Center, shall be paid the annual equivalent sum of 3.25%, of land lease. However, the PP is requested to clarify why the contract between Aprovechamientos Energeticos S.A. and Agricola Konavle Limitada document is 6 months before the investment decision date, how was validated that this value did not change?, in order to confirm that this document still valid 6 months later.</p> <p>b) As per addressed in section B.5 of the PDD variables Percentage of</p>	7.1	<p>a) The land lease contract, which was signed in June 2011, was valid for 40 years, granting a testing period of 18 months from June 2011 to December 2012. Hence, it was valid at the time of investment decision. See provided document “Land lease contract”.</p> <p>b) The parameters asked are based on internal experience from the project “Santa María de Nieva” which term sheet form October 2011 is provided (see “Santa Maria de Nieva Term sheet”).</p> <ul style="list-style-type: none"> • <u>Percentage of capital to be financed:</u> in Santa Maria de Nieva project, debt was fixed at a maximum of 80%. In order to be more conservative and because of the size of Cabo leones project, debt percentage was slightly reduced to 70%. • <u>Grace period:</u> As in Santa Maria de Nieva, the grace period coincides with the construction period, which in this case is approximately 2 years. • <u>Payback time:</u> payback time is not really and input but a 	<p>a) As per stated in the land lease contract the document is valid for 40 years, and comes into in force on 09/06/2011 till 08/06/2051. Thus this document is applicable during the time of the investment decision date.</p> <p>b) Sources of the Variables presented in table 11 have been correctly added.</p> <p><u>Percentage of capital to be financed, Grace Period, Grace period and Debt-Service Coverage</u></p> <p><u>Ratio (DSCR)</u>, have been based on the “Santa Maria de Nieva Term sheet”.</p> <p>c) Financial model has been corrected</p>
----	---	--	-----	---	---

			<p>capital to be financed, Grace Period, and Payback time are based on internal experience from the project owner. However, reliable sources related to the internal experiences should be presented e.g. information of other projects can be presented. Hence the PP is requested to enhance the term “Based on Internal experiences”.</p> <p>c) As per addressed in the PDD variable Interest rate is based on the information provided by the Bank BBVA- Madrid treasury, dated on 24/11/2011. However, the financial model spread sheet refers “based on internal experiences”. Hence the PP is requested to correct this inconsistency accordingly.</p> <p>As per addressed in the PDD variable Swap is based on Bank BBVA period 15/06/2011 to 15/12/2011. However, the financial model spread sheet refers “based on internal experiences”. Hence the PP is requested to correct this inconsistency accordingly.</p>		<p>result obtained by applying an DSCR of 2. A DSCR of 2 means that the annual incomes are half used for paying back the loan to the bank and half for shareholders. This is a conservative parameter that gives the highest profitability to the project. If DSCR was 1.5, the payback time would be 12 years and the Equity IRR would be 6.8%. In Santa Maria de Nieva project, payback time was 17 years, with a minimum average DSCR no lower than 1.3, which is in line with the conservative choice of 2 in Cabo Leones project.</p> <p>c) Corrected in the financial model spread sheet. Corrected in the financial model spread sheet.</p>	<p>accordingly.</p> <p>Financial model has been corrected accordingly. Hence the CAR is CLOSED.</p>
37	X		<p>CAR 37:</p> <p>Minor corrections:</p> <p>a) Some footnotes in the PDD, e.g. 24</p>		<p>a) All text in Spanish has been removed. See document in track changes in case any specific Spanish text</p>	<p>CLOSED.</p> <p>The corrections were addressed in the PDD and</p>

			and 25 are still in Spanish, please make sure all the information in the PDD is in English		should be finally included (i.e. Sistema Interconectado Central)	no Spanish references are made.
38		X	CL 38: Regarding the project timeline: a) Since the starting date of the project activity indicated in the PDD is in the past, please confirm to the DOE that the final wind turbines supply contract was signed on the expected date, or otherwise please update this date in the whole PDD. b) Clarify if the mentioned contract expected to be ratified later is the final wind turbines supply contract, expected to be signed on 30/06/2013		a) Wind turbines supply contract has not been signed by June 30 th 2013 since the project financing has not been closed yet. This is common practice in the wind sponsoring sector. New date has been included in the PDD and corresponding schedule updated. b) The mentioned contract expects to be the final contract from a legal perspective. Contract signed up to now are merely indicative.	a) CLOSED, the starting date was updated within the PDD and evidence of updated schedule was provided. b) CLOSED; it has been clarify that the non-binding contract will be the precedent of the official EPC contract.
39		X	CAR 39: The PP is requested to provide a separate file which lists all the set of coordinates, indicating the geometrical middle/center point of the area, this information shall be correctly addressed in section A.2.4. of the PDD.	3.1	Separate file listing all the set of coordinates, indicating the geometrical middle/center point of the area is provided.	CLOSED. Project participant has provided a set of coordinates in separate file.

Table 3: List of forward action requests (FARs)

Validation / Verification Standard

(27) The DOE shall raise a forward action request (FAR) during validation to highlight issues related to project implementation that require review during the first verification of the project activity. FARs shall not relate to the CDM requirements for registration.

FAR number	Reference	Summary of project owner response	Validation team conclusion
FAR01 As during the Validation activity, the project has not defined an starting date, the corresponding check of the real project implementation is requested in the first verification.		According to PDD and Project planning provided, starting date (corresponding to the estimated date when the final wind turbines supply contract will be signed) has been estimated on 30/10/2013. Hence, project implementation accordance with PDD as well as real starting date will be checked by DOE during first verification.	Starting date of the project activity and implementation of the activity as per PDD will be verified during the first periodic verification, thus response is accepted by the validation team.

Appendix B

Certificates of Competence

Qualification

Lemus Martinez-Estape, Rafael Arturo /

Emission Trading

United Nations Framework Convention on Climate Change

Auditor No.:
(AuditorenRegNr)

Appointed:
(Zugelassen)

☒ ja

Qualification Level:
(Qualifikationsstufe)

Lead Auditor

External:
(Externer)

☐ ja

Add. reviewer:
(Zusätzlicher Prüfer)

☐ yes

EAC Scopes:
(EAC Branchen)

CDM 01 - Energy industries (renewable - / non-renewable sources)
CDM 13 - Waste handling and disposal

Add. qualification:
(zus. Qualifikation)

First Appointment:
(Erstberufung)

06/07/2011

Valid to:
(Gültig bis)

05/07/2014

Remarks:

Valid for TA 1.2, 13.1

Languages:

Spanish
English

Experience Exchange

Date	Location	Remarks	Accreditation(s)
------	----------	---------	------------------

Monitoring

Latest Monitoring:
(letzte Beurteilung)

Next Monitoring:
(nächste Beurteilung)

Remarks:

[View / Edit Monitoring](#)

History of scope allocation

Date: 2011-07-07
Change: EAC CDM, CDM added
By: Manfred Brinkmann
Reason: Valid for TA 1.2, 13.1

History

Created:	30/06/2011 09:08:28 a.m.	Luis Javier Cerecedo/Mex/TUV
Modified:	10/05/2012 03:39:17 p.m.	Arturo Lemus/Mex/TUV
	10/05/2012 03:35:53 p.m.	Arturo Lemus/Mex/TUV
	08/05/2012 03:53:10 p.m.	Arturo Lemus/Mex/TUV
	03/05/2012 10:33:34 p.m. ZE8	
	07/07/2011 03:42:19 p.m. ZE9	
	07/07/2011 03:39:54 p.m. ZE9	
	30/06/2011 09:08:42 a.m.	

Qualification

Avendaño Reyes, Guadalupe /

Emission Trading

United Nations Framework Convention on Climate Change

Auditor No.:
(AuditorenRegNr)

Appointed:
(Zugelassen)

☒ ja

Qualification Level:
(Qualifikationsstufe)

Lead Auditor

External:
(Externer)

☐ ja

Add. reviewer:
(Zusätzlicher Prüfer)

☐ yes

EAC Scopes:
(EAC Branchen)

CDM 01 - Energy industries (renewable - / non-renewable sources)
CDM 13 - Waste handling and disposal

Add. qualification:
(zus. Qualifikation)

First Appointment:
(Erstberufung)

04/03/2010

Valid to:
(Gültig bis)

01/03/2016

Remarks:

Valid for TA 1.2, 13.1

Languages:

Spanish
English

Experience Exchange

Date

Location

Remarks

Accreditation(s)

Monitoring

Latest Monitoring:
(letzte Beurteilung)

Next Monitoring:
(nächste Beurteilung)

Remarks:

[View / Edit Monitoring](#)

History of scope allocation

Date: 2010-03-05
Change: EAC CDM, CDM, CDM added
By: Manfred Brinkmann
Reason:

History

Created:	28/01/2010 08:30:36 a.m.	Luis Javier Cerecedo/Mex/TUV
Modified:	06/03/2013 10:23:15 a.m. ZE8	Praveen Urs/Chn/TUV
	04/02/2011 11:52:14 a.m. ZE9	Manfred Brinkmann/Jpr/TUV
	04/02/2011 11:51:58 a.m. ZE9	Manfred Brinkmann/Jpr/TUV
	04/02/2011 11:49:32 a.m. ZE9	
	14/09/2010 03:59:20 p.m. ZE9	

Export to ICMS

Last Export:

Qualification

Diaz, Danae /

Emission Trading

United Nations Framework Convention on Climate Change

Auditor No.:
(AuditorenRegNr)

Appointed:
(Zugelassen)

☒ ja

Qualification Level:
(Qualifikationsstufe)

Lead Auditor

External:
(Externer)

☐ ja

Add. reviewer:
(Zusätzlicher Prüfer)

☐ yes

EAC Scopes:
(EAC Branchen)

CDM 13 - Waste handling and disposal
CDM 01 - Energy industries (renewable - / non-renewable sources)

Add. qualification:
(zus. Qualifikation)

First Appointment:
(Erstberufung)

27/10/2011

Valid to:
(Gültig bis)

26/10/2014

Remarks:

Valid for TA1.2, 13.1 and 13.2

Languages:

Spanish
English

Experience Exchange

Date	Location	Remarks	Accreditation(s)
------	----------	---------	------------------

Monitoring

Latest Monitoring:
(letzte Beurteilung)

Next Monitoring:
(nächste Beurteilung)

Remarks:

History of scope allocation

Date: 2012-04-04

Change: EAC CDM added
By: Praveen Urs
Reason:

Date: 2011-10-28
Change: EAC CDM added
By: Manfred Brinkmann
Reason:

History

Created:	24/10/2011 04:22:30 p.m.	Luis Javier Cerecedo/Mex/TUV
Modified:	04/04/2012 06:31:36 p.m. ZE8	Praveen Urs/Chn/TUV
	04/04/2012 06:30:03 p.m. ZE8	Praveen Urs/Chn/TUV
	13/12/2011 10:02:33 a.m. ZE9	Manfred Brinkmann/Jpn/TUV
	28/10/2011 07:22:36 a.m. ZE9	
	24/10/2011 04:22:41 p.m.	