

VALIDATION REPORT FOR THE PROJECT PARQUE EÓLICO MALDONADO

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Project Title	Parque Eólico Maldonado
Version	02
Report ID	2014/136/VOL/21

Report Title	Validation Report for the Project Parque Eólico Maldonado
Client	R del Sur S.A.
Pages	71
Date of Issue	31- March-2016
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Summary:

Spanish Association for Standardisation and Certification (AENOR) has made the validation of the “Parque Eólico Maldonado” project of R del Sur S.A., located in Maldonado department in Uruguay, on the basis of UNFCCC criteria for the CDM large-scale methodology (ACM0002 version 16.0), Verified Carbon Standard (VCS) v.3.5, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM rules and modalities and the subsequent decisions by the CDM Executive Board, as well as the host country criteria.

Parque Eólico Maldonado consists of a wind farm project in the department of Maldonado in Uruguay. The project involves 25 wind turbines of 2 MW with a total installed capacity of 50 MW generating power to offset the combustion of thousands of tonnes of fossil fuels and, in doing so, will help preserve non-renewable resources by promoting the exploitation and use of renewable resources and technologies.

The purpose of such a validation is to have an independent, third party assess the project design. In particular, the project’s baseline, the monitoring plan (MP), and the project’s compliance with relevant VCS issues and criteria are validated in order to confirm that the project design as documented is sound and reasonable and meets the stated requirements and identified criteria.

AENOR has performed a validation of Parque Eólico Maldonado. The validation process was performed on the basis of all issues and criteria of VCS Standard (version 3.5) /1/ and VCS Program Guide (version 3.5) /2/ for VCS projects and also on the criteria given by other guidance as VCS Validation and Verification Manual version 3.1./3/

The validation consisted of the following three phases: i) a desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) the resolution of outstanding issues and internal technical review followed by the issuance of the final validation report and opinion. In the course of the validation process 18 corrective actions and 5 clarifications were raised, all have been successfully closed (see Appendix 2).

In summary, it is AENOR’s opinion that the project correctly applies the large-scale methodology ACM0002 “Consolidated baseline methodology for grid-connected electricity generation from renewable sources”; version 16.0 and meets the relevant UNFCCC requirements for the CDM Methodology, Verified Carbon Standard (VCS) v.3.5 requirements and the relevant host country criteria.

The validation has been performed using a risk-based approach, as described above. The only purpose of this report is its use during the registration process as part of the VCS project registration process. Hence, AENOR cannot be held liable by any party for decisions made or not made based on the validation opinion, which goes beyond the purpose.

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1 INTRODUCTION

1.1 Objective

This validation concerns a project implemented by R del Sur S.A., the project proponent (PP), to reduce emissions of CO₂ by generating renewable energy coming from wind resources and thus offsetting the combustion of thousands of tonnes of fossil fuels.

This report summarizes the findings of the validation of the project, performed on the basis of relevant UNFCCC criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting and VCS v.3.5.

The objective of a validation is to provide an independent third party assessment of the project design. In particular, the project's baseline, the monitoring plan, and the project's compliance with relevant UNFCCC and host country criteria and VCS Standard v.3.5 are validated in order to confirm that the project design, as documented, is sound and reasonable, and meets the applicable CDM methodology requirements and the identified criteria as well as VCS Standard v.3.5. Validation is a requirement for all VCS 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 (VCUs).

AENOR as the validation/verification body (VVB) of the Project has been accredited as a DOE by UNFCCC.

1.2 Scope and Criteria

The scope of the validation covers the additionality assessment, the Environmental Impact Assessment and the stakeholder consultation, along with the baseline methodology, the ex-ante calculation of the emission reductions and the monitoring methodology to quantify the emissions reductions during the operational life of the project.

The following documents were reviewed as part of the scope of the activity:

- Project design document (VCS-PD) initial version /4/ and final version /5/, including baseline study and monitoring plan,
- ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources"; Version 16.0 /6/,
- All applicable rules and requirements set out under the VCS Program,
- Associated documentation (technical information, official statistics, etc.).

The validation scope 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 requirements of applicable conditions of the selected CDM methodology, guidance issued by the CDM Board and VCS Program. AENOR has used a risk based approach in the validation, focusing on the identification of significant risks for project implementation and the generation of ERs.

The validation is not meant to provide any consultancy services to the project proponent. However, stated requests for

1.3 Level of Assurance

The level of assurance was used to determine the depth of detail that the validator placed in the validation sampling plan to determine if there are any errors, omissions, or misrepresentations (ISO 14064-3:2006). AENOR assessed the project (general principles, data, monitoring descriptions, documentation, calculations, etc.) to provide reasonable assurance to meet the Project Level requirements of the VCS Program. The evidence used to achieve a reasonable level of assurance is specified in the following sections.

1.4 Summary Description of the Project

The proposed project activity involves the construction and operation of a 50 MW wind farm. The total installed capacity of the project involves the new implementation of 25 wind turbines of individual capacity 2 MW each in Maldonado department, in the southeast region of Uruguay, by R del Sur S.A. The energy generated by the project will be supplied to the national grid of Uruguay through the substation “Francisco Vieira” annexed to the park.

The project is a greenfield project which results in an estimated annual average GHG emission reduction of 109,818 tonnes of CO₂e.

2 VALIDATION PROCESS

2.1 Method and Criteria

The project assessment aims at a risk based approach and is based on the methodology developed in the VCS Standard (version 3.5), which aims to harmonize the approach and quality of all such assessments. The overall validation, from Contract Review to Validation Report and Opinion, was conducted using AENOR internal procedures.

The validation of the project started on 08 April 2014, with the listing of the project on the project pipeline (PL1289), and concludes with the submission of the final validation report for requesting the registration of the project. The validation was performed in several phases, starting with a desk review of the VCS-PD against the VCS rules, ACM0002 “Consolidated baseline methodology for grid-connected electricity generation from renewable sources”; Version 16.0 and other relevant criteria. The desk review was followed by a site visit to the project site in Maldonado department, Uruguay.

In order to ensure transparency, a validation protocol was customized for the project. The protocol shows, in a transparent manner, criteria (requirements), means of validation and the results derived from validating the identified criteria. The validation protocol serves the following purposes:

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

The sequence of the validation is given in the table below:

Topic	Date
Project is listed on pipeline	08-April-2014
On-site visit	08 to 09 -July-2014
Validation protocol version 01	05-August-2014
Final Validation report	31-March-2016

Following the completion of the assessment process by the validation team, all documentation undergoes an internal quality control through a technical review. The technical reviewer is a qualified member of AENOR, independent from the team that carried out the validation of the project activity. The technical reviewer or the team appointed for the technical review are qualified in the technical area and sectoral scope of the project activity.

The completed validation protocol is enclosed in Appendix 2 to this report.

2.2 Document Review

The Project document submitted by the PP was reviewed against the approved CDM methodology and against VCS Program and other relevant criteria. Additional background documents related to the project description, baseline and additionality analysis were also made available before and during the on-site visit in Maldonado department, Uruguay.

Furthermore, cross checks were made between information provided in the VCS-PD and information from sources other than those used, (if available) AENOR sectoral or local expertise and, (if necessary) independent background investigations.

To address the corrective actions and clarification requests that arose from the desk review and on-site visit, the consultant revised the initial project design document submitted and developed the final VCS-PD.

All documents assessed during validation are listed in Appendix 1.

2.3 Interviews

The AENOR validation team conducted interviews with project proponent in Flores department, Uruguay in order to confirm selected information and to resolve issues identified in the document review.

From 08 to 09 July 2014, validation team visited the facilities of the project site. During the visit, representatives from project proponent, in addition to relevant local stakeholders such as local inhabitants, affected by the project were interviewed.

Interviewed organization Person/Position	Interview topics
• Carlos Alvarez García VCS Consultant. • Javier Tirado Rodriguez Project Director R del Sur S.A.	• Project design • System management • Permits and authorizations applicable to the project • Project start date • Additionality assessment. • Ex-ante baseline determination • Consultation with local's stakeholders • Opinion about the project • Knowledge of the environmental impacts • Benefits for the community of Flores department • Project activity compliance with sectoral policies and legislation

2.4 Site Inspections

From 08 to 09 July 2014, audit team visited the facilities of the project site in order to assess if the project is implemented in accordance with specifications stated in the VCS-PD. It has been observed that the conditions of the main components of the project activity are consistent with the description in the VCS-PD. In addition, site visit included a desk review, including the topics indicated above at project representatives and on-site inspections of communities in the current operation status.

After background information on the history of the current system and the proposed project was assessed; project details such as the responsible contractors and implementation steps were discussed. For this purpose, visits and meetings were held at project proponent office. Evidences related to the discussions were provided to the audit team during the meeting.

Community inspections consisted of observations on the infrastructure, monitoring aspects, personnel and general operation.

2.5 Resolution of Findings

As an outcome of the validation process, the team can raise different types of findings (corrective actions, clarifications or other findings) according to the rules and requirements governing the VCS Program.

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

Where a non-conformance arises the validation team shall raise a Corrective Action Request (CAR). A CAR is issued, where:

- 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 VCS requirements have not been met;
- c) There is a risk that emission reductions cannot be monitored or calculated.

Failure to address a CL may result in a CAR. Information or clarifications provided as a result of a CL may also lead to a CAR.

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 VCS requirements for registration.

The project participants were requested to address all validation findings and ultimately provided the validation team with sufficient evidence to determine that the applicable VCS requirements have been met. The project participant modified the initial VCS-PD to resolve the validation team concerns and resubmitted a final version of the VCS-PD. AENOR has prepared this report based on the final VCS-PD.

To guarantee the transparency of the validation process, the issues raised, the responses provided by the project participants, the means of validation of such responses and references to any resulting changes in the VCS-PD or supporting annexes are documented in the Validation Protocol in Appendix 2.

2.6 Forward Action Requests

Project validation resulted without any forward action requests.

3 VALIDATION FINDINGS

3.1 Project Details

Project type, technologies and measures implemented, and eligibility of the project

According to the VCS version 3.5 Guidelines and the list of Sectoral Scopes of the UNFCCC, the project is applicable under the sectoral scope 1:

- Energy Industries (renewable/ non-renewable sources).

The proposed project activity involves the installation and operation of a wind farm with 25 turbines of a capacity of 2 MW each resulting in a total installed capacity of 50 MW; in Maldonado department, Uruguay, by R del Sur S.A.

The project is a greenfield project which results in an estimated annual average GHG emission reduction of 109,818 tonnes of CO₂e.

The technology employed, converts wind to electrical energy. The technology is an environment friendly technology since there are no GHG emissions associated with the electricity generation.

The purpose of the project activity is the generation of electricity from renewable sources to be supplied to the national grid of Uruguay. The project activity will generate greenhouse gas (GHG) emission reductions by avoiding CO₂e emissions which otherwise would have been generated by the operation of grid connected power plants and by the addition of new sources. Hence the project fulfils VCS conditions.

Project proponent

The project proponent has been identified as R del Sur S.A. The contact address of the project proponent is as follows:

Gabriel Otero 6462. Office 206. Montevideo. Uruguay. Tel. +598-2600-7201.

Project start date

The project start date is identical with the commercial operation start date. It is indicated as April 10th, 2014 in accordance with the timeline of the project /7/.

Project crediting period

The crediting period of the project will be 10 years. It will run from April 10th, 2014 to April 09th 2024. The crediting period lasts 10 years and is renewable at most twice.

Project scale and estimated GHG emission reductions or removals

The scale of the project is indicated in the table below:

Project Scale	
Project	X
Large project	

The estimated GHG reductions of the project in the first crediting period are summarised in the table below:

Year	Estimated GHG emission reductions or removals (tCO ₂ e)
2014	86,032
2015	109,818
2016	109,818
2017	109,818
2018	109,818
2019	109,818
2020	109,818
2021	109,818
2022	109,818
2023	109,818
2024	29,786
Total estimated ERs	1,098,180
Total number of crediting years	10
Average annual ERs	109,818

Project activities

The proposed project activity consists on the installation and operation of a new grid connected wind power project. Emission reductions will be achieved through the substitution of fossil fuel energy generation in order to meet the demands of the Uruguayan national grid.

The projected wind farm will have an installed capacity of 50 MW, will consist of twenty-five (25) Gamesa wind turbines G97 2.0 MW rated power, , with the following characteristics.

Gamesa G97 – 2,0 MW IIIA	
Rotor	
Diameter (m)	97
Scanning area (m ²)	7,390
Swing speed (rpm)	from 9.6 to 17.8

Blades	
Number of blades	3
Length (m)	47.5
Profile	Gamesa
Material	Fibreglass epoxy resin pre-impregnated carbon fibre reinforced.
Towers	
Type of tower	modular
Height (m)	78.90
Gear Box	
Type	1 planetary stage 2 parallel-axis stages
Ratio	1:106.8 (50 Hz) 1:127,1 (60 Hz)
Generator 2.0 MW	
Type	doubly-fed
Nominal power (MW)	2.0
Voltage (V)	690 AC
Frequency (Hz)	50/60
Protection class	IP54
Power factor (cos φ)	0.95 cap - 0.95 IND throughout all the power range

The wind farm is of new construction and there is no previous installed capacity. Forecasted capacity of the wind farm will remain the same through all the project lifetime, remaining at 50 MW. Estimated lifetime for the plant and the equipment used is 20 years

Load factor for the plant is calculated at 43.5%, which is considered to be very good by current standards. The plant will generate an estimated 190,500 MWh per year that would have been otherwise generated by the Uruguayan electricity market onto the national grid.

This electricity would have been generated with an emission factor of 0.5765 tCO₂/MWh in the baseline scenario for this project. Hence the emission reductions are derived from the substitution in the origin of the electricity generated.

Through reviewing the Technical studies/reports /8/, licenses and permits of the project /9/, contracts with other entities, general layout of the project, the site view and performed interviews, it has been validated that the information provided in the VCS-PD is consistent with referenced documents.

Project location

The project is located at the department of Maldonado, in the Southeast region of Uruguay. The 25 wind turbines that will make up the wind farm will be distributed along the Sierra de los Caracoles in the municipality of San Carlos in the department of Maldonado. The location, in Universal Transverse Mercator coordinate (UTM), of wind turbines, control towers and transformer are shown in the following tables /9/ /10/:

Turbine location		
UTM (21H)	X	Y
CAR-03-01	689,559	6,171,657
CAR-03-02	689,726	6,171,981
CAR-03-03	689,902	6,172,301
CAR-03-04	690,052	6,172,635
CAR-03-05	690,845	6,174,762
CAR-03-06	691,010	6,175,096
CAR-03-07	691,103	6,175,453
CAR-03-08	691,234	6,175,819
CAR-03-09	691,338	6,176,167
CAR-03-10	691,444	6,176,514
CAR-03-11	691,539	6,176,866
CAR-03-12	691,601	6,177,221
CAR-03-13	691,734	6,177,584
CAR-03-14	691,844	6,177,961
CAR-03-15	691,972	6,178,319
CAR-03-16	692,413	6,179,538
CAR-03-17	692,546	6,179,922
CAR-03-18	692,676	6,180,258
CAR-03-19	692,781	6,180,602
CAR-03-20	692,907	6,181,037
CAR-03-21	693,020	6,181,567
CAR-03-22	693,097	6,181,926
CAR-03-23	693,201	6,182,342

CAR-03-24	693,286	6,182,699
CAR-03-25	693,342	6,183,054

Control towers will be located at the following coordinates:

Location of the meteorological towers		
UTM (21H)	X	Y
MAL-TC01	689.559	6,179,729
MAL-TC02	689.726	6,183,256

Finally the substation will be available at the following coordinates:

Location of Maldonado Substation		
UTM (21H)	X	Y
SETMAL	689.559	6,173,601

Project compliance with applicable laws, statutes and other regulatory frameworks

The project activity had to follow relevant laws and statues or other regulatory frameworks before the beginning of the implementation.

- Law 14.694, National Electricity. Article 2 /11/, amended by Law 16.832 /12/
- Decree 77/06 /13/, by which the National Plants and Transmissions (UTE) will promote the celebration of special contracts for the sale of electricity with suppliers in order to promote settling in the country, to produce that energy from wind power, biomass, and small hydro.
- Decree 360/002, Regulation of Whole sale Electricity Market /14/.
- Decree 403/09 of August 24, 2009 /15/ and its amendment 41/10, dated February 1, 2010 /16/, entrusted with carrying out a joint venture call for tenders for the purchase of a rated capacity of 150 MW from wind energy private developments and allow for a second stage regulation of the 150 MW goal of completing the 300 MW by 2015.
- Decree 349/005 (“Reglamento de Evaluación de Impacto Ambiental y Autorizaciones Ambientales”) /17/.

The implementation of the project activity was approved by the Government of Uruguay in accordance with relevant sectoral regulations.

Ownership and other programs

Right of use

The documents “PPA with UTE” /19/, issued by the Administración Nacional de Usinas y Transmisiones electricas (UTE) clearly indicates R del Sur S.A’s right to all and any GHG emission reductions or removals generated by the project or program during the crediting period or verification period. R del Sur S.A is the only owner of the park and the sole recipient of the emission reductions generated by it.

Emissions trading programs and other binding limits

The project activity is a voluntary action implemented by the project proponent R del Sur S.A. Uruguay is not an Annex I country of the Kyoto protocol so it is not participating in the Assigned Amount Unit (AAU) markets. Also the country has not implemented a national emission rights market. The project proponent R del Sur S.A has declared that the generated GHG emission reductions will not be used in the compliance market and are not traded in any emission trading scheme /19/.

Other forms of environmental credit sought or received

The project proponent has declared that the project activity has not been registered nor is it seeking registration in other form of GHG related environmental credit for GHG emission reductions or removals claimed under the VCS Program /19/.

Participation under other GHG programs

The project proponent has declared that the project activity has not been registered nor is it seeking registration in other GHG programs besides VCS /19/.

Rejection by other GHG programs

The project activity has never been rejected by other GHG programs.

Additional information relevant to the project

Eligibility criteria for grouped projects

The project does not belong to a grouped project.

Leakage management for AFOLU projects

Not applicable. The project activity is a non-AFOLU project.

Commercially sensitive information

No commercially sensitive information has been excluded from the public version of the project description.

3.2 Application of Methodology

3.2.1 Title and Reference

The baseline and monitoring methodology has been determined in accordance with the UNFCCC methodology ACM0002 “Consolidated baseline methodology for grid-connected electricity generation from renewable sources --- Version 16.0” which has been used to determine the baseline emissions and the emission reductions of the project activity.

This methodology also refers to the approved versions of the following UNFCCC tools that have also been used:

- “Tool to calculate the emission factor for an electricity system --- Version 05.0” /20/
- “Tool for the demonstration and assessment of additionality --- Version 07.0.0” /21/
- “Combined tool to identify the baseline scenario and demonstrate additionality---Version 06.0” /22/

3.2.2 Applicability

The project applies the Approved consolidated baseline and monitoring methodology ACM0002, version 16.0.0. Applicability criteria for the baseline methodology are assessed by the validation team by means of document review and interview. In AENOR's opinion the project activity fully meets the criteria as described below:

Applicability conditions Project case	Applicability conditions Project case
This methodology is applicable to grid-connected renewable energy power generation project activities that: (a) Install a Greenfield power plant; (b) Involve a capacity addition to (an) existing plant(s); (c) Involve a retrofit of (an) existing operating plants/units; (d) Involve a rehabilitation of (an) existing plant(s)/unit(s); or (e) Involve a replacement of (an) existing plant(s)/unit(s).	The proposed project activity is a new greenfield wind power farm which is to be installed where no renewable power plant was operating prior to the implementation of the project. Hence, project complies with this condition and methodology is applicable.
The project activity may include renewable energy power plant/unit of one of the following types: hydro power plant/unit with or without reservoir, wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit;	The proposed project activity is a new grid-connected wind power generation project activity. Hence, project complies with this condition and methodology is applicable.
In the case of capacity additions, retrofits,	Not applicable.

rehabilitations or replacements (except for wind, solar, wave or tidal power capacity addition projects the existing plant/unit 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, retrofit, or rehabilitation of the plant/unit has been undertaken between the start of this minimum historical reference period and the implementation of the project activity.	The proposed project activity does not involve capacity addition, retrofit or replacement.
In case of hydro power plants, one of the following conditions shall apply:1 (a) The project activity is implemented in existing single or multiple reservoirs, with no change in the volume of any of the reservoirs; or (b) The project activity is implemented in existing single or multiple reservoirs, where the volume of the reservoir(s) is increased and the power density calculated using equation (3), is greater than 4 W/m^2 ; or (c) The project activity results in new single or multiple reservoirs and the power density, calculated using equation (3), is greater than 4 W/m^2 ; or (d) The project activity is an integrated hydro power project involving multiple reservoirs, where the power density for any of the reservoirs, calculated using equation (3), is lower than or equal to 4 W/m^2, all of the following conditions shall apply: (i) The power density calculated using the total installed capacity of the integrated project, as per equation (4), is greater than 4 W/m^2; (ii) Water flow between reservoirs is not used by any other hydropower unit which is not a part of the project activity; (iii) Installed capacity of the power plant(s) with power density lower than or equal to 4 W/m^2 shall be: a. Lower than or equal to 15 MW; and b. Less than 10 per cent of the total installed	Not applicable. The project activity is a new wind power plant.

capacity of integrated hydro power project.	
In the case of integrated hydro power projects, project proponent shall: (a) Demonstrate that water flow from upstream power plants/units spill directly to the downstream reservoir and that collectively constitute to the generation capacity of the integrated hydro power project; or (b) Provide an analysis of the water balance covering the water fed to power units, with all possible combinations of reservoirs and without the construction of reservoirs. The purpose of water balance is to demonstrate the requirement of specific combination of reservoirs constructed under CDM project activity for the optimization of power output. This demonstration has to be carried out in the specific scenario of water availability in different seasons to optimize the water flow at the inlet of power units. Therefore this water balance will take into account seasonal flows from river, tributaries (if any), and rainfall for minimum five years prior to implementation of CDM project activity.	Not applicable. The project activity is a new wind power plant.
The methodology is not applicable to: (a) Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity, since in this case the baseline may be the continued use of fossil fuels at the site; (b) Biomass fired power plants/units.	Not applicable. The project activity is a new wind power plant.
In the case of retrofits, rehabilitations, 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, that is 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".	Not applicable. The project activity is a greenfield power plant.

Applicability condition of applied tools; also, have been discussed in the VCS-PD:

Tool to calculate the emission factor for an electricity system, Version 05.0

Applicability conditions Project case	Applicability conditions Project case
This tool may be applied to estimate the OM, BM and/or CM when calculating baseline emissions for a project activity that substitutes grid electricity, i.e. where a project activity supplies electricity to a grid or a project activity that results in savings of electricity that would have been provided by the grid (e.g. demand-side energy efficiency projects).	This project activity will supply electricity to the Uruguayan grid hence this tool is applicable.

Tool for the demonstration and assessment of additionality, Version 07.0.0

Applicability conditions Project case	Applicability conditions Project case
Once the additionally tool is included in an approved methodology, its application by project participants using this methodology is mandatory	This tool has been included on the approved methodology ACM 00002 version 16.0.0, hence this tool is applicable

Combined tool to identify the baseline scenario and demonstrate additionality, Version 06.0

Applicability conditions Project case	Applicability conditions Project case
This tool is only applicable to methodologies for which the potential alternative scenarios to the proposed project activity available to project participants cannot be implemented in parallel to the proposed project activity	The potential alternative scenarios to the project activity cannot be implemented in parallel hence the tool is applicable

The VCS-PD describes the baseline methodology, which is in conformance with the latest version of the approved Baseline and Monitoring Methodology: ACM0002 “Consolidated baseline methodology for grid-connected electricity generation from renewable sources - Version 16.0.

In addition, section 2.2 of the final VCS-PD identifies the applicability conditions of the approved methodology and states how the project activity fulfils each of these conditions. AENOR has verified by desk review, on-site visit and interviews that the conditions required by the methodology are met. Thus, the VCS-PD clearly identifies that the project activity fulfils the conditions of the applicable methodology and tools.

3.2.3 *Project Boundary*

The boundary of the project activity is as per methodology definition ACM0002 “*includes the project power plant and all power plants connected physically to the electricity system that the CDM project power plant is connected to*”.

Project boundary is the wind turbines sites, the power house, the concession area and the auxiliary facilities. In addition, all emission sources and gases related to the baseline scenario, project scenario, and leakage are clearly identified and described in a complete manner. CO₂ is the main emission source and is included in the baseline; but CH₄ and N₂O are excluded, in compliance with the methodology. CO₂, N₂O and CH₄ are not included in the project activity as an emission source.

In order to calculate the emission factor for the project activity, the interconnected system is also included in the boundary of the project activity.

AENOR has validated the project boundary of the project during the on-site visit and with PPA and EPC contract /23/. The validation team states that the identified boundary and selected sources and gases are justified for the project activity

3.2.4 *Baseline Scenario*

The final version of the VCS-DD describes the baseline methodology, which is in conformance with the approved methodology ACM0002; version 16.0 According to description of the applied methodology, if the project activity is the installation of a new grid-connected renewable power plant/unit, the baseline scenario is the following:

“Electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in the “Tool to calculate the emissions factor for an electricity system”.

Since the project activity is the installation of a new, grid-connected renewable power plant, the baseline scenario is the electricity delivered to the grid by the project activity that otherwise 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”. This definition is in accordance with ACM0002 methodology and has been correctly indicated in the final version of the VCS-PD.

The assumptions and data used in the identification of the baseline scenario are appropriately justified, supported by evidence and can be deemed reasonable. In addition, relevant national and/or sectoral policies and circumstances are indicated in the final version of the VCS-PD.

The VCS-PD identifies the baseline for the proposed project activity, defined as the scenario that reasonably represents the anthropogenic emissions by sources of GHGs that would occur in the absence of the proposed project activity

3.2.5 *Additionality*

The additionality of Parque Eólico Maldonado project activity as required by ACM0002 version 16.0 is demonstrated by applying the “Tool for the demonstration and assessment of additionality” version 07.0.0. /21/

Applying the step 1 of the tool, plausible alternative baseline scenarios to the project have been identified and discussed in the final PD. These are:

Alternative 1: Execution of the project activity without its registration as VCS.

Alternative 2: Continuation of the current situation i.e. the supply of electricity from the Interconnected System of Uruguay (baseline scenario).

The alternatives presented in the Step 1 are realistic and credible and comply with the regulation in place, Law 14.694, Law 16.832, Decree 77/06, Decree 360/002, Decree 403/09 and Decree 349/005.

Application of Benchmark Analysis

Concerning the step 2, the PP has chosen the investment analysis. As the project activity generates financial and economic benefits other than VCS related income through the sales of electricity and the proposed baseline scenario does not involve an investment, R del Sur S.A. has used an IRR benchmark analysis in order to demonstrate the additionality of the Project activity.

In order to reproduce and validate the financial calculations, the spreadsheets together with the evidence regarding the input values were requested to the PP. In regard to this matter, the financial model /23/ has been provided.

It has been demonstrated that the project IRR post-tax without VCU revenues is estimated to be 9.54%. The project IRR is lower than the IRR benchmark of 11.20% in real terms, adopted by the Project Participant. As per the “Tool for the demonstration and assessment of additionality” version 07.0.0, a relevant benchmark for a project IRR can be derived from local commercial lending rates. The reference from the World Bank /24/ has been verified and crosschecked by AENOR and are found to be correct; hence, it has been accepted by the validation team.

The post-tax benchmark IRR of 11.20% is validated to be suitable for the project activity by AENOR’s validation team in compliance with paragraph 130 (a) of the VVS version 09.0.

The validation team verified that taxes and depreciation used in the investment analysis comply with the Uruguayan legal requirements i.e. 25% value of the income tax, tax exemptions for renewable projects and a linear depreciation 20 years for civil works and machinery /17/25/.

Following the Methodological tool: Investment analysis” version 06.0 /26/, it has been validated that the project IRR calculation reflects the expected operation of the underlying project activity (a technical lifetime of 20 years), that the capital cost of the assets and their depreciation as an expense to the project were not both treated to constitute a double counting of this cost, and that the cost of financing expenditures (i.e., loan repayments and interest) was not included in the calculation of the project IRR in the final version of the VCS-PD and the IRR calculation spreadsheet /24/.

AENOR has verified and confirmed that the values used in the financial analysis are consistent with the value of the source and this information was available before the starting date of the

project and was thus likely to be considered in the decision. References are included in the VCS-PD and IRR calculation spreadsheet.

The financial spreadsheets have been evidenced and verified to be correct. The assumptions used, the base documents and the financial calculations have also been verified.

Total Project Investment costs

The total project investment costs of 89,193,120.8 US\$ have been derived from third party entities, Gamesa which provided a quotation corresponding to equipment, machinery /27/, CIFORY, Elecnor, SEMI, Siemens, Alarde and SOCOIN which provided quotations for the civil works, electrical works and consultancy 28/29/30/31/32/33/. The PP has provided evidence of these investment costs and AENOR's validation team has checked that the total figure matches the amount stated in the financial model.

In addition a comparison of investment cost per MW is done among the proposed project activity and similar wind power projects in Uruguay.

The comparison results show that the investment per MW used in the VCS-PD for Parque eólico Maldonado project is below the range observed in similar projects registered as CDM in the same area (see below table) which is considered conservative and hence accepted by the validation team.

Comparison of investment per MW among similar registered CDM projects in Uruguay

Project	Capacity (MW)	Total static Investment 1,000 US\$	Investment per MW 1,000 US\$
Project 7627 : Minas I /34/	42.00	83,143	1,980
Project 8080 : Pastoreale /35/	51.00	106,715	2,092
Project 9150 : Luz de Mar – Pintado Wind Farm /36/	39.00	89,538	2,296
Project 9157 : Pintado II Wind Farm /37/	51.00	110,310	2,163
Project 9316 : Flores I Wind Farm /38/	102.00	216,348	2,121
Project 9336 : Peralta I Wind Power Project /39/	50.00	137,110	2,742
Parque eólico Maldonado	50.00	89,193	1,784

Source: PP and UNFCCC.

O&M Costs

The applied annual O&M costs are estimated by the PP based on its sectoral and local expertise in operating wind farm projects and the maintenance contract signed with Gamesa /40/. In order to validate the suitability of the input values applied, the validation team of AENOR crosschecked the annual average O&M costs with data from IRENA "Renewable Energy Technologies. Cost Analysis Series. June 2012" /41/ and with similar projects signed as CDM project in the same area (see table below).

Comparison of O&M costs among similar registered CDM projects in Uruguay

Project	Capacity (MW)	Annual Generation (MW)	Annual Average O&M costs 1,000 US\$	O&M costs US\$/KWh
Project 7627 : Minas I	42.00	166,161	1,932	0.012
Project 8080 : Pastoreale	51.00	212,872	2,327	0.011
Project 9150 : Luz de Mar – Pintado Wind Farm	39.00	149,280	1,836	0.012
Project 9157 : Pintado II Wind Farm	51.00	199,739	2,327	0.012
Project 9316 : Flores I Wind Farm	102.00	352,067	4,218	0.012
Project 9336 : Peralta I Wind Power Project	50.00	176,700	2,868	0.016
Parque eólico Maldonado	50.00	190,500	2,892	0.015

Source: PP and UNFCCC.

The applied average annual O&M costs of 0.015 US\$/KWh, were found to be in line with similar projects signed as CDM project in the same area and also within the interval of 0.01 US\$/KWh to 0.043 US\$/KWh provided by the IRENA, hence it is deemed appropriate and therefore accepted by the validation team of AENOR.

Based on above information, in AENOR's opinion the Annual O&M cost used in the VCS-PD was reasonable, valid and applicable at the time of the investment decision.

Annual Power Generation/ Plant Capacity Factor

The wind farm plant capacity factor of 43.5% was found to be within the range of similar projects signed as CDM in the same area, and is, therefore, accepted by AENOR's validation team.

In addition, electricity generation was determined by a third party, Barlovento with data from the wind resource measurement, taking into account the on-site topography, geomorphology, air density, wind turbine efficiency and other basic data /42/.

Therefore, AENOR confirms that the above procedure for the annual power supply estimation is common practice for wind farm projects in Uruguay.

Comparison of Annual Power Generation among similar registered CDM projects in Uruguay

Project	Capacity (MW)	Annual Generation (MW)	Load Factor (%)
Project 7627 : Minas I	42.00	166,161	45.2%
Project 8080 : Pastoreale	51.00	212,872	47.6%
Project 9150 : Luz de Mar – Pintado Wind Farm	39.00	149,280	43.7%
Project 9157 : Pintado II Wind Farm	51.00	199,739	44.7%
Project 9316 : Flores I Wind Farm	102.00	352,067	39.4%
Project 9336 : Peralta I Wind Power Project	50.00	176,700	40.3%
Parque eólico Maldonado	50.00	190,500	43.5%

Source: PP and UNFCCC.

Therefore, according to the “Guidelines for the reporting and validation of plant load factors” /43/ and above cross-checking, AENOR considers that the annual grid-connected electricity generation is reasonable and appropriate.

Electricity price

As mentioned in the VCS-PD the project activity will supply electricity to the Uruguayan grid under a long term Power Purchase Agreement (PPA) signed with UTE /18/ with a initial tariff of 63.50 US\$/MWh. Under this scheme it is mandatory to sell the committed energy to UTE at that fixed price during 20 years i.e. project lifetime.

AENOR has checked the contract signed between UTE and the PP and found the tariff values used in the financial model to be the same. Calculations were also found to be correct.

In addition, AENOR checked the PDDs of wind farm projects in Uruguay and found the tariff used in the investment analysis and the final VCS-PD, within the range of tariffs for registered CDM projects.

Comparison of tariffs among similar registered CDM projects in Uruguay

Project	Capacity (MW)	Tariff (US\$/MWh)	Indexed (Y/N)
Project 7627 : Minas I	42.00	63.90	Yes
Project 8080 : Pastorale	51.00	63.50	Yes
Project 9150 : Luz de Mar – Pintado Wind Farm	39.00	80.34	Yes
Project 9157 : Pintado II Wind Farm	51.00	62.35	No
Project 9316 : Flores I Wind Farm	102.00	72.24	No
Project 9336 : Peralta I Wind Power Project	50.00	86.60	Yes
Parque eólico Maldonado	50.00	63.50	Yes

Source: PP and UNFCCC.

Therefore, AENOR considers that the value for the tariff used for the IRR calculation as has been done in the PDD is appropriate and was valid and applicable at the time of the investment decision.

Sensitivity Analysis

The VCS-PD includes a sensitivity analysis to demonstrate that the conclusion regarding the financial/economic attractiveness withstands reasonable variations in the critical assumptions.

For this purpose, variations in the range of +/- 10% for the parameters of electricity price, total project investment costs, plant capacity factor and O&M costs have been considered, since that range is reasonable for the project context and these variables constitute more than 20% of either total project costs or total project revenues.

The sensitivity analysis shows that without the income from VCUs sales the IRR of the proposed project is also lower than the benchmark, even when the possible variations of the main parameters are considered. It was confirmed that the conclusion obtained in the analysis mentioned above was robust to conclude that the project activity is unlikely to be financially attractive.

In addition, AENOR has validated that higher variations of these parameters, that would make the project IRR reach the benchmark, are not likely to occur due to the following facts:

- 12% increase in the electricity price. As told before, the chosen price was settled based on a PPA for the first 20 years of operation. Since the electricity price is fixed in the PPA for 20 years therefore it is unlikely that the chosen electricity tariff could increase an additional 12% to make the project IRR reach the benchmark.
- 12% decrease in the total project investment costs. Prices including those for the main equipments and raw materials have been increasing in recent years /44/. In addition, the investment cost per MW of the project was found to be below similar registered projects in the area; therefore, it is unlikely that the total investment will decrease by 12%, such that the project IRR reaches the benchmark.
- 59% decrease in the total O&M costs. As told above, prices have been increasing in recent years in Uruguay. In addition the O&M cost of the project was found to be within the range of similar registered projects in the area; therefore, it is unlikely that total O&M costs will decrease by 59%, such that the project IRR reaches the benchmark.
- 13% increase in plant capacity factor (electricity generation) .The annual electricity output is determined by a third party, Barlovento, an engineering consortium specialised in the wind power sector resulting in a plant capacity factor of 43.5%. In addition, the average load factor of similar CDM registered projects in the area is 43.5%; thus, it is unlikely that the load factor of the project will increase an additional 13%, such that the project IRR reaches the benchmark.

AENOR reviewed and confirmed all related documents. The assessments show clearly that investment is unlikely to be 12% lower, electricity tariff 12% higher, total O&M costs 59% lower and electricity generation 13% higher.

In summary, it is AENOR's opinion that the additionality of the project is sufficiently demonstrated based on the investment analysis and thus it is sufficiently demonstrated that the project is not a likely baseline scenario and those emission reductions are therefore additional.

Barrier analysis

The barrier analysis has not been selected to demonstrate the additionality.

Common Practice

According to the tool on common practice, version 03.1/45/, a common practice analysis is carried out.

Step 1: The proposed project is of 50 MW installed capacity, thus the projects with $\pm 50\%$ design capacity of the proposed project activity (25~75 MW) are considered as of similar size.

Step 2: 0 similar projects located in Uruguay with an installed capacity within the range of 25~75 MW and that started commercial operation before the start date of the project, have been correctly identified in this step. Information used has been carefully verified and the determination of similar projects is assessed as reasonable and it has been crosschecked with the webpage of the Electricity Market Administrator (ADME) of Uruguay /46/, and found to be accurate by the validation team of AENOR.

Step 3: 0 plants have been correctly identified. According to ADME, there are no similar projects which fulfil all the conditions. Hence, N_{all} is determined as 0.

Information used has been carefully verified and the determination of N_{all} is assessed as reasonable.

Step 4: There are no similar plants projects applying different technologies that the proposed project activity. Hence, N_{diff} is determined as 0.

Information used is carefully verified and the determination of N_{diff} is assessed as reasonable.

Step 5: calculate factor $F = 1 - N_{diff}/N_{all}$

$F = 1 - N_{diff}/N_{all} = 1 - 0/0 = \text{undefined}$

$N_{all} - N_{diff} = 0$.

Therefore as $N_{all} - N_{diff}$ is smaller than 3, irrespective of F value; therefore, the proposed project clearly cannot be taken as common practice in Uruguay.

In summary, based on our local and sectoral expertise it is AENOR's opinion that the additionality of the project is sufficiently demonstrated based on the investment analysis, that the project is not a likely baseline scenario, and that those emission reductions are, therefore, additional.

3.2.6 Quantification of GHG Emission Reductions and Removals

The emission reduction is determined in accordance with the CDM methodology AMC0002. This section contains the description of the alternatives chosen from the methodology in order to calculate GHG emission reductions for the project activity which have been correctly used in the calculation spreadsheet for emission reductions /47/. The spreadsheet was checked against the source of all used parameters such as, generation data, IPCC default values and electricity market statistics.

Quantification of baseline emissions

According to the *applied methodology*, baseline emissions are calculated as follows:

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

Where:

BE_y : Baseline emissions in year y (tCO₂/yr.)

$EG_{PJ,y}$: Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the VCS project activity in year y (MW·h/yr.)

$EF_{grid,CM,y}$: Combined margin CO₂ emission factor for grid connected power generation in year y calculated using version 05.0 of the “Tool to calculate the emissions factor for an electricity system” (tCO₂/MW·h)

According to the methodology if the project activity is the installation of a Greenfield power plant, then:

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

$EG_{facility,y}$: Quantity of net electricity generation supplied by the project plant/unit to the grid in year y (MW·h/yr.)

At the start of validation stage, due to the fact that the project activity has not been operating yet, the estimations of net energy supplied to the grid is done based on wind resources study, which states that the estimated energy is 190,500 MWh /42/.

Then:

$$EG_{facility,y} = EG_{PJ,y} = 190,500 \text{ MWh}$$

The baseline emission factor ($EF_{grid,CM,y}$) is determined following the six steps stated in the “tool to calculate the emission factor for an electricity system” version 05.0 /20/.

Step 1: Identify the relevant electricity systems;

The spatial extent of the project boundary includes the project site, connected to the National Interconnected System.

In addition, for the purpose of determining emission factor(s) for net electricity imports from Argentina and Brasil, default value 0 tCO₂/MWh is used.

Step 2: Choose whether to include off-grid power plants in the project electricity system (optional);

From two options the PPs chose Option I: Only grid power plants are included in the calculation of the operating and build margin emission factor.

Step 3: Select a method to determine the operating margin (OM);

The Simple adjusted OM was selected by the proponent to calculate the operating margin, using the ex-ante option for the data vintages. As per the ex-ante option, the emissions factor is determined once at the validation stage, thus no monitoring and recalculation of the emission factor during the crediting period is required.

For the calculation purposes, hourly dispatch data from 2011 /48/, 2012 /49/ and 2013 /50/ for the electric system has been provided by ADME and they have been made available to the validation team.

Step 4: Calculate the operating margin emission factor according to the selected method;

It has been validated that Simple adjusted OM method is calculated based on fuel consumption and the fuel type used, IPCC emission factors default values /51/ and dispatch data provided by ADME. For determining the CO₂ emission factor for the grid power units, option A1 of the applicable tool has been used.

Due to the fact that ex ante option was chosen; the emission factor is determined using a 3-year generation-weighted average, based on the most recent data available at the time of submission of the VCS-PD to the DOE for validation (data from 2011 to 2013).

$EF_{grid,OM-adj,2011}$	$EF_{grid,OM-adj,2012}$	$EF_{grid,OM-adj,2013}$
0.7524	0.7359	0.5805

Therefore, the operation margin is **0.6881 tCO₂** (average)

After reviewing all data provided and spreadsheet of grid emission factor calculation /47/, AENOR is able to confirm that they are in compliance with the methodology and follow the procedures of the tool. Values of $EF_{grid,OM-adj,y}$ were properly calculated; the emission factors of the fuel adopted were obtained from 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Workbook; the lower values of the 95 % confidence intervals are used for the emission factors of the fuels employed, which is a conservative approach in the emission factor calculation context. Formulae and factors used to calculate the operating margin are properly described in the final version of the VCS-PD and they are considered correct and transparent.

Step 5: Calculate the build margin (BM) emission factor; (f) Step 6: Calculate the combined margin (CM) emission factor.

Option 1 of the applicable tool has been chosen in terms of vintage of data, i.e., for the first crediting period, the BM emission factor is calculated ex-ante based on the most recent information available on units already built for sample group, m, at the time of VCS-PD submission to the DOE for validation. For the second crediting period, the BM emission factor will

be updated based on the most recent information available on units already built at the time of submission of the request for renewal of the crediting period to the DOE. For the third crediting period, the BM emission factor calculated for the second crediting period will be used.

The resulting sample group of power units m for determining the build margin is the: $SET_{\text{sample-CDM} \rightarrow 10\text{yrs}}$. $EF_{\text{grid,BM},y}$ is calculated as 0.2417 tCO₂e/MWh. The calculations have been reproduced and AENOR deems that they are in compliance with the methodology and follow the procedures of the tool.

Step 6: Calculate the combined margin emissions factor

The combined margin (CM) is determined as the weighted average of the operating margin (OM) and build margin (BM). Moreover, the default weights are adopted in the proposed project activity. According to the “Tool to calculate the emission factor for an electricity system” the weighting applicable for Wind and solar power generation project activities: $w_{\text{OM}} = 0.75$ and $w_{\text{BM}} = 0.25$ (owing to their intermittent and nondispatchable nature) for the first crediting period and for subsequent crediting periods;

The value obtained for the CM is detailed as follows:

$$EF_{\text{grid,CM},y} = EF_{\text{grid,OM},y} \times 0.75 + EF_{\text{grid,BM},y} \times 0.25$$

$$EF_{\text{grid,CM},y} = 0.6881 \times 0.75 + 0.2417 \times 0.25$$

$$EF_{\text{grid,CM},y} = 0.5765 \frac{\text{tCO}_2}{\text{MWh}}$$

Then, baseline emissions are:

$$BE_y = EG_{PJ,y} \times EF_{\text{grid,CM},y}$$

$$BE_y = 190,500 \text{ MWh} \times 0.5765 \frac{\text{tCO}_2}{\text{MWh}}$$

$$BE_y = 109,818 \text{ tCO}_2$$

Quantification of Project emissions

According to the applied methodology the project emissions are equal to the sum of the Project emissions from fossil fuel consumption; project emissions from the operation of geothermal power plants due to the release of non-condensable gases; and project emissions from water reservoirs of hydro power plants. For wind power projects the aforementioned values are zero. Therefore, project emissions (PE_y) are zero.

Quantification of Leakage

According to the applied methodology no leakage emissions are considered.

Quantification of Emission Reductions

Emission reductions are calculated as follows:

$$ER_y = BE_y - PE_y$$

Where:

ER_y : Emission reductions in year y (tCO₂e/y);

BE_y : Baseline emissions in year y (tCO₂e/y);

PE_y : Project emissions in year y (tCO₂e/y);

Therefore,

$$ER_y = 109,818 - 0$$

$$ER_y = 109,818 \text{ tCO}_2$$

3.2.7 Methodology Deviations

No methodology deviation has been applied to the Project.

3.2.8 Monitoring Plan

The project participant has developed a monitoring plan, which is detailed in section 4.3 of the VCS-PD, in order to ensure that the real, measurable and long-term greenhouse gas (GHG) emission reduction for the proposed project is monitored and reported. The project monitoring management, monitoring equipment and installation and procedures for calibration and maintenance of monitoring equipment, reporting, review, etc., are addressed in the monitoring plan.

There are only one parameter to be monitored, which is $EG_{\text{facility},y}$ ($EG_{PJ,y}$): Quantity of net electricity generation supplied by the project plant to the grid in year y. It will be monitored by Electricity meter at project site and will be measured by SMEC (Commercial Energy Measuring System of Uruguay). There will be two meters: a main meter and a backup meter; the measured of back up meter will be utilized only if there is any problem with the main meter. The hourly measured reading by meters will be recorded monthly by plant personnel. According to the local

regulation /52/; the class of main meters is 0.2 and for backup meter is 0.5, installed in parallel with the main meter and should be periodically calibrated at least one every two years during the verification of the system. Furthermore, project owner will archive electronically all data collected as part of monitoring electronically and kept it at least for 2 years after the end of the last crediting period.

AENOR has checked that the provisions included in the monitoring plan satisfy the purpose of guaranteeing that the project activity has been correctly managed since the beginning. Also, the ADME webpage was reviewed in order to check the availability of information, and all of it is in conformance with the provisions detailed in the monitoring plan of the VCS-PD.

Therefore, AENOR confirms that the monitoring arrangements described in the monitoring plan are feasible within the project design, and that the data management, quality assurance, and quality control procedures are sufficient to ensure that the emission reductions achieved by resulting from the proposed project activity can be reported ex post and verified.

3.3 Non-Permanence Risk Analysis

Since this project activity is not an AFOLU project and its emission reductions, do not have risk of reversibility, it is not necessary to perform a non-permanence risk analysis.

3.4 Environmental Impact

According to Uruguay decree 349/005 (Regulatory System of Environmental Impact Assessment and Environmental authorizations) /17/, the project requires an environmental approval. Therefore, project proponent hired an environmental consultant to develop the environmental impact assessment for the project Wind Farm.

All of the impact would be within an acceptable limit by carrying out corresponding mitigation measures as per the statement of the EIA. Moreover, AENOR confirms that environmental information in VCS-PD is consistent with the resolutions of MVOTMA and that the PP has followed a correct analysis of environmental impacts in accordance with procedures as required by the host party.

The final VCS-PD summarize in section 5 the main environmental impacts gathered in the EIA. Environmental impacts that are considered significant by the project participants or the host Party are properly described in the VCS-PD and they were checked against the EIA.

On December 2011, the project EIA was presented against the National Environment Directorate (DINAMA) of the Uruguayan Ministry of Housing, Land Use Planning and Environment (MVOTMA).

Maldonado project got its Prior Environmental Authorization on November the 7th 2012, allowing for the works to proceed on the project and, once works were finished, the project got its Operating Environmental Authorization, which is the final approval step on the environmental authorization process that allows the park to operate throughout its lifetime.

AENOR concludes that the Project Participant has followed a correct analysis of environmental impacts in accordance with procedures as required by the host Party

3.5 Comments by Stakeholders

In order to take into account the local stakeholder comments, PP holds interviews with the stakeholders relevant for the project activity. The PP provided the summary of the stakeholder comments process to the validation team. A Social Impact Assessment /53/ was carried out in March 2012. In addition, the PP has developed a Project Communication Plan /54/, in order to establish appropriate communication channels, including the reception and response of comments or complaints about the project.

AENOR has checked all the related documents and confirms that the consultation was appropriate. Also, during the on-site visit a meeting with community representative from Maldonado Municipality where scheduled, in order to confirm that the community was informed about the project.

The audit team is able to confirm the information summarized in the section 6 of the PD.

4 VALIDATION CONCLUSION

AENOR has performed a validation of the project Parque Eólico Maldonado. The validation process was performed on the basis of all issues and criteria of VCS Standard (version 3.5) and VCS Program Guide (version 3.5) for VCS projects and also on the criteria given to provide for consistent project operations, monitoring and reporting.

The validation consisted of the following three phases: i) a desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) the resolution of outstanding issues and the issuance of the final validation report and opinion. In the course of the validation process 18 corrective actions and 5 clarifications were raised, all have been successfully closed.

The project proponent applied the methodology ACM0002 “Consolidated baseline methodology for grid-connected electricity generation from renewable sources”; version 16.0. In addition, the “Tool for the demonstration and assessment of additionality --- Version 07.0.0” is used to demonstrate the additionality of the project.

The project proponent demonstrates that the proposed project activity 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 review of the project design documentation and additional documents related to baseline and monitoring methodology; the subsequent background investigation, follow-up interviews and review of comments by parties and stakeholders have provided AENOR with sufficient evidence to validate the fulfilment of the stated criteria.

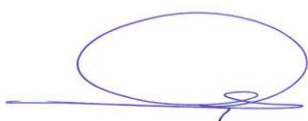
The conclusions can be summarised in detail as follows:

- The project additionality is sufficiently justified in the VCS-PD.
- The monitoring plan is transparent and adequate.
- The calculation of the project emission reductions is carried out in a transparent and conservative manner, so the project activity is likely to achieve the average estimated amount of emission reductions of 109,818 tCO₂e per year.

In AENOR opinion, the project correctly applies and meets all applicable rules and requirements set out under the VCS Program. The validation is based on the information made available to us and the engagement conditions detailed in this report.

The validation has been performed using a risk-based approach, as described above. The only purpose of this report is its use during the registration process as part of the VCS Project Registration Process. Hence, AENOR cannot be held liable by any party for decisions made or not made based on the validation opinion, which goes beyond the purpose.

DATE: 31 March 2016



Luis Robles Olmos
Authorized Person

DATE: 31 March 2016



Manuel García-Rosell
Lead Validator

APPENDIX 1: REFERENCES

Ref	Document Name	Date	Author/Competent Authority
1	VCS Standard: version 3.5	25 March 2015	Verified Carbon Standard
2	VCS Program Guide version 3.5	8 October 2013	Verified Carbon Standard
3	VCS Validation and Verification Manual version 3.1.	8 October 2013	Verified Carbon Standard
4	Initial Version of VCS-PD: Version 2.0	25 June 2014	Project Proponent
5	Final Version of VCS-PD: version 2.6	31 March 2016	Project Proponent
6	Approved methodology ACM0002 version 16.0	28 November 2014	CDM- Executive Board
7	Timeline of the project	-	Project Proponent
8	Technical studies/reports	-	GAMESA
9	Licenses and permits of the project	-	Eastern Republic of Uruguay
10	Environmental Impact assessment	December 2011	Estudio Ingeniería Ambiental
11	Law 14.694	-	Eastern Republic of Uruguay
12	Law 16.832	-	Eastern Republic of Uruguay
13	Decree 77/06	-	Eastern Republic of Uruguay
14	Decree 360/002,	-	Eastern Republic of Uruguay
15	Decree 403/09	2009	Eastern Republic of Uruguay
16	Amendment 41/10	2010	Eastern Republic of Uruguay
17	Decree 349/005	-	Eastern Republic of Uruguay
18	PPA with UTE	06 September 2012	Project Proponent and UTE

Ref	Document Name	Date	Author/Competent Authority
19	Declaration that the project has not applied any other GHG scheme	23 July 2014	Project Proponent
20	Tool to calculate the emission factor for an electricity system version 05.0	27 November 2015	CDM- Executive Board
21	Tool for the demonstration and assessment of additionality version 07.0.0	23 November 2012	CDM- Executive Board
22	Combined tool to identify the baseline scenario and demonstrate additionality version 06.0	24 July 2015	CDM- Executive Board
23	Project IRR calculation spreadsheet		Project Proponent
24	Lending interest rate (http://data.worldbank.org/indicator/FR.INR.LEND)	Various years	The World Bank
25	Law 18.083 (Tax Law)	-	Eastern Republic of Uruguay
26	Methodological tool: Investment analysis version 06.0	24 July 2015	CDM- Executive Board
27	Quotation for wind turbines	20 July 2012	GAMESA Eolica SL
28	Civil Works bid	17 September 2012	CIFORY SA
29	Quotation for substation and connection	July 2012	Elecnor
30	Quotation for connection to grid	19 October 2012	SEMI
31	Quotation for transformer	10 July 2012	Siemens
32	Quotation for consultancy	15 January 2012	Alarde
33	Quotation for engineering	-	SOCOIN
34	Project 7627 : Minas I	-	CDM- Executive Board
35	Project 8080 : Pastoreale	-	CDM- Executive Board
36	Project 9150 : Luz de Mar – Pintado Wind Farm	-	CDM- Executive Board

Ref	Document Name	Date	Author/Competent Authority
37	Project 9157 : Pintado II Wind Farm	-	CDM- Executive Board
38	Project 9316 : Flores I Wind Farm	-	CDM- Executive Board
39	Project 9336 : Peralta I Wind Power Project	-	CDM- Executive Board
40	Quotation for wind turbine maintenance	20 July 2012	GAMESA
41	Renewable Energy Technologies. Cost Analysis Series.	June 2012	IRENA
42	Wind Resource Assessment	03 October 2012	Barlovento
43	Guidelines for the reporting and validation of plant load factors version 01	17 July 2009	CDM- Executive Board
44	Uruguay CPI statistics	Various years	National Institute of Statistics of Uruguay
45	Methodological tool: Common practice version 03.1	3 June 2015	CDM- Executive Board
46	Generation plants	Various years	Electricity Market Administrator (ADME)
47	Emission Reduction Calculation Spreadsheet	-	Project Proponent
48	Dispatch Data Generation 2011 Of Electricity System	2011	UTE
49	Dispatch Data Generation 2012 Of Electricity System	2012	UTE
50	Dispatch Data Generation 2013 Of Electricity System	2013	UTE
51	2006 IPCC Guidelines for National Greenhouse Gas Inventories	2006	IPCC
52	Resolution 14/002. Commercial Energy Measuring System	-	Eastern Republic of Uruguay
53	Project Social Impact Assessment	2012	Estudio Ingeniería Ambiental
54	Project Communication Plan	2012	Estudio Ingeniería Ambiental

VALIDATION PROTOCOL

PROJECT:

PARQUE EÓLICO MALDONADO

PROJECT PROPONENT:

R DEL SUR S.A.

Validation Type	
☒ VCS Validation of a Project Activity	
Validation Team:	
Manuel Enrique García-Rosell Rodríguez – Lead Validator Marcelino Pellitero – Validator Richard Gonzales Toledo –Validator	
Version of this Validation Protocol: 03	Date: 31/03/2016

CHECKLIST TOPIC / QUESTION	MoV/Ref.*	COMMENTS	Draft Conclusion	Final Conclusion
A. GENERAL DESCRIPTION OF PROJECT ACTIVITY				
A.1. Title of the project activity				
A.1.1 Does the used project title clearly enables to identify the unique VCS activity? Is it consistent in all section of the VCS PD and in all documents?	DR	Yes, the project title is "Parque Eólico Maldonado" which clearly identifies the VCS activity.	OK	OK
A.1.2 Are there any indication concerning the revision number and the date of the revision?	DR	Yes, the submitted VCS PD dated on 25/06/2014 refers to version 2.0 CAR 1: The table of contents does not match with the Project description template v3.2 The VCS PD has been updated. Now the table of contents is in accordance with de project description template v3.2 CAR 1 is closed.	CAR 1	OK
A.1.3 Is this consistent with the time line of the project's history?	DR	CL 1 A work execution schedule shall be provided to the VVB. A work schedule and supporting documentation have been provided to the VVB. CL 01 is closed.	CL 1	OK
A.1.4 Has the PD been listed on the project pipeline?	DR	Yes, the project has been listed on the project pipeline before the opening meeting between the validation body and the project proponent. Project ID is PL1308.	OK	OK
A.2. Description of the project activity				
A.2.1 Is the description delivering a transparent overview of the project activities?	DR	Yes, according to VCS PD version 2.0, the purpose of the project is the generation of electricity from renewable sources through the construction and operation of a 50 MW wind farm, located at the department of Maldonado, in the Southeast region of Uruguay. This wind farm will consist of 25 turbines with a	CL 2	OK

		capacity of 2 MW each. The energy generated by the project will be supplied to the national grid of Uruguay through a substation annexed to the park. The power plant will have an expected operating life of 20 years and will displace a total amount of 190,500 MW-h/year from the national power grid, generating, on average, annual emission reductions of 118,585 tCO₂ The proposed project activity consists of the installation and operation of a new grid connected wind power project, the baseline scenario for the proposed project activity is the Uruguayan national grid. CL 2: The project participant shall provide the relevant permits related with the implementation of the project activity. The project participant has provided the relevant permits, including the resolution N° 08110/2012, (record 2012-88-01-12408, Act 02371/2012), from the Intendancy of Maldonado and the environmental authorization for operation, RM 1213-2014. CL 02 is closed		
A.2.2 Is the sectoral scope and the project type clearly stated?	DR	CAR 2.- Sectoral scope and project type shall be defined according to VCS Standard (version 3.4) requirements Sectoral scope and project type has been indicated in accordance with the VCS requirements. CAR 02 is closed.	CAR 2	OK
A.2.3 Is the information required for the indication of project proponent correctly presented?	DR	Yes, there is only one project proponent "R del Sur S.A.".	OK	OK
A.2.4 Are there other entities other than the project proponent involve in the project?	DR	Yes, Instalaciones Inabensa, S. A. – Zeroemissions as VCS consultant. This company is not a project proponent.	OK	OK
A.2.5 Is all information on proponent / Parties provided in consistency with details provided by further chapters of the VCS PD?	DR	Yes, the information of R del Sur S.A." is consistent in the entire VCS-PD.	OK	OK

A.2.6 Are the project's starting date clearly defined and reasonable?	DR	Yes, the starting date of the project activity is established on 1 July 2014, start of commercial operation. CAR 3.- The selected starting date included in the VCS PD does match with the supporting evidence provided. The PD has been updated and now is in accordance with the evidence provided. CAR 03 is closed.	CAR 3	OK
A.2.7 Is the assumed crediting time clearly defined and reasonable (renewable crediting period of max 10 years with potential for 2 renewals)?	DR	CAR 4.- The crediting time shall be defined according to VCS Standard (version 3.4) requirements. Yes, the crediting time of 10 years has been clearly stated in section 1.6 of the VCS CAR is closed.	CAR 4	OK
A.2.8 Is the proposed project a large project (ERs greater than 300,000 tCO ₂ e/year) or a project (ERs less or equal than 300,000 tCO ₂ e/year)?	DR	The estimated emission reductions are less than 300,000 tCO ₂ e/year; therefore, the project is categorized as project...	OK	OK
A.2.9 Is the form required for the indication of projected emission reductions correctly applied?	DR	Yes, the form for the indication of projected ERs is correct.	OK	OK
A.2.10 Does the technical design of the project activity reflect current good practices? How much is applied technology environmental safe?	DR	The project activity will generate electricity from wind power and will deliver the generated output to the national grid of Uruguay. The project activity will reduce GHG emissions by displacing fossil fuel based electricity generation from the interconnected system. The technology consists of the following main components: • 25 Wind turbines • PE Maldonado Substation • Evacuation High Voltage line	OK	OK
A.2.11 Does the information provided on the location of the project activity allow for a clear identification of the site(s)?	DR	The location of the project activity have been included in section 1.9 of the VCS PD. "Parque Eólico Maldonado" project activity is located in the San Carlos municipality, Department of	OK	OK

		Maldonado, Uruguay. The validation team verified the coordinates against the information obtained during the on-site visit.		
A.2.12 Describe the conditions prior to the project initiation. Explain why the project has not been implemented only with the purpose to generate ERs.	DR	The project activity consists of 25 wind turbines of 2 MW with a total installed capacity of 50 MW generating power to offset the combustion of thousands of tonnes of fossil fuels and, in doing so, will help preserve non-renewable resources by promoting the exploitation and use of renewable resources and technologies. Therefore, the proposed project activity is primarily implemented for power generation, and not with the purpose to create GHG emissions and their subsequent reduction, removal or destruction. The audit team confirms this information during the onsite visits through meetings carried out.	OK	OK
A.2.13 Compliance with laws, statutes and other regulatory frameworks	DR	The project activity had to follow relevant laws and statutes or other regulatory frameworks before the beginning of the implementation. • Law 14.694, National Electricity Law • Decree 360/002, Regulation of Whole sale Electricity Market, • Decree 77/06, by which the National Plants and Transmissions (UTE) will promote the celebration of special contracts for the sale of electricity with suppliers in order to promote settling in the country, to produce that energy from wind power, biomass, and small hydro, • Decree 403/09 of August 24, 2009 and its amendment 41/10, dated February 1, 2010, entrusted with carrying out a joint venture call for tenders for the purchase of a rated capacity of 150 MW from wind energy private developments and allow for a second stage regulation of the 150 MW goal of completing the 300 MW by 2015, • Decree 349/005, Law of the National Environmental Impact Assessment The implementation of the project activity complies with relevant sectorial regulations.	CL 2	OK

A.3. Ownership and other programs				
A.3.1 Right of use?	DR	The audit team has confirmed that only R del Sur S.A has the rights to all and any GHG emission reductions according to: Ministry of Industry, Energy and Mining of Uruguay award authorizing R del Sur for generating electricity by means of Parque Eolico Maldonado project dated 23 October 2012. CL 3 - The Ministry award shall be provided to the VVB The Ministry award has been provided to the VVB. CL 3 is closed.	CL 3	OK
A.3.2 Will the generated ERs be used for compliance with an emissions trading program, or to meet the binding limits on GHG emissions?	DR	According to the official declaration of the project proponent, the project activity will not be used for any emissions trading program or to meet binding limit on GHG emissions.	OK	OK
A.3.3 Is the project registered under any other GHG-program?	DR	According to the official declaration of the project proponent, the project has not been registered under any other GHG-program.	OK	OK
A.3.4 Does the project intends to generate any other form of GHG-related environmental credit? (e.g. renewable energy certificates)	DR	According to the official declaration of the project proponent, the project does not generate any GHG-related environmental credit GHG-program.	OK	OK
A.3.5 Has the proposed project been rejected by any other GHG program?	DR	Based on the provided information, it can be stated that the project activity has not been rejected by any other program.	OK	OK
A.3.6 Additional information relevant to the project				
A.3.6.1 In case of grouped projects, are there clear eligibility criteria for potential new participants (VCS term: Project In-stances)?	DR	The proposed project is not part of any other grouped project.	OK	OK
A.3.6.2 Is the leakage management properly described?	DR	N/A, no leakage in the project activity.	N/A	N/A

A.3.6.3 Has commercially sensitive information been excluded from the VCS PD? Ex-plain to which items this information refers to.	DR	No commercially sensitive information has been excluded from the VCS PD.	OK	OK
A.3.6.4 Is there any further information available regarding the project?	DR	All information in the project documents is available for the public review, as claimed by PP in the VCS Project Description.	OK	OK
B. BASELINE AND MONITORING METHODOLOGY				
B.1. Title and reference of the approved baseline and monitoring methodology				
B.1.1. Are reference number, version number, and title of the approved baseline and monitoring methodology clearly indicated?	DR	The applied methodology is ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources -Version 15.0". it is clearly indicated in section 2.1 of the VCS PD. CAR 17: Since the "in-force" versions of applied methodology and tools were updated during the validation process, PP shall updated the VCS PD in order to demonstrate the application of its last versions Version of applied Methodology and tools has been updated in the VCS PD last version. The applied methodology is ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources -Version 16.0". Also the versions of applied Tools have been updated accordingly. Applicability has been correctly considered. CAR 17 is closed	CAR 17	OK
B.1.2. Is the applied version the most recent one and / or is this version still applicable?	DR	Yes, the applied version the most recent one.	CAR 17	OK
B.1.3 If the baseline and monitoring methodology, applied in the original VCS PD, was withdrawn after the registration of the VCS project activity and replaced by a consolidated methodology: Is the latest approved version of the respective consolidated methodology used?	DR	Not applicable	N/A	N/A

B.1.4 In the case the registered VER project activity does not meet the applicability criteria of the options provided in B.1.2. or B.1.3., due to their revision or due to the update of the baseline: Have the project participants either selected another applicable approved methodology or request, through the DOE, a deviation from an approved methodology for the purpose of renewal of the crediting period?	DR	Not applicable	N/A	N/A
B.1.5 Does the methodology refer to the following tools with its latest approved versions?	DR	Yes, the applied methodology refers to the following tools and guidelines: • Tool to calculate the emission factor for an electricity system - Version 05.0 • Tool for the demonstration and assessment of additionality - Version 07.0.0 • Combined tool to identify the baseline scenario and demonstrate additionality -Version 06.0.0	CAR 17	OK
B.2. Applicability of the selected methodology to the project activity				
B.2.1. Is the applied methodology considered the most appropriate one?	DR	Yes, the applied methodology ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources -Version 16.0 is applicable to the project activity since it implies the installation of new grid-connected wind power plant at site where there were not renewable energy power plants operating prior to the implementation of the project activity (Greenfield plants). The project reduces emissions of CO2 by generating renewable energy coming from wind resources. During the on site visit the validation team confirm that the methodology is applicable to the project activity.	CAR 17	OK
Fill in the required amount of sub checklists for applicability criteria as given by the methodology applied and comment at least every line answered with "No"				
B.2.2. Criterion 1 – This methodology is applicable to grid-	DR		CAR 5 CAR 17	OK

connected renewable energy power generation project activities that: (a) Install a Greenfield power plant; (b) Involve a capacity addition to (an) existing plant(s); (c) Involve a retrofit of (an) existing operating plants/units; (d) Involve a rehabilitation of (an) existing plant(s)/unit(s); or (e) Involve a replacement of (an) existing plant(s)/unit(s).		<table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the PD?</td><td>Yes</td></tr><tr><td>Evidence provided?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table> CAR 5:- This criterion does not match exactly with the one discussed in the VCS-PD The criterion has been updated and corrected in the latest version of the VCS PD. The audit team confirmed that the project activity is the installation of a new wind power project at site were no renewable power plant was operated prior the project activity in accordance with technical information provided by the PP and visual inspection during the on site visit. CAR 5 is closed.	Applicability checklist	Yes/No	Criterion discussed in the PD?	Yes	Evidence provided?	Yes	Compliance verified?	Yes		
Applicability checklist	Yes/No											
Criterion discussed in the PD?	Yes											
Evidence provided?	Yes											
Compliance verified?	Yes											
B.2.3. Criterion 2 – The project activity may include renewable energy power plant/unit of one of the following types: hydro power plant/unit with or without reservoir, wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit;	DR	<table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the PD?</td><td>Yes</td></tr><tr><td>Evidence provided?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table> CAR 6:- This criterion does not match exactly with the one discussed in the VCS-PD The criterion has been updated and corrected in the latest version of the VCS PD. The project activity is a new grid connected wind power project in accordance with technical information provided by the PP and visual inspection during the on-site visit.	Applicability checklist	Yes/No	Criterion discussed in the PD?	Yes	Evidence provided?	Yes	Compliance verified?	Yes	CAR 6 CAR 17	OK
Applicability checklist	Yes/No											
Criterion discussed in the PD?	Yes											
Evidence provided?	Yes											
Compliance verified?	Yes											

		CAR 6 is closed.										
B.2.4. Criterion 3 – In the case of capacity additions, retrofits, rehabilitations or replacements (except for wind, solar, wave or tidal power capacity addition projects the existing plant/unit 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, retrofit, or rehabilitation of the plant/unit has been undertaken between the start of this minimum historical reference period and the implementation of the project activity.	DR	<table> <tr> <th>Applicability checklist</th> <th>Yes/No</th> </tr> <tr> <td>Criterion discussed in the PD?</td> <td>Yes</td> </tr> <tr> <td>Evidence provided?</td> <td>Yes</td> </tr> <tr> <td>Compliance verified?</td> <td>Yes</td> </tr> </table> CAR 7:- This criterion does not match exactly with the one discussed in the VCS-PD The criterion has been updated and corrected in the latest version of the VCS PD. Not applicable since the project activity is a new grid connected wind power project in accordance with technical information provided by the PP and visual inspection during the on- site visit. CAR 7 is closed.	Applicability checklist	Yes/No	Criterion discussed in the PD?	Yes	Evidence provided?	Yes	Compliance verified?	Yes	CAR 7 CAR 17	OK
Applicability checklist	Yes/No											
Criterion discussed in the PD?	Yes											
Evidence provided?	Yes											
Compliance verified?	Yes											
B.2.5. Criterion 4 – In case of hydro power plants, one of the following conditions shall apply:1 (a) The project activity is implemented in existing single or multiple reservoirs, with no change in the volume of any of the reservoirs; or (b) The project activity is implemented in existing single or multiple reservoirs, where the volume of the reservoir(s) is increased and the power density calculated using equation (3), is greater than 4 W/m2; or (c) The project activity results in new single or	DR	<table> <tr> <th>Applicability checklist</th> <th>Yes/No</th> </tr> <tr> <td>Criterion discussed in the PD?</td> <td>Yes</td> </tr> <tr> <td>Evidence provided?</td> <td>Yes</td> </tr> <tr> <td>Compliance verified?</td> <td>Yes</td> </tr> </table> CAR 8:- This criterion does not match exactly with the one discussed in the VCS-PD	Applicability checklist	Yes/No	Criterion discussed in the PD?	Yes	Evidence provided?	Yes	Compliance verified?	Yes	CAR 8 CAR 17	OK
Applicability checklist	Yes/No											
Criterion discussed in the PD?	Yes											
Evidence provided?	Yes											
Compliance verified?	Yes											

multiple reservoirs and the power density, calculated using equation (3), is greater than 4 W/m²; or (d) The project activity is an integrated hydro power project involving multiple reservoirs, where the power density for any of the reservoirs, calculated using equation (3), is lower than or equal to 4 W/m², all of the following conditions shall apply: (i) The power density calculated using the total installed capacity of the integrated project, as per equation (4), is greater than 4 W/m²; (ii) Water flow between reservoirs is not used by any other hydropower unit which is not a part of the project activity; (iii) Installed capacity of the power plant(s) with power density lower than or equal to 4 W/m² shall be: a. Lower than or equal to 15 MW; and b. Less than 10 per cent of the total installed capacity of integrated hydro power project.		The criterion has been updated and corrected in the latest version of the VCS PD. Not applicable since the project activity is a new grid connected wind power project in accordance with technical information provided by the PP and visual inspection during the on- site visit. CAR 8 is closed.										
B.2.6. Criterion 5 – In the case of integrated hydro power projects, project proponent shall: (a) Demonstrate that water flow from upstream power plants/units spill directly to the downstream reservoir and that collectively constitute to the generation capacity of the integrated hydro power project; or (b) Provide an analysis of the water balance covering the water fed to power units, with all possible combinations of reservoirs and without the construction of reservoirs. The purpose of water balance is to demonstrate the requirement of specific combination of reservoirs constructed under CDM project activity for the optimization of power output.	DR	<table><thead><tr><th>Applicability checklist</th><th>Yes/No</th></tr></thead><tbody><tr><td>Criterion discussed in the PD?</td><td>Yes</td></tr><tr><td>Evidence provided?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></tbody></table> CAR 9:- This criterion does not match exactly with the one discussed in the VCS-PD The criterion has been updated and corrected in the latest version of the VCS PD. CAR 9 is closed.	Applicability checklist	Yes/No	Criterion discussed in the PD?	Yes	Evidence provided?	Yes	Compliance verified?	Yes	CAR 9 CAR 17	OK
Applicability checklist	Yes/No											
Criterion discussed in the PD?	Yes											
Evidence provided?	Yes											
Compliance verified?	Yes											

This demonstration has to be carried out in the specific scenario of water availability in different seasons to optimize the water flow at the inlet of power units. Therefore this water balance will take into account seasonal flows from river, tributaries (if any), and rainfall for minimum five years prior to implementation of CDM project activity.		Not applicable since the project activity is a new grid connected wind power project in accordance with technical information provided by the PP and visual inspection during the on site visit.										
B.2.7. Criterion 6 – The methodology is not applicable to the following: • 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/units;	DR	<table><thead><tr><th>Applicability checklist</th><th>Yes/No</th></tr></thead><tbody><tr><td>Criterion discussed in the PD?</td><td></td></tr><tr><td>Evidence provided?</td><td></td></tr><tr><td>Compliance verified?</td><td></td></tr></tbody></table> CAR 10:- This criterion does not match exactly with the one discussed in the VCS-PD The criterion has been updated and corrected in the latest version of the VCS PD. CAR 10 is closed Not applicable since the project activity is a new grid connected wind power project in accordance with technical information provided by the PP and visual inspection during the on site visit.	Applicability checklist	Yes/No	Criterion discussed in the PD?		Evidence provided?		Compliance verified?		CAR 10 CAR 17	OK
Applicability checklist	Yes/No											
Criterion discussed in the PD?												
Evidence provided?												
Compliance verified?												
B.2.8. Criterion 7 – In the case of retrofits, rehabilitations, 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, that is 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”.	DR	<table><thead><tr><th>Applicability checklist</th><th>Yes/No</th></tr></thead><tbody><tr><td>Criterion discussed in the PD?</td><td>Yes</td></tr><tr><td>Evidence provided?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></tbody></table>	Applicability checklist	Yes/No	Criterion discussed in the PD?	Yes	Evidence provided?	Yes	Compliance verified?	Yes	N/A	OK
Applicability checklist	Yes/No											
Criterion discussed in the PD?	Yes											
Evidence provided?	Yes											
Compliance verified?	Yes											

		Not applicable. The project activity does not that involve retrofits, replacements, or capacity addition.		
B.3. Description of the Project Boundary				
B.3.1 Are all the sources and gases included in the project boundary of the project activity (baseline scenario, project scenario and leakage) in accordance with the applied methodology?	DR	Yes, all sources and gases included in the project boundary have been stated in the VCS PD.	OK	OK
B.3.2. Are the inclusion or exclusion of the sources of gases correctly justified?	DR	CAR 11.-No justification/explanation of the exclusion of the source of gases is provided in the VCS PD. Justification/explanation of the exclusion of the source of gases has been provided and justified in the latest version of the VCS PD. CAR 11 is closed.	CAR 11	OK
B.3.3. Do the spatial and technological boundaries as verified on-site comply with the discussion provided by the VCS-PD?	DR	The spatial and technological boundaries as verified on-site comply with the discussion provided by the VCS PD.	OK	OK
B.4. Description of the baseline scenario identification				
B.4.1. Is the baseline scenario clearly described?	DR	The baseline scenario has been clearly indicated in the VCS PD and is the electricity delivered to the grid by the project would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources.	OK	OK
B.4.2. Have there been other alternative scenarios considered? Is it justified the selected scenario as the most likely one?	DR	Not applicable. The baseline methodology ACM0002 version 15.0 does not require to consider other alternative scenarios if the project activity is the installation of a new grid-connected renewable power plant/unit. The selected baseline scenario is reasonable and it is in compliance with methodology	N/A	N/A

B.4.3. Does the VCS PD follow the steps to determine the baseline scenario required by the methodology?	DR	The baseline scenario has been determined following the approved methodology ACM0002 version 15.0	OK	OK
B.4.4. Has the baseline scenario been determined using conservative assumptions where possible?	DR	Yes. The baseline scenario has been determined using conservative assumptions.	OK	OK
B.4.5 If alternatives are excluded: a.- Is sufficient evidence/ justification provided to support every exclusion of alternatives? Is it reasonable? b.- Is it shown that at least one credible and feasible alternative does not face a barrier? Is this reasonable?	DR	Not applicable. The baseline methodology ACM0002 version 15.0 does not require to consider other alternative scenarios if the project activity is the installation of a new grid-connected renewable power plant/unit.	N/A	N/A
B.4.7 Is the baseline scenario determination compatible with the available data and are all literature and sources clearly referenced?	DR	Yes, the baseline scenario determination is in line with the available data and all literature and sources are clearly referenced.	OK	OK
B.5. Description of how the anthropogenic emissions of GHG by sources are reduced below those that would have occurred in the absence of the registered VCS project activity (assessment and demonstration of additionality):				
B.5.1 Is the project additionality assessed according to the applicable methodology? Detail the Tool used to demonstrate the Additionality of the project activity.	DR	Yes, the additionality has been assessed according to the latest version of the "Tool for the demonstration and assessment of additionality".	OK	OK
B.5.2 Are alternative scenarios defined that provide outputs or services comparable with the proposed VER project activity?	DR	Yes, realistic and credible alternative scenarios are defined	OK	OK
B.5.3 Can be the list of alternatives considered to be complete, why? Is the scenario project activity without being registered as VER project	DR	Yes, the list of alternatives is considered to be complete and the project activity without VERs is included.	OK	OK

included?				
B.5.4 In case several different facilities, technologies, outputs or services are present in the project, are separately alternative scenarios for each of them included? Have realistic combinations been considered as project scenario?	DR	Not applicable.	N/A	N/A
B.5.5 Describe why the alternative scenarios are credible and realistic (technology, practices, services, status of implementation)?	DR	Alternatives scenarios are credible and realistic because of they comprise the energy situation of the country.	OK	OK
B.5.6 Do the alternative scenarios comply with mandatory laws and regulations?	DR	Yes they comply-	OK	OK
B.5.7 If a scenario does not comply with the mandatory laws and regulations, is it clearly demonstrated that the law and/or regulation is systematically not enforced in the country?	DR	Not applicable.	N/A	N/A
B.5.8 In case of applying step 2 / investment analysis of the additionality tool: Is the analysis method identified appropriately?	DR	Yes, the analysis method has been identified appropriately.	OK	OK
B.5.9 In case of Option I (simple cost analysis): Is it demonstrated that the activity produces no economic benefits other than VERs income? a. Are the assumptions for all alternatives compared consistent (including discount rates if applicable)?	DR	Not applicable since Option I is not considered in the analysis.	N/A	N/A
B.5.10 In case of Option II (investment comparison analysis): Is the most suitable financial indicator clearly identified (IRR, NPV,	DR	Not applicable since Option II is not considered in the analysis.	N/A	N/A

cost benefit ratio, or (levelized) unit cost)? a. Are the assumptions for all alternatives compared consistent (including discount rates if applicable)?				
B.5.11 In case of Option III (benchmark analysis): Is the most suitable financial indicator clearly identified (IRR, NPV, cost benefit ratio, or (levelized) unit cost)? a. If an IRR indicator is used, is the choice of benchmark appropriate to the type of IRR calculated? b. Is the choice of benchmark or discount rate justified with supporting evidence for its appropriateness?	DR	CAR 12: Equity IRR has been identified as financial indicator. However, the PD shall clarify if the indicator takes or not taxes into account. Project IRR post-tax has been identified as financial indicator in the final PD. CAR 12 is closed Yes, the benchmark is considered appropriate and reliable evidence has been provided.	CAR 12	OK
B.5.12 How is it demonstrated that the financial/economic analysis (benchmark) represents standard returns in the market, considers the specific risk of the project type, but is not linked to the subjective profitability expectation or risk profile of a particular project developer (Option II and Option III)?	DR	Yes, the default nominal equity IRR benchmark post-tax of 11.2% adopted by the Project Participant is derived from the value provided by the World Bank as Lending interest rate. The post-tax benchmark IRR of 11.20% is validated to be suitable for the project activity by AENOR's validation team in compliance with paragraph 130 (a) of the VVS version 09.0.	CAR 12	OK
B.5.13 In case of company internal benchmark, is it clearly demonstrate that there is only one potential project developer and that the benchmark has been consistently used in the past (Option II and Option III)?	DR	CAR 13: Unprotected and traceable spreadsheet versions of the investment and sensitivity analyses have to be provided. Unprotected and traceable spreadsheet versions of the investment and sensitivity analyses have been provided. CAR 13 is closed. CL 4: Evidence about the appropriateness of the input values used (techno-economic parameters and assumptions) in the investment analysis shall be provided e.g. tariff, tax rate, interest rate, investment costs, =&M costs, load factor, etc. Appropriate evidence has been provided	CAR 13 CL 4	OK

		CL 4 is closed.		
B.5.14 In case of Option II or Option III: Is the calculation of financial figures for this indicator correctly done for all alternatives (Option II) and the project activity (Option III)?	DR	Yes, the calculation of financial figures is correctly done.	CAR 12 CAR 13 CL 4	OK
B.5.15 In case of Option II or Option III: Is the analysis presented in a transparent manner including publicly available proofs for the utilized data?	DR	Yes, the investment analysis is presented in a transparent manner.	CAR 12 CAR 13 CL 4	OK
B.5.16 Are all assumptions and input data clearly presented, documented, evidenced and consistent with the rest of the PD?	DR	Yes, all assumptions and input data are clearly presented and consistent along the PD. Appropriate evidence of the input data has been provided.	CAR 12 CAR 13 CL 4	OK
B.5.17 Does the sensitivity analysis show that the conclusion of financial/economical attractiveness is robust to reasonable variations in the critical assumptions?	DR	All critical costs and revenues are included in the sensitivity analysis and the conclusion of financial/economical attractiveness is robust to reasonable variations.	CAR 12 CAR 13 CL 4	OK
B.5.18 How is demonstrated that this variations have been adequately taken (range is adequate)?	DR	The assessed range of variation is reasonable and the sensitivity analysis is possible to reproduce	CAR 12 CAR 13 CL 4	OK
B.5.19 In case of applying step 3 (barrier analysis) of the additionality tool: Is a complete list of barriers developed that prevent the implementation of the proposed project and the different alternatives to occur?	DR	Not applicable since barrier analysis has not been applied.	N/A	N/A
B.5.20 Is transparent and documented evidence provided on the existence and significance of these barriers?	DR	Not applicable since barrier analysis has not been applied.	N/A	N/A

B.5.21 Is it transparently shown that the execution of at least one of the alternatives is not prevented by the identified barriers?	DR	Not applicable since barrier analysis has not been applied.	N/A	N/A
B.5.22 How is confirmed that the VER does alleviate the barriers presented?	DR	Not applicable since barrier analysis has not been applied.	N/A	N/A
B.5.23 Has common practice analysis been undertaken?	DR	Yes it has been undertaken as per the latest versions of the Tool for the demonstration and assessment of additionality and the Guidelines on common practice.	OK	OK
B.5.24 Have other activities in the host country / region similar to the project activity been identified and are these activities appropriately analyzed by the VCS PD?	DR	Yes, all comparable projects have been included in the common practice analysis	OK	OK
B.5.25 If similar activities are occurring: Is it demonstrated that in spite of these similarities the project activity would not be implemented without the VER component?	DR	No similar projects have been undertaken in the region.	OK	OK
B.5.26 Overall, is the proposed VCS project activity considered common practice?	DR	No, the project activity cannot be considered common practice.	OK	OK
B.5.27 Is it demonstrated/justified that the project activity is not a likely baseline scenario?	DR	Yes, it is demonstrated.	CAR 12 CAR 13 CL 4	OK
B.6. Emissions reductions				
<i>B.6.1. Explanation of methodological choices</i>				
B.6.1.1. Is it explained how the procedures provided in the methodology are applied by the proposed project activity?	DR	VCS-PD explains correctly how the procedures provided in the methodology are applied.	OK	OK

B.6.1.2. Is every selection of options offered by the methodology correctly justified and is this justification in line with the situation verified on-site?	DR	Yes, every selected option offered by the methodology is properly justified and is in line with the situation verified during the on-site visit. However, the emission factor shall be updated in order to apply the most recent data available. CAR 14: The emission factor calculation shall be calculated using the most recent data available. The EF calculation has been updated to include 2013 data. CAR 14 is closed.	CAR 14	OK
B.6.1.3. Are the formulae required for the determination of emissions reductions correctly presented and used? (<i>Open excel, trazability of data, etc</i>)	DR	Yes. All formulae are in accordance with applied methodology and tool.	CAR 14	OK
B.6.1.4 Are all the data and assumptions listed in the VCS PD and are appropriate and calculations result in a conservative estimate of emission reductions?	DR	Yes. All data and assumption are listed in the final version of the VCS-PD. Conservative criteria has been applied to determine emission reductions	CAR 14	OK
B.6.2. Data and parameters that are available at validation				
B.6.2.1. Is the list of parameters presented in VCS PD considered to be complete with regard to the requirements of the applied methodology? Is all the information required for each parameter included?	DR	The list of parameters that are available at validation is considered complete. However, some relevant information is not in accordance with the PD template and relevant guidance CAR 15. For each parameter the given information shall be completed in accordance with the PD template and relevant guidance: • Data unit shall be correctly expressed • Purpose of data shall be expressed in accordance with the guidance. • Values applied shall be provided or referred to an appendix to be checked.	CAR 15	OK

		Justification of choice of data shall be provided. PDD has been updated. For each parameter the given information has been completed in accordance with the PD template and relevant guidance Then, CAR 15 is closed.		
B.6.2.2. Are all the data derived from official data sources or replicable records and have been correctly quoted?	DR	Yes, all the data is derived from official data sources or replicable records and is correctly quoted	CAR 14	OK
B.6.2.3. For parameter: FC_{i,m,y}/EG_{m,y} ; FC_{i,k,y}/EG_{k,y} a. Title in line with Methodology? b. Data unit correctly expressed? c. Appropriate description? d. Source clearly referenced? (and appropriate?) e. Correct value provided? f. Has this value been verified? g. Choice of data correctly justified? h. Measurement method correctly described? i. Purposed of data expressed?	DR	a. Yes. b. Yes c. Yes d. Yes e. Yes f. Yes g. Yes h. N/A i. Yes	CAR 14 CAR 15	OK
B.6.2.3. For parameter: NCV_{i,y} a. Title in line with Methodology? b. Data unit correctly expressed? c. Appropriate description? d. Source clearly referenced? (and appropriate?)	DR	a. Yes. b. Yes c. Yes d. Yes e. Yes	CAR 15	OK

e. Correct value provided? f. Has this value been verified? g. Choice of data correctly justified? h. Measurement method correctly described? i. Purposed of data expressed?		f. Yes g. Yes h. N/A i. Yes		
B.6.2.3. For parameter: EF_{CO2,i,y} a. Title in line with Methodology? b. Data unit correctly expressed? c. Appropriate description? d. Source clearly referenced? (and appropriate?) e. Correct value provided? f. Has this value been verified? g. Choice of data correctly justified? h. Measurement method correctly described? i. Purposed of data expressed?	DR	a. Yes. b. Yes c. Yes d. Yes e. Yes f. Yes g. Yes h. N/A i. Yes .	CAR 15	OK
B.6.2.3. For parameter: EG_{m,y} and EG_{k,y} Plant yearly generation (last 3 years) a. Title in line with Methodology? b. Data unit correctly expressed? c. Appropriate description? d. Source clearly referenced? (and appropriate?) e. Correct value provided? f. Has this value been verified?	DR	a. Yes. b. Yes c. Yes d. Yes e. Yes f. Yes g. Yes h. N/A i. Yes	CAR 14 CAR 15	OK

g. Choice of data correctly justified?				
h. Measurement method correctly described?				
i. Purposed of data expressed?				
B.6.2.3. For parameter: EF_{grid,CM,y} a. Title in line with Methodology? b. Data unit correctly expressed? c. Appropriate description? d. Source clearly referenced? (and appropriate?) e. Correct value provided? f. Has this value been verified? g. Choice of data correctly justified? h. Measurement method correctly described? i. Purposed of data expressed?	DR	a. Yes. b. Yes c. Yes d. Yes e. Yes f. Yes g. Yes h. N/A i. Yes	CAR 14	OK
B.6.2.4. Will the data and parameters result in a conservative estimate of emissions reductions?	DR	Yes, relevant evidence was provided to the validation team. Official statistics and IPCC values are used. Therefore the estimation of emission reduction calculation will result conservative	CAR 14	OK
<i>B.6.3 Calculation of GHG Emission Reductions – Baseline Emissions</i> <i>It is assessed whether the baseline emissions are stated according to the methodology and whether the argumentation for the choice of default factors and values – where applicable – is justified.</i>				
B.6.3.1 Are the calculations documented according to the approved methodology and in a complete and transparent manner?	DR	Yes, the latest version of VCS-PD and spreadsheets contain all the calculations according to the methodology in a transparent manner.	CAR 14	OK
B.6.3.2. Have conservative assumptions been used when calculating the baseline emissions?	DR	Yes, Conservative assumptions have been taken into account.	CAR 14	OK

B.6.3.3 Are uncertainties in the baseline emission estimates properly addressed?	DR	Validation team has checked that uncertainties have been properly addressed.	CAR 14	OK
B.6.3.4. Is additional background information on baseline data provided in Annex of the VCS PD? Is this information consistent with data presented by other sections of the VCS PD?	DR	No additional information was addressed; however all necessary information is addressed in the VCS-PD	CAR 14	OK
B.6.4 Calculation of GHG Emission Reductions – Project Emissions <i>It is assessed whether the project emissions are stated according to the methodology and whether the argumentation for the choice of default factors and values – where applicable – is justified.</i>				
B.6.4.1 Are the calculations documented according to the approved methodology and in a complete and transparent manner?	DR	N/A	N/A	N/A
B.6.4.2. Have conservative assumptions been used when calculating the project emissions?	DR	N/A	N/A	N/A
B.6.4.3 Are uncertainties in the project emission estimates properly addressed?	DR	N/A	N/A	N/A
B.6.5. Calculation of GHG Emission Reductions – Leakage <i>It is assessed whether leakage emissions are stated according to the methodology and whether the argumentation for the choice of default factors and values – where applicable – is justified.</i>				
B.6.5.1 Are the leakage calculations documented according to the approved methodology and in a complete and transparent manner?	DR	N/A	N/A	N/A
B.6.5.2. Have conservative assumptions been used when calculating the leakage emissions?	DR	N/A	N/A	N/A
B.6.5.3. Are uncertainties in the leakage emission estimates properly addressed?	DR	N/A	N/A	N/A

<i>B.6.6. Ex-ante calculation of emission reductions</i>				
B.6.6.1. Are the GHG calculations documented in a complete and transparent manner? Are all the calculations correct?	DR	Yes, the latest version of VCS-PD and spreadsheets contain all the calculations according to the methodology in a transparent manner.	CAR 14	OK
B.6.6.2. Is the data provided in this section consistent with data as presented in other chapters of the VCS PD?	DR	Inconsistencies were detected between the emission reductions tables in section 1.7 and section 3.4 of the VCS PD. CAR 18: The estimated yearly emission reductions shall be consistent in all chapters of the VCS-PD. In addition, the lambda value for year 2011 is not in accordance with that in the EF calculation spreadsheet. Mistakes have been corrected. Now the data provided in this section is consistent with data as presented in the chapters of the VCS-PD and EF calculation spreadsheet. CAR 18 is closed.	CAR 18	OK
<i>B.6.7. Summary of the ex-ante estimation of emission reductions</i>				
B.6.7.1. Will the project results in fewer GHG emissions than the baseline scenario?	DR	Yes. Due to the fact that the project complies with requirements of the methodology. Moreover, emission reduction calculation follows the procedures established in the methodology, it will result in fewer GHG emissions than the baseline scenario	CAR 14	OK
B.6.7.2. Are the emissions reductions projected in line with the envisioned time schedule for the project' implementation and the indicated crediting period?	DR	Yes, they are in line.	CAR 3	OK
B.7. Application of the monitoring methodology and description of the monitoring plan				
<i>B.7.1. Description of the monitoring plan</i>				
B.7.1.1 Is the monitoring plan documented according to the approved methodology and relevant tools and in a complete and transparent manner?	DR	The description of the monitoring plan has been completed according to the approved methodology and relevant tools and in a complete and transparent manner.	OK	OK

B.7.1.2. Does the monitoring methodology provide a consistent approach in the context of all parameters to be monitored and further information provided in the VCS PD?	DR	Yes, the validation team has verified that the parameters and the descriptions are stated in accordance with the applied version of the methodology and tool.	OK	OK
B.7.1.3. Does the monitoring plan provide a clear description of the organization structure involved in monitoring activities and their responsibilities?	DR	Section 5.3 of the PD provided a clear description of the organization structure involved in monitoring activities	OK	OK
B.7.1.4. If applicable: Does VCS PD provide useful information enabling a better understanding of the envisioned monitoring provisions?	DR	Section 5.3 of the PD provides useful information for a better understanding of monitoring provisions.	OK	OK
B.7.1.5. Is the registration, monitoring, measurement and reporting procedure defined?	DR	Yes, the project participant has defined the registration, monitoring, measurement and reporting procedure	OK	OK
<i>B.7.2 Compliance of the monitoring plan with the approved methodology</i>				
B.7.2.1 Is the list of parameters considered to be complete with regard to the requirements of the applied methodology? Are all of them clearly described in the monitoring plan and in accordance with the methodology and tools?	DR	Yes, the list of parameters in section B.5.2 of the PDD is considered complete in accordance with the requirements of the applied methodology, ACM0002 version 15.0.0 and the "Tool to calculate the emission factor for an electricity system,, version 04".	OK	OK
B.7.2.2. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for estimation or measuring the emission reductions within the project boundary during the crediting period?	DR	Yes. The monitoring plan allows for collecting and archiving all relevant and necessary data.	OK	OK
B.7.2.3. For parameter EG_{facility, y} , is the: a. Title in line with methodology? b. Data unit correctly expressed?	DR	a. OK b. OK c. OK	OK	OK

c. Parameter appropriately described? d. Source clearly referenced? e. Correct value provided for the purpose of PD estimations? f. Has this value been verified? g. Measurement methods correctly described and in line with the methodology/tools? h. Correct reference to standards (i.e. for calibration and maintenance)? i. Indication of accuracy provided? j. QA/QC procedures described? k. QA/QC procedures appropriate? l. Purposed of data expressed?		d. OK e. OK f. OK g. OK h. OK l. OK		
B.7.3 Implementation of the Monitoring Plan				
B.7.3.1 Do the means of monitoring of each of the parameters included in the plan complies with the requirements of the methodology?	DR	Yes, the validation team checked that the means for monitoring of each of the parameters included in the plan comply with the requirements of the methodology.	OK	OK
B.7.3.2. Is the measurement equipment described and deemed appropriate?	DR	Yes, the measurement equipment is described and deemed appropriate.	OK	OK
B.7.3.3. Are procedures identified for maintenance of monitoring equipment and installations? Are provisions regarding the calibration intervals included in the monitoring plan?	DR	The validation team has checked that procedures for the maintenance of monitoring equipment and installations have been identified and that the monitoring plan includes calibration intervals.	OK	OK
B.7.3.5. Is the monitoring Plan sufficient to ensure the verification of a proper	DR	The measurement accuracy is addressed and deemed appropriate.	OK	OK

implementation of the monitoring plan?				
C. ENVIRONMENTAL IMPACTS				
C.1. Documentation on the analysis of the environmental impacts, including transboundary impacts				
C.1.1. Has the analysis of the environmental impacts of the project activity been sufficiently described in the VCS PD?	DR	The main negative impacts of the project considered in the EIA and actions and programs to address negative impacts have been included in the PD.	OK	OK
C.1.2. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, has an EIA been approved?	DR	CL 5.- EIA approval shall be provided to the VVB. As it is established in the Decree 349/005 ("Reglamento de Evaluación de Impacto Ambiental y Autorizaciones Ambientales"), the project needs an environmental approval. At the moment the project activity has granted the preliminary environmental impact approval. PP has provided preliminary approval resolution of the EIA: resolution R.M. 1432/2013 dated 17 October 2013. However, the environmental approval for operation shall be provided to the VVB. CL is still open.	CL 5	
C.1.3. Will the project create any adverse environmental effects? Has any environmental impact identified as significant?	DR	Yes, the VCS PD summarizes potential negative environmental impacts during construction and operation phases. The main negative impacts, reversible in the short term, are mainly the air pollution, the affection to the vegetation and birdlife and the increase in the levels of noise. However, no significant environmental impact has been identified.	OK	OK
C.1.4. Are transboundary environmental impacts identified in the analysis?	DR	No transboundary impacts have been identified.	OK	OK
C.1.5. Does the project comply with any other environmental legislation in the host country?	DR	Yes, PP has provided preliminary approval resolution of the EIA: resolution R.M. 1432/2013 dated 17 October 2013 and the environmental authorization for operation, RM 1213-2014.	CL 5	OK
C.2. If environmental impacts are considered significant by the project participants or the host Party, please provide conclusions and all references to support				

documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party.				
D.2.1. Have the identified environmental impacts been addressed in the PD sufficiently?	DR	Yes, they have been sufficiently addressed.	OK	OK
D. STAKEHOLDERS' COMMENTS				
D.1. Brief description how comments by local stakeholders have been invited and compiled				
D.1.1. Have relevant local stakeholders been consulted? Is the exact date of the consultation process included in the PD?	DR	Yes, relevant stakeholders have been consulted.	OK	OK
D.1.2. Have appropriate media been used to invite comments by local stakeholders?	DR	Appropriate media have been used to performance the stakeholders consultation	OK	OK
D.1.3. If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws?	DR	The current legislation does not require a local stakeholder consultation for voluntary emission reduction project activities. The VCS also does not require it.	OK	OK
D.1.4. Is the undertaken stakeholder process that was carried out described in a complete and transparent manner?	DR	The process is described in a clear and transparent manner.	OK	OK
E.2. Summary of the comments received				
E.2.1. Is a summary of the stakeholder comments received provided?	DR	CAR 16.- A summary of stakeholders shall be provided to VVB and included in the VCS PD. Outcomes from stakeholder consultations and mechanisms for on-going communication has been included in the section E.2.1 of the VCS PD. Evidence has been provided. Furthermore, the audit team was able to verify these outcomes during the site visit. CAR 16 is closed	CAR 16	OK

E.3. Report on how due account was taken of any comments received

E.3.1. Has due account been taken of any stakeholder comments received?	DR	Stakeholder comments have been taken into account as is detailed in in the VCS PD.	CAR 16	OK
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Table 2 Resolution of Corrective Action and Clarification Requests

Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
CAR 1: The table of contents does not match with the Project description template v3.2	A.1.2	VCS PD has been modified Table of contents has been updated and now matches Project description template v3.2	The VCS PD has been updated. Now the table of contents is in accordance with the project description template v3.2. CAR 1 is closed.
CAR 2:- Sectoral scope and project type shall be defined according to VCS Standard (version 3.4) requirements	A.2.2	VCS PD has been modified Sectoral scope and project type are now defined according to VCS Standard (version 3.4) requirements	Sectoral scope and project type has been indicated in accordance with the VCS requirements. CAR 02 is closed.
CAR 3:- The selected starting date included in the VCS PD does match with the supporting evidence provided.	A.2.6	Starting date has been changed to match with provided evidence.	The PD has been updated and now is in accordance with the evidence provided. CAR 03 is closed.
CAR 4:- The crediting time shall be defined according to VCS Standard (version 3.4) requirements.	A.2.7	VCS PD has been modified The crediting time is now defined according to VCS Standard (version 3.4) requirements.	The crediting ending date is not in accordance with the crediting period defined. CAR 04 still open.
		Crediting ending date has been modified in the PD	The crediting ending date has been corrected. CAR 04 is closed.
CAR 5:- This criterion does not match exactly with the one discussed in the VCS-PD	B.2.2	Criterion description and applicability have been updated in the PD to reflect the latest methodology version.	The criterion has been updated and corrected in the latest version of the VCS PD. CAR 5 is closed.
CAR 6:- This criterion does not match exactly with the one discussed in the VCS-PD	B.2.3	Criterion description and applicability have been updated in the PD to reflect the latest methodology version.	The criterion has been updated and corrected in the latest version of the VCS PD. CAR 6 is closed.
CAR 7:- This criterion does not match exactly with the one discussed in the	B.2.4	Criterion description and applicability have been updated in the PD to	The criterion has been updated and corrected in the latest version of the

Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
VCS-PD		reflect the latest methodology version.	VCS PD. CAR 7 is closed.
CAR 8:- This criterion does not match exactly with the one discussed in the VCS-PD	B.2.5	Criterion description and applicability have been updated in the PD to reflect the latest methodology version.	The criterion has been updated and corrected in the latest version of the VCS PD. CAR 8 is closed.
CAR 9:- This criterion does not match exactly with the one discussed in the VCS-PD	B.2.6	Criterion description and applicability have been updated in the PD to reflect the latest methodology version.	The criterion has been updated and corrected in the latest version of the VCS PD. CAR 9 is closed.
CAR 10:- This criterion does not match exactly with the one discussed in the VCS-PD	B.2.7	Criterion description and applicability have been updated in the PD to reflect the latest methodology version.	The criterion has been updated and corrected in the latest version of the VCS PD. CAR 10 is closed
CAR 11.-No justification/explanation of the exclusion of the source of gases is provided in the VCS PD.	B.3.2	VCS PD has been modified Justification of the exclusion of the source of gases has been provided in the VCS PD.	Justification/explanation of the exclusion of the source of gases has been provided in the latest version of the VCS PD. CAR 11 is closed.
CAR 12: Equity IRR has been identified as financial indicator. However, the PD shall clarify if the indicator takes or not taxes into account.	B.5.11	Financial indicator takes taxes into account. Financial indicator has been modified to be Project IRR	Project IRR post-tax has been identified as financial indicator in the final PD. CAR 12 is closed
CAR 13: Unprotected and traceable spreadsheet versions of the investment and sensitivity analyses have to be provided.	B.5.13	Unprotected and traceable spreadsheet versions of the investment and sensitivity analyses have been provided.	Mistakes in the excel spreadsheet have been found as well as inputs values not consistent with the evidence provided. Then , CAR 13 still open.
		Mistakes in the spreadsheet have been fixed. Input values have been justified further	Mistakes in the excel spreadsheet have been corrected and inputs values are consistent with the evidence

Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
			provided. CAR 13 is closed.
CAR 14: The emission factor calculation shall be calculated using the most recent data available.	B.6.1	VCS PD has been modified Emission factor calculation has been updated to include 2013 data. Spreadsheet with the calculations has been provided	The EF calculation has been updated to include 2013 data. CAR 14 is closed.
CAR 15. For each parameter the given information shall be completed in accordance with the PD template and relevant guidance: • Data unit shall be correctly expressed • Purpose of data shall be expressed in accordance with the guidance. • Values applied shall be provided or referred to an appendix to be checked. Justification of choice of data shall be provided.	B.6.2	VCS PD has been modified Information for each parameter the given information shall be completed in accordance with the PD template and relevant guidance.	VCS PD has been modified. However, some mistakes remains: • Purpose of data for each parameter is not expressed in accordance with the option given in the monitoring report guidance. • Justification of choice of data shall be corrected for $NCV_{i,y}$ and $EF_{CO2,i,y}$ Then, CAR 15 still open.
		The remaining parameter information • Purpose of data • Justification of choice of data for $NCV_{i,y}$ and $EF_{CO2,i,y}$ have been changed to be in accordance to guidance, corrected and be defined more clearly.	Mistakes have been corrected. For each parameter the given information has been completed in accordance with the PD template and relevant guidance. CAR 15 is closed.
CAR 16.- A summary of stakeholders shall be provided to VVB and included in the VCS PD.	E..2.1	VCS PD has been modified A summary of stakeholders has been provided to VVB and included in the VCS PD.	Outcomes from stakeholder consultations and mechanisms for on-going communication has been included in the section E.2.1 of the VCS PD. Evidence has been provided. Furthermore,

Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
			the audit team was able to verify these outcomes during the site visit. CAR 16 is closed.
CL 1 A work execution schedule shall be provided to the VVB	A.1.3	The work schedule and supporting documentation has been provided.	A work schedule and supporting documentation have been provided. CL 01 is closed.
CL 2: The project participant shall provide the relevant permits related with the implementation of the project activity.	A.2.1	Evidences have been provided to DOE	The project participant has provided the resolution N° 08110/2012, from the Intendancy of Maldonado. However, is required the environmental approval CL 02 still open.
		Environmental approval has been provided	The environmental authorization for operation, RM 1213-2014, has been provided to the audit team. CL 02 is closed
CL 3 - The Ministry award shall be provided to the VVB	A.3.1	Evidences have been provided to DOE	Appropriate evidence has been provided CL 3 is closed.
CL 4: Evidence about the appropriateness of the input values used (techno-economic parameters and assumptions) in the investment analysis shall be provided e.g. tariff, tax rate, interest rate, investment costs, O&M costs, load factor, etc..	B.5.13	Evidences have been provided to DOE	Appropriate evidence has been provided CL 4 is closed.
CL 5.- EIA approval shall be provided to the VVB:	C.1.2.	Evidence have been provided to DOE.	PP has provided preliminary approval resolution of the EIA: resolution R.M. 1432/2013 dated 17 October 2013. However, the environmental approval for operation shall be provided to the VVB.

Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
			CL 05 still open.
		Environmental approval has been provided.	The environmental authorization for operation, RM 1213-2014, has been provided to the audit team. CL 02 is closed
CAR 17: Since applied methodology and tools were updated during the validation process, PP shall updated the VCS PD in order to demonstrate the application of its last versions	B1.1	Methodologies and tools have been updated throughout the documentation.	Version of applied Methodology and tools has been updated and its applicability has been correctly considered. CAR 17 is closed
CAR 18: The estimated yearly emission reductions shall be consistent in all chapters of the VCS-PD. In addition, the lambda value for year 2011 is not in accordance with that in the EF calculation spreadsheet.	B.6.6.2.	Estimated yearly emission reduction values and lambda value for the year 2011, have been corrected.	Mistakes have been corrected. CAR 18 is closed.