



VALIDATION REPORT

ZETA ENERGIA S.A.

VALIDATION OF THE

LAGOA DE TOUROS WIND

POWER PLANTS CDM

PROJECT ACTIVITY

REPORT No. BR.1099483

REVISION No. 02

BUREAU VERITAS CERTIFICATION

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

VALIDATION REPORT



Date of first issue: 20/03/2012	Organizational unit: Bureau Veritas Certification Holding SAS
Client: Zeta Energia S.A.	Client ref.: Mr. Marco Antônio Garcia

Summary:

Bureau Veritas Certification has made the validation of the Lagoa de Touros Wind Power Plants CDM Project Activity of Zeta Energia S.A. located in Touros and Rio do Fogo, Rio Grande do Norte State, Brazil on the basis of UNFCCC criteria for the CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM rules and modalities and the subsequent decisions by the CDM Executive Board, as well as the host country criteria.

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

The first output of the validation process is a list of Clarification and Corrective Actions Requests (CL and CAR), presented in Appendix A. Taking into account this output, the project proponent revised its project design document.

In summary, it is Bureau Veritas Certification's opinion that the project correctly applies the baseline and monitoring methodology ACM0002 – "Consolidated baseline methodology for grid-connected electricity generation from renewable sources", version 12.3.0, and meets the relevant UNFCCC requirements for the CDM and the relevant host country criteria.

Report No.: BR.1099483	Subject Group: CDM
Project title: Lagoa de Touros Wind Power Plants CDM Project Activity	
Work carried out by: Marco Francisco Prauchner – Lead Verifier Karina Polido – Verifier Bernardo Aleksandravicious – Financial Specialist	
Internal Technical Review carried out by: Guilherme Lefèvre	
Date of this revision: 13/04/2012	Rev. No.: 02
Number of pages: 153	

Indexing terms

Work approved by:

Flavio Gomes – Global Product Manager

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1 INTRODUCTION

Zeta Energia S.A. has commissioned Bureau Veritas Certification to validate its CDM project Lagoa de Touros Wind Power Plants CDM Project Activity (hereafter called “the project”) at Touros and Rio do Fogo municipalities, Rio Grande do Norte State, Brazil.

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

1.1 Objective

The validation serves as project design verification and is a requirement of all projects. The validation is an independent third party assessment of the project design. In particular, the project's baseline, the monitoring plan (MP), and the project's compliance with relevant UNFCCC and host country 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. Validation is a requirement for all CDM projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of certified emission reductions (CERs).

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.

1.2 Scope

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 Kyoto Protocol requirements, UNFCCC rules and associated interpretations.

The validation is not meant to provide any consulting towards the Client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project design.

1.3 Validation team

The validation team consists of the following personnel:

FUNCTION	NAME	CODE HOLDER*	TASK PERFORMED
Lead Verifier	Marco Francisco Prauchner	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> DR <input checked="" type="checkbox"/> SV <input checked="" type="checkbox"/> RI
Verifier	Karina Polido	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> DR <input type="checkbox"/> SV <input checked="" type="checkbox"/> RI
Technical	N.A.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> DR <input type="checkbox"/> SV <input type="checkbox"/> RI



Specialist			
Financial Specialist	Bernardo Aleksandravicious	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> DR <input type="checkbox"/> SV <input checked="" type="checkbox"/> RI
Internal Technical Reviewer (ITR)	Guilherme Lefèvre	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> DR <input type="checkbox"/> SV <input type="checkbox"/> RI
Specialist supporting ITR	N.A.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> DR <input type="checkbox"/> SV <input type="checkbox"/> RI

*DR = Document Review; SV = Site Visit; RI = Report issuance

2 METHODOLOGY

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

In order to ensure transparency, a validation protocol was customized for the project, according to the version 01.2 of the Clean Development Mechanism Validation and Verification Manual */e/*, issued by the Executive Board at its 55th meeting on 30/07/2010. The protocol shows, in a transparent manner, criteria (requirements), means of validation and the results from validating the identified criteria. The validation protocol serves the following purposes:

- It organizes, details and clarifies the requirements a CDM 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 completed validation protocol is enclosed in Appendix A to this report.

2.1 Review of Documents

The Project Design Document (PDD) submitted by Zeta Energia S.A. and additional background documents related to the project design and baseline, i.e. country Law, Guidelines for Completing the Project Design Document (CDM-PDD), Approved methodology, Kyoto Protocol, Clarifications on Validation Requirements to be Checked by a Designated Operational Entity were reviewed.

To address Bureau Veritas Certification corrective action and clarification requests, Zeta Energia S.A. revised the PDD and resubmitted it on 13/04/2012.

The validation findings presented in this report relate to the project as described in the PDD version 04.



2.2 Follow-up Interviews

On December 06th and 07th, 2011, Bureau Veritas Certification performed interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of Zeta Energia S.A. and Ecopart Assessoria em Negócios Empresariais Ltda were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
Omega Energia Renovável S.A. and Zeta Energia S.A.	<ul style="list-style-type: none"> ➤ Project background information, ➤ Project technology, operation, maintenance and monitoring capability, ➤ Project monitoring and management plan, ➤ Stakeholder consultation process, ➤ Project status, ➤ Wind power development in the area, ➤ Policies related to wind power projects.
Ecopart Assessoria em Negócios Empresariais Ltda	<ul style="list-style-type: none"> ➤ Project background information, ➤ Project technology, operation, maintenance and monitoring capability, ➤ Project monitoring and management plan, ➤ Stakeholder consultation process, ➤ Project status, ➤ Wind power development in the area, ➤ Policies related to wind power projects.

2.3 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the validation is to raise the requests for corrective actions and clarification and any other outstanding issues that needed to be clarified for Bureau Veritas Certification positive conclusion on the project design.

Corrective Action Requests (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 CDM requirements have not been met;
- (c) There is a risk that emission reductions cannot be monitored or calculated.



The validation team may also use the term Clarification Request (CL), if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

To guarantee the transparency of the validation process, the concerns raised are documented in more detail in the validation protocol in Appendix A.

2.4 Internal Technical Review

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

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

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

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

The validation activity has been performed by the team by exercising utmost diligence and complete adherence to the CDM rules and requirements.

The review encompasses all aspects related to the project which includes project design, baseline, additionality, monitoring plans and emission reduction calculations, internal quality assurance systems of the project participant as well as the project activity, review of the stakeholder comments and responses, closure of CARs, CLs and FARs during the validation exercise, review of sample documents.

The reviewer compiles clarification questions for the Lead Verifier and Validation Team and discusses these matters with Lead Verifier.

After the agreement of the responses on the 'Clarification Request' from the Lead Verifier as well as the PP(s) the finalized validation report is accepted for further processing such as uploading on the UNFCCC webpage.



3 VALIDATION CONCLUSIONS

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

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

The Clarification and Corrective Action Requests are stated, where applicable, in the following sections and are further documented in the Validation Protocol in Appendix A. The validation of the Project resulted in 19 Corrective Action Requests (CARs) and 14 Clarification Requests (CLs).

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

The number between brackets at the end of each section correspond to the VVM paragraph

3.1 Approval (49-50)

The participation for each project participant has not been approved yet by a Party of the Kyoto Protocol.

3.2 Participation (54)

The participation for each project participant has not been approved yet by a Party of the Kyoto Protocol. Please, refer to section 3.1 of this Validation Report.

3.3 Project design document (57)

The validation team hereby confirms that the PDD complies with the latest forms of the guidance documents for completion of PDD.

3.4 Changes in the Project Activity

As was observed by the validation team through documentation analysis and during the site visit held on December 06th and 07th, 2011, the project is being implemented in accordance with the descriptions provided in the webhosted PDD.

The only change in the PDD Version 02, related to the Version 01 is the changing in the starting date. In the first PDD version it was informed 01/09/2012 as an estimated date to order the major equipments. During the validation process, the PP decided to participate in the auction A-3 that is expected to occur in March 2012, and the first real action is the



expected date of the signature of the PPA (Power Purchase Agreement), on 22/12/2012, which became the new starting date.

The changes in the PDD Version 04, related to the Version 02 are minor changed issued by the Internal Technical Reviewer.

All the other changes that have been made to the different versions of the PDD during the Validation Process, from the webhosted PDD, version 01 **/1/** to the final PDD, version 04 **/37/**, have been supported by CARs and CLs opened by the DOE and have already been discussed in the Validation Protocol.

3.5 Project description (64)

The project activity consists in the implementation of seven wind power plants, with a total installed capacity of 177.8 MW, which is expected to deliver to the Brazilian grid, through the National Interconnected Power System (NIPS), 669,366 MWh annually, with an average plant load factor of 43.99%.

The plant load factor has been determined using the option “b)” as defined in the Guidelines for the Reporting and Validation of Plant Load Factors, version 1.0, EB 48 Report, Annex 11 **/h/** (the plant load factor determined by a third party contracted by the project participants). The expected operational lifetime is 20 years.

The DOE validated the accuracy and completeness of the project description by:

i) The analysis of documents related to the project activity, and their respective crosscheck with the PDD information:

- GE Turbines Technical Description and Data **/15/**;
- Vestas V100 Turbines Technical Description and Data **/16/**;
- Excel Spreadsheets **/3/**, **/4/**, **/5/**, **/6/** and **/7/**;
- Wind Studies of the seven Wind Parks **/8/**, **/9/**, **/10/**, **/11/**, **/12/**, **/13/** and **/14/**;
- RAS – Simplified Environmental Report **/25/**;

ii) A site visit and interviews with PP and consultant;

iii) An analysis of official background documents related to the project activity:

- Official figures from Brazilian DNA to the Grid emission factor, available at <http://www.mct.gov.br/index.php/content/view/327118.html#ancora>
- Environmental Preliminary Licenses **/18/**, **/19/**, **/20/**, **/21/**, **/22/**, **/23/** and **/24/**;



- Data Sheet from the Energy Research Company, for the seven Wind Parks **/27/**.

The DOE hereby confirms that the project description in PDD version 04 **/37/** is accurate and complete in all respects and that there are no changes to the project activity/design or boundary as compared to the webhosted PDD, except those changes that have been supported by CARs and CLs opened by the DOE, which have already been discussed in the Validation Protocol.

3.6 Baseline and monitoring methodology

3.6.1 General requirement (76-77)

The steps taken to assess the relevant information contained in the PDD against each applicability condition are described below.

The project applies the approved baseline methodology ACM0002 - “Consolidated baseline methodology for grid-connected electricity generation from renewable sources”, version 12.3.0 **/a/**.

The applied baseline methodology is justified as it has been demonstrated that the project activity ensures that:

Applicability conditions:

“Grid-connected renewable power generation project activities that (a) install a new power plant at a site where no renewable power plant was operated prior to the implementation of the project activity (greenfield plant)...”

The DOE validate that the project activity is the installation of seven new wind power plants at sites where no renewable power plant was operated prior to the implementation of the project activity, by a site visit and by the analysis of project activity related documents:

- Excel Spreadsheets **/3/, /4/, /5/, /6/ and /7/;**
- Wind Studies of the seven Wind Parks **/8/, /9/, /10/, /11/, /12/, /13/ and /14/;**
- RAS – Simplified Environmental Report **/25/;**
- Environmental Preliminary Licenses **/18/, /19/, /20/, /21/, /22/, /23/ and /24/;**
- Data Sheet from the Energy Research Company, for the seven Wind Parks **/27/**.

“The project activity is the installation, capacity addition, retrofit or replacement of a power plant/unit of one of the following types: hydro



power/unit (either with a run-of-river reservoir or an accumulation reservoir), wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit”.

The DOE validate that the project activity is the installation of seven new wind power plant, by a site visit and by the analysis of project activity related documents:

- Excel Spreadsheets **/3/, /4/, /5/ and /6/;**
- Wind Studies of the seven Wind Parks **/8/, /9/, /10/, /11/, /12/, /13/ and /14/;**
- RAS – Simplified Environmental Report **/25/;**
- Environmental Preliminary Licenses **/18/, /19/, /20/, /21/, /22/, /23/ and /24/;**
- Data Sheet from the Energy Research Company, for the seven Wind Parks **/27/.**

“In the case of capacity additions, retrofits or replacements (except for capacity addition projects for which the electricity generation of the existing power plant(s) or unit(s) is not affected): the existing plant started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity addition or retrofit of the plant has been undertaken between the start of this minimum historical reference period and the implementation of the project activity;”

The DOE validate that the project activity is not a capacity addition, retrofit or replacements; it is the installation of seven new wind power plant, by a site visit and by the analysis of project activity related documents:

- Excel Spreadsheets **/3/, /4/, /5/ and /6/;**
- Wind Studies of the seven Wind Parks **/8/, /9/, /10/, /11/, /12/, /13/ and /14/;**
- RAS – Simplified Environmental Report **/25/;**
- Environmental Preliminary Licenses **/18/, /19/, /20/, /21/, /22/, /23/ and /24/;**
- Data Sheet from the Energy Research Company, for the seven Wind Parks **/27/.**

“In case of hydro power plants:

- *At least one of the following conditions must apply:*
 - *The project activity is implemented in an existing single or multiple reservoirs, with no change in the volume of any of the reservoirs; or*
 - *The project activity is implemented in an existing single or multiple reservoirs, where the volume of any of reservoirs is increased and*



the power density of each reservoir, as per the definitions given in the Project Emissions section, is greater than 4 W/m² after the implementation of the project activity; or

- *The project activity results in new single or multiple reservoirs and the power density of each reservoir, as per the definitions given in the Project Emissions section, is greater than 4 W/m² after the implementation of the project activity.”*

The DOE validate that the project activity is not a hydro power plant, by a site visit and by the analysis of project activity related documents:

- Excel Spreadsheets **/3/, /4/, /5/ and /6/;**
- Wind Studies of the seven Wind Parks **/8/, /9/, /10/, /11/, /12/, /13/ and /14/;**
- RAS – Simplified Environmental Report **/25/;**
- Environmental Preliminary Licenses **/18/, /19/, /20/, /21/, /22/, /23/ and /24/;**
- Data Sheet from the Energy Research Company, for the seven Wind Parks **/27/.**

In case of hydro power plants using multiple reservoirs where the power density of any of the reservoirs is lower than 4 W/m² after the implementation of the project activity all of the following conditions must apply:

- *The power density calculated for the entire project activity using equation 5 is greater than 4 W/m²;*
- *All reservoirs and hydro power plants are located at the same river and were designed together to function as an integrated project that collectively constitutes the generation capacity of the combined power plant;*
- *The water flow between the multiple reservoirs is not used by any other hydropower unit which is not a part of the project activity;*
- *The total installed capacity of the power units, which are driven using water from the reservoirs with a power density lower than 4 W/m², is lower than 15 MW;*
- *The total installed capacity of the power units, which are driven using water from reservoirs with a power density lower than 4 W/m², is less than 10% of the total installed capacity of the project activity from multiple reservoirs.”*

The DOE validate that the project activity is not a hydro power plant, by a site visit and by the analysis of project activity related documents:

- Excel Spreadsheets **/3/, /4/, /5/ and /6/;**
- Wind Studies of the seven Wind Parks **/8/, /9/, /10/, /11/, /12/, /13/ and /14/;**
- RAS – Simplified Environmental Report **/25/;**



- Environmental Preliminary Licenses **/18/, /19/, /20/, /21/, /22/, /23/ and /24/;**
- Data Sheet from the Energy Research Company, for the seven Wind Parks **/27/.**

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;*
- *A hydro power plant that results in the creation of a new single reservoir or in the increase in an existing single reservoir where the power density of the reservoir is less than 4 W/m².”*

The DOE validate that the project activity does not:

- involves switching from fossil fuels to renewable energy sources,
- fires biomass
- is a hydro power plant,

by a site visit and by the analysis of project activity related documents:

- Excel Spreadsheets **/3/, /4/, /5/ and /6/;**
- Wind Studies of the seven Wind Parks **/8/, /9/, /10/, /11/, /12/, /13/ and /14/;**
- RAS – Simplified Environmental Report **/25/;**
- Environmental Preliminary Licenses **/18/, /19/, /20/, /21/, /22/, /23/ and /24/;**
- Data Sheet from the Energy Research Company, for the seven Wind Parks **/27/.**

The DOE hereby confirms that the selected baseline and monitoring methodology ACM0002 – “Consolidated baseline methodology for grid-connected electricity generation from renewable sources” - version 12.3.0 **/a/**, the Tool for demonstration and assessment of additionality - version 06.0.0 **/c/**, the Tool to calculate the emission factor for an electricity system - version 2.2.1 **/b/** are previously approved by the CDM Executive Board, and are applicable to the project activity, which, complies with all the applicability conditions therein.



The DOE hereby confirms that, as a result of the implementation of the proposed CDM project activity, there are no greenhouse gas emissions occurring within the proposed CDM project activity boundary, which are expected to contribute more than 1% of the overall expected average annual emissions reductions, which are not addressed by the applied methodology.

3.6.2 Project boundary (80)

For ACM0002, version 12.3.0 *1a*, “the spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system that the CDM project power plant is connected to”.

The DOE validated the project boundary by:

a) Analysis of the PDD and related documents:

- Wind Studies of the seven Wind Parks *18*, *19*, *10*, *11*, *12*, *13* and *14*;
- Environmental Preliminary Licenses *18*, *19*, *20*, *21*, *22*, *23* and *24*;
- RAS – Simplified Environmental Report *25*;
- Data Sheet from the Energy Research Company, for the seven Wind Parks *27*;
- Brazilian DNA Resolution # 8, of May 26, 2008, which defines the National Interconnected Power System (NIPS) as the electricity system for CDM projects in Brazil using the ACM0002 Methodology.

The PDD version 04 *37* included at Section B.3, a flow diagram, showing the main features and systems included in the boundary. The Table 5 of the PDD shows the sources and gases included in the baseline and in the project boundary, with the respective justification.

b) A site visit, that took place from December 06th until 07th, 2011, in PPs main office, with representatives of the Project Participants. At the moment of the site visit there were no buildings or systems being implemented related to the project activity. The starting date, as defined in the PDD version 04 *37*, is 22/12/2012, and is defined as the date of PPA (Power Purchase Agreement) signature.

Based on the above assessment, the DOE hereby confirms that the identified boundary and the selected sources and gases are justified for the project activity.

3.6.3 Baseline identification (87-88)

The steps taken to assess the requirement given in paragraph 81 and 82 of the VVM are described below.



The project activity is the installation of seven new grid-connected renewable power plants. According to methodology ACM0002, version 12.3.0 /a/, the baseline scenario is the following, as defined in the PDD version 04 /37/, Section B.4:

“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 as described in the “Tool to calculate the emission factor for an electricity system”.

As methodology ACM0002, version 12.3.0 /a/ prescribes the baseline scenario and no further analysis is required, there is no need to take steps to identify the baseline scenarios.

Based on the above assessment, the DOE hereby confirms that:

- (a) All the assumptions and data used by the project participants are listed in the PDD, including their references and sources;
- (b) All documentation used is relevant for establishing the baseline scenario and correctly quoted and interpreted in the PDD;
- (c) Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence and can be deemed reasonable;
- (d) Relevant national and/or sectoral policies and circumstances are considered and listed in the PDD;
- (e) The approved baseline methodology has been correctly applied to identify the most reasonable baseline scenario and the identified baseline scenario reasonably represents what would occur in the absence of the proposed CDM project activity.

3.6.4 Algorithms and/or formulae used to determine emission reductions (92-93)

The steps taken to assess the requirement outlined in paragraph 89 the VVM are described below.

The PP correctly calculated the emission reductions and the baseline emissions to the proposed project activity, as predicted by the methodology ACM0002, version 12.3.0 /a/, as follows:

Emission reductions (ER_y)

$$ER_y = BE_y - PE_y$$

Where:

ER_y Emissions reductions in year y (tCO₂e/yr)



BE_y Baseline emissions in year y (tCO₂/yr)
 PE_y Project emissions in year y (tCO₂e/yr)

Baseline emissions (BE_y)

The baseline scenario represents the electricity that would have otherwise been generated by the operation of the grid-connected power plants and by the addition of new generation sources.

The baseline emissions are calculated as follows:

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

Where:

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

For the quantity of net energy generation ($EG_{PJ,y}$) option a) “Greenfield renewable energy power plants” from methodology ACM0002, version 12.3.0, is applicable because the project activity is a new grid-connected renewable power plant at a site where no renewable power plant was operated prior to the implementation of the project activity, and

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

Where:

$EG_{PJ,y}$ Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh/yr)
 $EG_{facility,y}$ Quantity of net electricity generation supplied by the project plant/unit to the grid in year y (MWh/yr)

Therefore, the quantity of net energy generation that is produced and fed into the grid for the project activity is 669,366 MWh/yr, considering 2.3 % losses transmission. The DOE was able to validate this losses assessing the official CCEE report Public Annual Report – 2009 **/32/**.

For the calculation of the emission factor, which will yield the total equivalent CO₂ emission reduction for this first crediting period, a Combined Margin (CM) was used, in accordance with the six steps of the

“Tool to calculate the emission factor for an electricity system”, version 2.2.1 /b/.

Step 1 - Identify the relevant electricity systems

The Brazilian DNA has published Resolution nr. 8, issued on 26th of May, 2008, defining the National Interconnected Power System (NIPS, or in Portuguese: the “SIN”) as the project electricity system. Hence, this figure will be used to calculate the baseline emission factor of the grid.

BVC was able to verify this by crosschecking the above mentioned resolution online at: http://www.mct.gov.br/upd_blob/0024/24719.pdf (accessed on 07/12/2011).

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

Option I: Only grid power plants are included in the calculation.

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

For the calculation of the OM emission factor, the Brazilian DNA made available the operating margin emission factor calculated using option (c) Dispatch data analysis OM.

Detailed information on the methods and data applied can be obtained in the DNA’s website:

<http://www.mct.gov.br/index.php/content/view/327118.html#ancora>

In accordance with the tool, for the dispatch data analysis, the emission factor shall be up-dated annually, i.e. the ex-post data vintage is chosen.

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

The dispatch data analysis OM emission factor ($EF_{grid,OM-DD,y}$) is determined based on the grid power units that are actually dispatched at the margin during each hour h where the project is displacing grid electricity. It shall be calculated according to the formulae below:

$$EF_{grid,OM-DD,y} = \frac{\sum_h EG_{PJ,h} \times EF_{EL,DD,h}}{EG_{PJ,y}}$$

Where:

- $EF_{grid,OM-DD,y}$ = Dispatch data analysis operating margin CO₂ emission factor in year y (tCO₂/MWh);
 $EG_{PJ,h}$ = Electricity displaced by the project activity in hour h of the year y (MWh);
 $EF_{EL,DD,h}$ = CO₂ emission factor for power units in the top of the dispatch order in hour h in year y (tCO₂/MWh);
 $EG_{PJ,y}$ = Total electricity displaced by the project activity in year y (MWh);
 h = Hours in year y in which the project activity is displacing grid electricity;
 y = Year in which the project activity is displacing grid electricity.

The PP adopted in the PDD the latest figures available in the Brazilian DNA website, related to the year 2010.

Step 5 - Calculate the build margin (BM) emission factor

The build margin emissions factor is the generation-weighted average emission factor (tCO₂/MWh) of all power units m during the most recent year y for which electricity generation data is available, calculated as follows:

$$EF_{grid,BM,y} = \frac{\sum_m EG_{m,y} \times EF_{EL,m,y}}{\sum_m EG_{m,y}}$$

Where:

- $EF_{grid,BM,y}$ = Build margin CO₂ emission factor in year y (tCO₂/MWh);
 $EG_{m,y}$ = Net quantity of electricity generated and delivered to the grid by power unit m in year y (MWh);
 $EF_{EL,m,y}$ = CO₂ emission factor of power unit m in year y (tCO₂/MWh);
 m = Power units included in the build margin;
 y = Most recent historical year for which electricity generation data is available.

In terms of vintage of data, project participants choose the Option 2.

The PP correctly adopted in the PDD the latest figures available in the Brazilian DNA website, related to the year 2010.

Step 6. Calculate the combined margin emission factor

The PP correctly adopted the method (a) *Weighted average CM*, provided by the Tool, following their Weighted default values for Wind Farms: $w_{OM} = 0.75$ and $w_{BM} = 0.25$.

The combined margin is correctly calculated according to the formulae:

$$EF_{grid,CM,y} = EF_{grid,OM,y} \cdot w_{OM} + EF_{grid,BM,y} \cdot w_{BM}, \text{ where:}$$

$EF_{grid,BM,y}$ = Build margin CO₂ emission factor in year y (tCO₂/MWh);

$EF_{grid,OM,y}$ = Operating margin CO₂ emission factor in year y (tCO₂/MWh);

w_{OM} = Weighting of operating margin emissions factor (%);

w_{BM} = Weighting of build margin emissions factor (%).

on which, applying the official DNA figures and the weighted default values results in:

$$EF_{grid,CM,y} = 0.4787 \text{ tCO}_2/\text{MWh} \times 0.75 + 0.1404 \text{ tCO}_2/\text{MWh} \times 0.25$$

$$EF_{grid,CM,y} = 0.3941 \text{ tCO}_2/\text{MWh}$$

Project emissions (PE_y)

According to ACM0002, for most renewable power generation project activities, $PE_y = 0$. However, some project activities may involve project emissions that can be significant. These emissions shall be accounted for as project emissions by using the following equation:

$$PE_y = PE_{FF,y} + PE_{GP,y} + PE_{HP,y}$$

Where,

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

$PE_{FF,y}$ Project emissions from fossil fuel consumption in year y (tCO₂/yr);

$PE_{GP,y}$ Project emissions from the operation of geothermal power plants due to the release of noncondensable gases in year y (tCO₂e/yr);

$PE_{HP,y}$ Project emissions from water reservoirs of hydro power plants in year y (tCO₂e/yr).



In case of the project activity, the PP correctly informed the project emissions by the proposed project activity as zero.

$$PE_y = 0 \text{ tCO}_2\text{e/year}$$

Leakage (LE_y)

According to the methodology ACM0002, version 12.3.0, “*no leakage emissions are considered*”. Therefore, leakage emissions related to the implementation of the proposed project activity are 0 tCO₂.

Note on Brazilian Emission Factor Validation

In order to comply with the guidance provided by the EB-CDM, on its 43rd meeting, regarding the validation of grid emission factors made available to project participants for use in CDM project activities by some DNAs, the Brazilian DNA sent, in January 2009, official letters addressed to several DOEs inviting them for a meeting with the purpose to grant the opportunity for the DOEs to have access to the calculation of the emission factor of the national grid system.

The DOEs representatives had access to confidential data and were requested by Mr. Miguez from the Brazilian DNA that such information must not be disclosed for national strategic and market reasons.

The DOEs members had the opportunity to: i) assess the formulae used in the calculation spreadsheet; ii) to be informed about the sources of data and information used in the calculation spreadsheet; and, iii) to discuss and to take note of the assumptions adopted by the calculation working group from the Brazilian DNA.

A new meeting was conceded by the Brazilian DNA in order to allow two DOEs representatives to check the findings of the first meeting of 05 February 2009 regarding the Brazilian grid emission factor calculation again.

The second meeting took place in MCT's office, located at Praia do Flamengo, n° 200 – 7th floor, Rio de Janeiro, on 24 July 2009. The following participants attended the meeting: Mr. Newton Paciornik and Ms. Ana Carolina Avzaradel, both from MCT, on behalf of the Brazilian DNA, and; Mr. Ricardo Fontenele (BVC Holding SAS) and David Freire da Costa (DNV), both representing the group of DOEs.

During this second meeting, the DOEs' representatives were able to assess and verify a larger range of samples used in the emission factor



calculation spreadsheets. Operating Margin (OM) and Build Margin (BM) data, sources, references, formulas and calculation were verified for the years 2007 and 2008. For the year 2009, only the OM calculation was verified, because the BM for the referred year will be only calculated after the end of 2009, as the Brazilian DNA needs to gather annual consolidated information from the power plants serving the Interconnected National System. In addition, the results of the emission factor calculation spreadsheets were cross-checked with the information made available at the Brazilian DNA website, on a sampling basis, and no discrepancy or inconsistencies of the verified values were found.

The second meeting, on 24 July 2009, was extremely useful for the DOEs' members to assess cross-check and verify complementary data and related information used in the emission factor calculation spreadsheets, given even more credibility and assurance of the calculation provided by the Brazilian DNA.

It was a common sense of the DOEs members, that the calculations provided in the spreadsheet are clearly and transparently demonstrated. The formulae, equations and steps followed in the calculations are in accordance to the "Tool to calculate the emission factor for an electricity system (Version 01.1)". The assumptions made in the calculations are considered reasonable and acceptable.

Under consideration of the general conditions, the group of DOEs express a final favorable validation opinion in regards of the results from the calculation of the emission factor of the Brazilian grid system provided by the Brazilian DNA.

Observation: It has been noticed that, during EB 63 meeting it has been approved the version 02.2.1 of the "Tool to calculate the emission factor for an electricity system". The DOE assessed this new version of the Tool and understands that the changes in version 02.2.1 don't affect the results of the emission factor as calculated by the Brazilian DNA and validated by the DOES during the meetings of February 2009 (1st meeting) and 24 July 2009 (2nd meeting).

Based on the above assessment, the DOE hereby confirms that:

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



- (b) All documentation used by project participants as the basis for assumptions and source of data is correctly quoted and interpreted in the PDD;
- (c) All values used in the PDD are considered reasonable in the context of the proposed CDM project activity;
- (d) The baseline methodology has been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions;
- (e) All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PDD.

The DOE crosschecked the calculations (algorithms and formulae) of the emission reductions on the support spreadsheet ER's calculation - Lagoas de Touros_CERs_2012.01.27_v.2 **/6/** against the formulae defined by the methodology ACM0002, version 12.3.0 **/a/** and the Tool to calculate the emission factor for an electricity system version 2.2.1 **/b/**. The data and values adopted in these calculations were crosschecked against the official Brazilian figures from the National Grid emission factor, available at <http://www.mct.gov.br/index.php/content/view/72764.html> (accessed on 07/12/2011).

3.7 Additionality of a project activity (97)

The steps taken and sources of information used, to cross-check the information contained in the PDD on this matter are described below.

To demonstrate its additionality, the Tool for demonstration and assessment of additionality, version 06.0.0 **/c/**, is correctly applied by the Project, as required by the section Additionality of the methodology ACM0002, version 12.3.0 **/a/**.

The details of the DOE assessment on the Project additionality are described in the Sections 3.7.2 to 3.7.5 below, following the steps defined in the Tool for demonstration and assessment of additionality version, 06.0.0 **/c/**.

The information sources used to cross-check the information contained in the PDD on additionality of the project activity were the Investment and the Sensitivity analysis, and their related documents, the UNFCCC website, and the spreadsheet Economic Model - FCF_Complexo Touros_2012.03.28 **/30/**.

Details on the assessment of the investment analysis and the authenticity of the documentation and data used are described in Section 3.7.3.

3.7.1 Prior consideration of the clean development mechanism (104)

The project activity has a starting date defined in the PDD version 04 **/37/**, as being on 22/12/2012, which is the estimated date of the signature of



PPA (Power Purchase Agreement). This is the earliest date at which either the implementation or construction or real action of this project activity begins, as defined by *Glossary of CDM Terms*, version 06.0 **/f/**.

According to VVM paragraphs 99-102, the Project is a new project activity with a start date after 02/08/2008. The PDD has been published for global stakeholder consultation on 26/10/2011, which is earlier than the start date of the Project, 22/12/2012.

In that case, in accordance with the Guidelines in the demonstration and assessment of prior consideration of the CDM, version 04 **/d/**, no communication has to be made regarding CDM consideration, since the beginning of the GSP itself demonstrate that CDM is being considered.

The DOE hereby confirms that the Period for Comments related to this project activity is from 26 Oct 11 – 24 Nov 11, and that the CDM benefits were considered necessary in the decision to undertake the project as a proposed CDM project activity.

Based on the above assessment, the DOE hereby confirms that the proposed CDM project activity complies with the requirements of the Guidelines on the Demonstration and Assessment of Prior Consideration of the CDM, version 04 **/d/**.

3.7.1.1 Historical information on project timeline

The main historical information of the project is:

- PDD uploading on the UNFCCC website for global stakeholders comments from 26 Oct 11 - 24 Nov 11;
- Project Starting Date is 22/12/2012.

3.7.2 Identification of alternatives (107)

The DOE considers the listed alternatives to be credible and complete.

3.7.3 Investment analysis (114)

a) Investment Analysis

The project proponent decided to use the “Tool for the demonstration and assessment of additionality” version 6.0.0 **/c/**, which refers to the “Guidelines on the assessment of investment analysis” version 5 **/g/** and, therefore, these guidelines were used in the following analysis.

Validation Team adopted a four steps strategy to confirm the veracity of the conclusion drawn by the project developer:



- a) Evaluating the appropriateness of the benchmark applied for the type of financial indicator presented;
- b) Conducting an assessment of parameters and assumptions used in calculating the financial indicator and determining the accuracy and suitability of parameters and cross-checking the parameters against third-party or publicly available sources;
- c) Assessing the correctness of computations carried out and documented; and
- d) Subjecting the critical assumptions of the project activity to reasonable variations to determine under what conditions variations in the result would occur, and the likelihood of these conditions.

a) Suitability of financial indicator and benchmark:

Financial indicator: The project participant has chosen equity IRR to demonstrate the additionality of the project. Additionality Tool (Ver. 06.0.0) **/c/** permits the use of financial indicator, IRR, for demonstrating the additionality using benchmark analysis. The tool permits the use of either project IRR or equity IRR. Since the project developer is demonstrating the financial unattractiveness of the project, IRR is appropriate, as it is often used by the project developers to make a decision on investing in the project. As such, the selection of IRR as financial indicator to demonstrate the additionality of the project is appropriate conforms to the Additionality Tool **/c/**.

Based on Additionality tool (ver.06.0) **/c/** which states: “*When applying Option II or Option III, the financial/economic analysis shall be based on parameters that are standard in the market, considering the specific characteristics of the project type, but not linked to the subjective profitability expectation or risk profile of a particular project developer. Only in the particular case where the project activity can be implemented by the project participant, the specific financial/economic situation of the company undertaking the project activity can be considered.*”, and paragraph 13 from EB62 Annex 05 which states that “*In the cases of projects which could be developed by an entity other than the project participant the benchmark should be based on parameters that are standard in the market. The DOE’s validation of the benchmark shall also include its opinion on whether a company-specific benchmark or a benchmark based on parameters that are standard in the market is suitable in the context of the underlying project activity.*”, the validation team concluded that:

The WACC calculation is based on parameters that are standard in the market, considers the specific characteristics of the project type, and is not linked to the subjective profitability expectation or risk profile of this particular project developer.



Benchmark calculation description: **We** and **Wd** are, respectively, the weights of equity and debt typically observed at the sector. **We** is of 50%, and **Wd** of 50%. These numbers derive from the typical default leverage suggested in the additionality tool.

Kd is the cost of debt, which is observed in the market related to the project activity, and which already accounts for the tax benefits of contracting debts. **Kd** is of 4.71%, and also derives from long term loans applied to the sector in Brazil, and therefore is based on Brazilian Development Bank (from the Portuguese *Banco Nacional de Desenvolvimento Econômico e Social – BNDES*¹) financing endeavour credit line's interest rates. BNDES is the major provider of long-term loans in the country; it supplies the financing for small to large scale projects. Long-term loans are scarcely provided by commercial banks, and in general, these entities do not have competitive rates compared to the BNDES.

Ke is the cost of equity, estimated through the Capital Asset Pricing Model (CAPM). **Ke** is of 14.05%. **Ke** derives from a risk free rate plus the market risk premium adjusted to the sector through Beta. The risk-free rate, the market risk premium, and the Beta have been calculated based on publicly available data and presented to the DOE.

Plugging these numbers into WACC formulae:

$$\text{WACC} = 0.50 \times 4.71\% + 0.50 \times 14.05\% = 9.38\%$$

Benchmark: 9.38%

BVC agrees with all the data used in benchmark calculations and would like to point out that they were clearly presented, available to consult and correct.

b) Description of the parameters and assumptions used in the investment analysis, description of the means of validation and the procedures to cross-check the parameters against third-party or publicly available sources.

Input Values/Assumptions	Value	Means of validation
Installed capacity	177.8 MW	It was cross-checked by using third parties available sources. The DOE has cross-checked the installed capacity of the project activity with a technical report from Camargo Schubert (/9/ - /14/). The DOE was able to cross-check the

¹ Available at BNDES' website: http://www.bndes.gov.br/SiteBNDES/bndes/bndes_en/Institucional/The_BNDES/.



		referred information and considered it in accordance to the CDM rules.
Total Investment	BRL 715,703 (X 1000) (BRL 4.03 million per MW of installed capacity)	<p>It was cross-checked by using third parties available sources.</p> <p>The project's total investment per installed capacity is around USD 2 million/MW – considering an exchange rate of 2 BRL / USD and it was determined by four documents from third parties /33/, /34/, /35/ and /36/. The suitability was assessed by comparing such value with other projects.</p> <ul style="list-style-type: none"> - Rio do Fogo Wind Farm ²(Brazil) – USD 2 million/ MW ; - Osorio Wind Farm³ (Brazil) – USD 2.6 million/ MW; - Fuerza Eólica del Istmo Wind Farm⁴ (Mexico) – USD 2.5 million/ MW; - Electrica del Valle de Mexico Wind Farm⁵(Mexico) – USD 2.6 million/ MW; - Los Cocos Wind Farm (Dominican Republic)⁶ – USD 2.7 million/ MW; <p>All referred projects are similar and comparable to the project activity.</p> <p>In conclusion, based on the total investment cost per MW comparison the validation agreed with the suitability and appropriateness of the referred input value. It is important to highlight that all the information used was available at the time of investment decision.</p>
O&M costs	BRL 115,000 / per year / per tower	<p>It was cross-checked by using a third party available source.</p> <p>The validation team cross-checked this assumption with Matafongo Wind Farm project, reference number 5456. The referred project considered an O&M cost of USD 83,520 and USD 112,752 per year and per tower for the first and second respective years. Since the O&M cost of proposed project is USD 57,500 per year considering a 2 USD / BRL exchange rate, the DOE considered suitable the referred input value.</p>
Sales price or energy price	Variable	<p>It was cross-checked by using a third party available source.</p> <p>The validation team cross-checked the referred input value with a energy forecast from PSR⁷ a leading energy consulting company in Brazil and other countries. It is a study prepared to the project proponent based on</p>

²<https://www.eleconomista.es/mercados-cotizaciones/noticias/6478/04/06/Economia-Empresas-Iberdrola-pone-en-marcha-su-primer-parque-eolico-en-Brasil-con-66-millones-de-euros-de-inversion.html>, accessed on 01/12/2011.

³<http://www.eleconomista.es/mercados-cotizaciones/noticias/40593/07/06/Economia-Empresas-Elecenor-pone-en-marcha-un-parque-eolico-en-Brasil-con-una-inversion-de-2456-millones-de-euros.html>, accessed on 01/12/2011.

⁴<http://cdm.unfccc.int/UserManagement/FileStorage/QU24R97J1OK0W63XVBLC5HG8TNZMAE> accessed on 01/02/2012.

⁵<http://cdm.unfccc.int/UserManagement/FileStorage/J1HGRV0CNP9LBQEWA7FT6MI8S3XD52> accessed on 10/12/2011.

⁶http://www.oficinascomerciales.es/icex/cda/controller/pageOfecomes/0.5310.5280449_5282927_5284940_4315472_DO.00.html accessed on 30/12/2011.

⁷ Available at: http://www.psr-inc.com.br/portal/psr_en/. Accessed on 14/03/2012.



		macroeconomic forecasts and using statistical software in order to determine the energy sales price curve in the future, which was used in the project activity. PSR has been a global provider of technological solutions and consulting services in the areas of electricity and natural gas since 1987.
Period of assessment	23 years	It was cross-checked by using a third party available report. The project IRR calculation reflects the period of expected operation of the underlying project activity (technical lifetime). According to turbines specification from Vestas (Vestas_V_100_brochure /16/) the operational lifetime is around 20 years.
PLF	43.99 %	It was cross-checked by using third party available source. The plant load factor value was estimated by the wind certification company at 50% of probability (P50). The use of the wind certification report is in compliance with paragraph 3(b) of Annex11, EB 48. The DOE was able to verify and cross-check such values with the third-party report.

Depreciation, and other non-cash items related to the project activity, which have been deducted in estimating gross profits on which tax is calculated, was added back to net profits for the purpose of calculating the project IRR. Taxation was not included as an expense in the IRR calculation.

Input values used in all investment analysis were valid and applicable at the time of the investment decision taken by the project participant. The validation team validated the timing of the investment decision and the consistency and appropriateness of the input values with this timing. Also it were validated that the listed input values had been consistently applied in all calculations. Project participants supplied spreadsheets versions of all investment analysis. All formulas used in this analysis were readable and all relevant cells were viewable and unprotected.

c) Assessment of correctness of computation: BVC checked all formulas in all spreadsheets presented by the project proponent. The assessment involves checking the data input taken from quotation/documents, adoption of correct accounting principle and arithmetical accuracy. BVC checked the quotation/ documents and ensured that right input has been taken in the project cost and projections. The accounting principles adopted for computing depreciation, tax, costs are found to be in order. The arithmetical accuracy is also found to be correct. The principle adopted by the project participant for computing equity IRR is in conformity with the "Guidance on the Assessment of Investment Analysis" issued by EB. Based on the above, the IRR of the project was lower in



contrast to the benchmarks. However, the conclusion was checked by subjecting the critical assumptions to reasonable variations.

d) Sensitivity analysis: The Guidance on Assessment of Investment Analysis requires the robustness of the conclusion arrived at to be proved through a sensitivity analysis by varying the critical assumptions to a reasonable variation ($\pm 10\%$). To confirm how solid the investment analysis is, project participants presented a sensitivity analysis varying the most important parameters: (i) increase in electricity generation, (ii) increase in the tariff and (iii) decrease in project expected investments.

The sensitivity analysis confirmed that the project activity is not financially attractive once the project internal rate of return is lower than the benchmark in all scenarios analysed. Sensitivity analysis is available in table and 12 from PDD.

Conclusion:

Project activity's IRR – 3.39%

PDD's Benchmark – 9.38%

Based on the foregoing, BVC has concluded that the project activity faces investment constraints as much as the equity IRR is less than the benchmark return and will continue to remain additional even under most optimistic conditions (based on sensitivity analysis), and thus the validation team has arrived at the conclusion that the project activity is additional and is not a business-as-usual case. The CDM registration would help PP in overcoming the investment case identified above.

CLs BQA 1 to 3 and CARs BQA 1 to 3 were issued and they have been satisfactorily solved and closed. Refer to Appendix A.

The DOE, based on the assessment result by the financial expert engaged, hereby confirms that the underlying assumptions are appropriate and the financial calculations are correct.

3.7.4 Barrier analysis (118)

Barrier analysis was not adopted to demonstrate the project additionality.

3.7.5 Common practice analysis (121)

The geographical scope of the common practice analysis adopted by the PP to demonstrate that the project activity is not a common practice is the Rio Grande do Norte state in Brazil. This is in line with the requirements of the Tool for demonstration and assessment of additionality, version 06.0.0 /c/, sub-step 4a, and the Guidelines on Common Practice, version 1.0 /k/. The DOE validated this scope by an analysis:



- Brazilian Wind Resource Potential: Atlas of Brazil's Electric Power 3rd Edition (From Portuguese Atlas de Energia Elétrica do Brasil) – ANEEL /28/, which presents different wind energy potentials due to the country size and different climate regions;
- Regulation related to the Tariff for the Use and Transmission / Distribution System: official ANEEL website: <http://www.aneel.gov.br/area.cfm?idArea=97&idPerfil=2>, which can be different per state;
- Each different states in Brazil have different technical requirement to obtain the environmental licenses. This was crosschecked by the DOE in CONAMA 279 /I/ law (from National Council of Environment) dated June 27, 2001.

Based on the above assessment, the DOE agrees that a different geographical scope can be adopted to validate the common practice, in case of this project activity, the State of Rio Grande do Norte.

The DOE assessed the existence of similar projects in the Brazilian on the ANEEL data base, at the website <http://www.aneel.gov.br/aplicacoes/capacidadebrasil/GeracaoTipoFase.asp?tipo=7&fase=3>.

The PDD version 04 /37/, presented the Common Practice analysis following the requirements of the Guidelines on Common Practice, version 1.0 /k/, in conjunction with the provisions of paragraph 47 of the Tool for the demonstration and assessment of additionality. The values of N_{all} and N_{diff} were crosschecked by the DOE in the official Ministry of Mines and Energy online database: <http://www.aneel.gov.br/15.htm>.

The DOE hereby confirms that the proposed CDM project activity is not common practice.

3.8 Monitoring plan (124)

The DOE hereby confirms that the monitoring plan complies with the requirements of the methodology.

The steps taken to assess whether the monitoring arrangements described in the monitoring plan are feasible within the project design are described below.

The Project uses the methodology ACM0002 - Consolidated baseline methodology for grid-connected electricity generation from renewable sources, version 12.3.0 /a/. The project involves the installation of seven new grid connected renewable power plants, using wind energy.



The Combined Margin (CM) emission factor is determined ex-post, based on the most recent information available.

In accordance to the monitoring plan, the parameters that will be monitored are:

- The quantity of net electricity generation supplied by every Wind Power plant of the project activity to the grid in year y ($EG_{\text{facility},y}$). The information will be crosschecked using records of sold energy, produced by the CCEE - Electric Power Commercialization Chamber. CCEE is the independent agency that manages the commercialization of energy in Brazil and keeps the official records for sold energy.

Operational management for the Project is comprehensively detailed in the PDD. It includes description of the responsibilities, equipment requirements and record needs, all elements which could ensure that the monitoring plan could be followed during the operation of the Project.

The DOE hereby confirms that the project participants are able to implement the monitoring plan.

3.9 Sustainable development (127)

The host Party's DNA confirmed the contribution of the project to the sustainable development of the host Party. Refer to item 3.1 of this report.

3.10 Local stakeholder consultation (130)

The steps taken to assess the adequacy of the local stakeholder consultation are described below.

The PP conducted Local and National Stakeholder consultations, before the publication of the PDD on the UNFCCC website on 26 Oct 11.

According to Resolution nr. 7, issued on March 5th 2008, Brazilian Designated National Authority (Comissão Interministerial de Mudança Global do Clima– CIMGC) requests, among other documents, comments from local stakeholders in order to provide the Letter of Approval for a project.

The Resolution determines that the project proponent has to send invite for comments, at least, the following agents involved in and affected by project activity:

- Municipal governments and City Councils;
- State and Municipal Environmental Agencies;
- Brazilian Forum of NGOs and Social Movements for Environment and Development;
- Community associations;



- State Attorney for the Public Interest (state and federal).

The same resolution also requires that at the time these letters are sent, a version of the PDD in the local language and a declaration stating how the project contributes to the sustainable development of the country must be made available to these stakeholders at least 15 days previous to the starting of the Global Stakeholder Process (GSP). The Portuguese version of the PDD was published at the internet website <http://sites.google.com/site/consultadcp/> on 29/09/2011 which is also the date when the invitation letters were sent to the following agents:

- Prefeitura de Touros (Touros City Hall)
- Câmara Municipal de Touros (Municipal Assembly of Touros)
- Secretaria do Meio Ambiente de Touros (Environmental Agency of Touros)
- Sindicato dos Trabalhadores Rurais de Touros (Communitarian Association of Touros)
- Instituto de Desenvolvimento Sustentável e Meio Ambiente do Rio Grande do Norte - IDEMA (Rio Grande do Norte Environmental Agency)
- Ministério Público Federal (State Attorneys for the Public Interest of Brazil)
- Ministério Público do Rio Grande do Norte (State Attorneys for the Public Interest of Rio Grande do Norte State)
- Fórum Brasileiro de ONGs e Movimentos Sociais para o Desenvolvimento e Meio Ambiente (Brazilian Forum of NGOs and Social Movements for the Development and Environment)

During the on-site visit, the DOE had access to the records from these letters and post office confirmation of receipt **/26/**, and is able to confirm that the procedures to conduct the local stakeholders comment are transparent. Furthermore, no comments have been received yet.

Comment on CAR 16: During the Internal Technical review, it was observed that 2 from 7 Wind Farms are located in a neighbouring Municipality from Touros, Rio do Fogo, different as informed in the original PDD. The DOE raised the CAR 16, to complete the consultation, and to guarantee that all comments are incorporated in the documentation that is submitted to the Brazilian DNA in order to obtain the letter of approval of the Host Country.

The DOE hereby confirms that the process of local stakeholder consultation is observed to be adequate.



3.11 Environmental impacts (133)

In Brazil, the sponsor of any project that involves construction, installation, expansion or operation of any polluting or potentially polluting activity or any other capable to cause environmental degradation is obliged to secure several permits from the relevant environmental agency (federal and/or local, depending on the project).

The environmental impact of Wind Power Plants as the ones considered in the proposed project activity is considered small given the other sources of electricity generation. For this reason, in accordance with the National Environment Council (from the Portuguese CONAMA - *Conselho Nacional do Meio Ambiente*) Resolution #279, dated 27/06/2001 //, wind power plants must do the a simplified environmental impact assessment (RAS) in order to obtain the necessary licenses to the project.

Licenses required by CONAMA (Resolution #237/97) are:

- The Preliminary License (*Licença Prévia* or LP);
- The Construction License (*Licença de Instalação* or LI); and
- The Operating License (*Licença de Operação* or LO).

The process starts with a previous analysis by the local environmental department of the simplified environmental impact assessment. The result of those assessments is the Preliminary License (LP), which reflects the environmental local agency positive understanding about the environmental project concepts.

In order to obtain the Construction License (LI) it is necessary to present (a) additional information about previous assessment; (b) a new simplified assessment; or (c) the Environmental Basic Project, according to the environmental agency decision informed at the LP.

The Operation License (LO) is a result of pre-operational tests during the construction phase to verify if all exigencies made by environmental local agency were completed.

During the Validation process, the DOE assessed the Simplified Environmental Studies **/25/** and the Preliminary Licenses (LP) (/18/ to /24/) as follows:

Wind Power Plant	LP Number	Issuance Date	Expiry Date
<i>Touros 1</i>	2010-037817/TEC/LP-0122	05/07/2010	05/07/2012
<i>Touros 2</i>	2010-037815/TEC/LP-0120	05/07/2010	05/07/2012
<i>Touros 3</i>	2011-043866/TEC/LP-0065	20/06/2011	20/06/2013
<i>Touros 4</i>	2011-043868/TEC/LP-0067	17/06/2011	17/06/2013



<i>Touros 5</i>	2011-043867/TEC/LP-0066	17/06/2011	17/06/2013
<i>Touros 6</i>	2011-043869/TEC/LP-0068	17/06/2011	17/06/2013
<i>Touros 7</i>	2011-044376/TEC/LP-0074	17/06/2011	17/06/2013

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

The PDD using methodology ACM0002 – “Consolidated baseline methodology for grid-connected electricity generation from renewable sources”, version 12.1.0, was webhosted on the UNFCCC for global stakeholders comments as per CDM requirements. The project was webhosted from 26 Oct 11 to 24 Nov 11.

No comments were received.

5 VALIDATION OPINION

Bureau Veritas Certification has performed a validation of the Lagoa de Touros Wind Power Plants CDM Project Activity Project in Brazil. The validation was performed on the basis of UNFCCC criteria and host country criteria 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.

Project participants used the latest tool for demonstration of the additionality. In line with this tool, the PDD provides analysis of investment to determine that the project activity itself is not the baseline scenario.

By the construction of seven wind power plants with 177.8 MW of installed capacity, as follows: Lagoa de Touros 1, 2, 4, 6 and 7 Wind Power Plants (28.8 MW), Lagoa de Touros 3 Wind Power Plant (16.2 MW) and Lagoas de Touros 5 Wind Power Plant (17.6 MW), in the Rio Grande do Norte State, Brazil, renewable energy will be delivered to the National Interconnected Power System, the project is likely to result in reductions of GHG emissions partially. An analysis of the investment 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. Given that the project is implemented and maintained as designed, the DOE hereby confirms that the total estimated amount of 1,846,551 tCO₂e emission reductions, during the 1st crediting period, is correct.



The review of the project design documentation (version 04) and the subsequent follow-up interviews have provided Bureau Veritas Certification with sufficient evidence to determine the fulfillment of stated criteria. In our opinion, the project correctly applies and meets the relevant UNFCCC requirements for the CDM and the relevant host country criteria. Bureau Veritas Certification thus requests registration of Lagoa de Touros Wind Power Plants CDM Project Activity as CDM project activity.

6 REFERENCES

Category 1 Documents:

Documents provided by Zeta Energia S.A. that relate directly to the GHG components of the project.

- /1/ PDD version 01, dated 29/09/2011
- /2/ PDD version 02, dated January 27, 2012
- /3/ Excel Spreadsheet – Economic Model – “FCF_Complexo Touros_Final”
- /4/ Excel Spreadsheet – Economic Model – “FCF_Complexo Touros_2012.01.27”
- /5/ Excel Spreadsheet - ER's calculation – “Lagoas de Touros_CERs_2011.09.26”
- /6/ Excel Spreadsheet - ER's calculation – “Lagoas de Touros_CERs_2012.01.27_v.2”
- /7/ Excel Spreadsheet to calculate the grid Emission Factor “BR EF ex ante 2008 to 2010-def EF tool 2.2-2011.10.06” – (Used in the PDD V 01, which adopted an ex ante calculation)
- /8/ Wind Study – Camargo Schubert – Lagoa de Touros I, dated 16/04/2011
- /9/ Wind Study – Camargo Schubert – Lagoa de Touros II, dated 16/04/2011
- /10/ Wind Study – Camargo Schubert – Lagoa de Touros III, dated 16/04/2011
- /11/ Wind Study – Camargo Schubert – Lagoa de Touros IV, dated 18/04/2011
- /12/ Wind Study – Camargo Schubert – Lagoa de Touros V, dated 18/04/2011
- /13/ Wind Study – Camargo Schubert – Lagoa de Touros VI, dated 18/04/2011
- /14/ Wind Study – Camargo Schubert – Lagoa de Touros VII, dated 29/04/2011
- /15/ GE_Wind 1.6 -100 Brochure
- /16/ Vestas_V_100_brochure
- /17/ ONS Data – Energy Generation - (Used in the PDD V 01, which adopted an ex ante calculation)
- /18/ Environmental Preliminary License – Lagoa de Touros I - # 2010 – 037817/TEC/LP-0122
- /19/ Environmental Preliminary License – Lagoa de Touros II - # 2010 - 037815/TEC/LP-0120
- /20/ Environmental Preliminary License – Lagoa de Touros III - # 2011 – 043866/TEC/LP-0065
- /21/ Environmental Preliminary License – Lagoa de Touros IV - # 2011 – 043868/TEC/LP-0067
- /22/ Environmental Preliminary License – Lagoa de Touros V - # 2011 – 043867/TEC/LP-0066
- /23/ Environmental Preliminary License – Lagoa de Touros VI - # 2011 –



- 043869/TEC/LP-0068
- /24/ Environmental Preliminary License – Lagoa de Touros VII - # 2011-044376/TEC/LP-0074
 - /25/ RAS – Simplified Environmental Reports:
 - Lagoa de Touros I, dated January 2010
 - Lagoa de Touros II, dated January 2010
 - Lagoa de Touros III, dated April 2011
 - Lagoa de Touros IV, dated April 2011
 - Lagoa de Touros V, dated April 2011
 - Lagoa de Touros VI, dated April 2011
 - Lagoa de Touros VII, dated May 2011
 - /26/ Copy of the letters sent to the local stakeholders consultation process, and respective evidence Receipt of Letters, sent by the Postal Service
 - /27/ Data Sheet from the Energy Research Company, for:
 - Lagoa de Touros I – Emission date: 16/04/2011
 - Lagoa de Touros II - Emission date: 16/04/2011
 - Lagoa de Touros III - Emission date: 19/04/2011
 - Lagoa de Touros IV - Emission date: 19/04/2011
 - Lagoa de Touros V - Emission date: 25/04/2011
 - Lagoa de Touros VI - Emission date: 25/04/2011
 - Lagoa de Touros VII - Emission date: 03/05/2011
 - /28/ Atlas of Brazil's Electric Power 3rd Edition (From Portuguese Atlas de Energia Elétrica do Brasil) – ANEEL
 - /29/ PDD version 03, dated March 28, 2012
 - /30/ FCF_Complexo Touros_2012.03.28
 - /31/ Lagoas de Touros_CERs_2012.03.28_v.3
 - /32/ CCEE - Public Annual Report – 2009
 - /33/ WTG - Vestas / 25211-PR-OME-V100-2.0-95m REV0 25072011
 - /34/ Price Schedule – Wind Complex Parnaíba - Rev.2 OPÇÃO VESTAS
 - /35/ Civil - Cortez / Proposal Delta (without R Igaracu) Rev03
 - /36/ Engecorps_ PP-01-10098-OER-R1
 - /37/ PDD version 04, dated April 13, 2012

Category 2 Documents:

Background documents related to the design and/or methodologies employed in the design or other reference documents.

- /a/ ACM0002, version 12.3.0 - EB 66, Annex 35
- /b/ Tool to calculate the emission factor for an electricity system, version 2.2.1 – EB 63, Annex 19
- /c/ Tool for demonstration and assessment of additionality, version 06.0.0 – EB 65, Annex 21
- /d/ Guidelines on the Demonstration and Assessment of Prior Consideration of the CDM, version 4 – EB 62, Annex 13
- /e/ Validation and Verification Manual, version 1.2 – EB 55, Annex 01
- /f/ Glossary of CDM Terms, version 06.0, EB 66 Annex 63
- /g/ Guidelines on the assessment of investment analysis, version 5 – EB 62,



Annex 5

- /h/ Guidelines for the Reporting and Validation of Plant Load Factors, version 1 – EB 48, Annex 11
- /i/ Clean Development Mechanism - Project Design Document Form (CDM-PDD), version 3 – EB 25, Annex 15
- /j/ Guidelines for completing the Project Design Document (CDM-PDD) and the Proposed New Baseline and Monitoring Methodologies (CDM-NM), version 7 – EB 41, Annex 12
- /k/ Guidelines on Common Practice, version 1.0 – EB 63, Annex 12
- /l/ CONAMA – Resolution # 279, dated June 27th, 2001
- /m/ CIMGC – Resolution # 7
- /n/ CIMGC – Resolution # 8
- /o/ ONS Procedures – Submodules 12.2 and 12.3

Persons interviewed:

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

- /1/ Ana Paula Veiga - Ecopart Assessoria em Negócios Empresariais Ltda
- /2/ Ademar de Proença Filho - Zeta Energia

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7 CURRICULA VITAE OF THE DOE'S VALIDATION TEAM MEMBERS

Bureau Veritas Certification – Internal technical Reviewer

Guilherme B. Lefèvre – is graduated in Law with experience in GHG Programs, both compulsory and voluntary. Guilherme has vast experience in the development and analysis of CDM, VCS, Social Carbon and CCBS projects. He has an MSc in Environmental Science - São Paulo University. Guilherme trained as a lead auditor in the fields of environment (ISO 14001) and GHG – Green House Gas.

Bureau Veritas Certification – Lead Verifier

Marco F. Prauchner – is graduated in Mechanical Engineering with experience in Quality and Environmental management in mechanical, plastic and chemical industries. He is ISO 9001:2008 and ISO 14001:2004 Lead Auditor and has also experience in the implementation of Environmental Management Systems. Marco is qualified as Lead Verifier GHG – Green House Gases.

Bureau Veritas Certification – Verifier

Karina Polido - is graduated in Civil Engineering with experience in management system audits. She is ISO 9001:2008 and ISO 14001:2004 Lead Auditor. Karina is also qualified as Lead Verifier GHG – Green House Gases.

Bureau Veritas Certification – Financial Specialist

Bernardo Aleksandravicius - is graduated in Business Administration with a very expressive experience in valuation of new projects in the electrical and technology sectors; Equity analyst with focus on the consumer staples, consumer discretionary, technology and telecommunications sectors for many companies in Brazil.



APPENDIX A: ZETA ENERGIA S.A. CDM PROJECT VALIDATION PROTOCOL

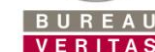
Table 1 Validation requirements based on the Clean Development Mechanism Validation and Verification Manual (Version 01.2) and methodology ACM0002 (Version 12.1) – “Consolidated baseline methodology for grid-connected electricity generation from renewable sources”

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
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VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS		Draft Concl	Final Concl
1. Approval			<i>COUNTRY A (Brazil)</i>	<i>COUNTRY B (insert the country name)</i>		
a. Have all Parties involved approved the project activity?	VVM	44	Please refer to item 1.b below	Not applicable	OK	OK
b. Has the DNA of each Party indicated as being involved in the proposed CDM project activity in section A.3 of the PDD provided a written letter of approval? (If yes, provide the reference of the letter of approval, any supporting documentation, and specify if the letter was received from the project participant or directly from the DNA)	VVM	45	The final decision from the Brazilian DNA will be available only after its first ordinary meeting, after the receiving of all the required documents necessary for evaluation, including this validation report, according to Article 6 of the Resolution number 1 of the Brazilian DNA: CIMGC – Comissão Interministerial de Mudança Global do Clima. (http://www.mct.gov.br/upd_blob/0023/23433.pdf (accessed on 17/12/2011).	Not applicable	OK	OK
c. Does the letter of approval from DNA of each	VVM	45			OK	OK



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS		Draft Concl	Final Concl
Party involved:						
i. confirm that the Party is a Party of the Kyoto Protocol?	VVM	45.a	Please refer to item (1.b) above.	Not applicable	OK	OK
ii. confirm that participation is voluntary?	VVM	45.b	Please refer to item (1.b) above.	Not applicable	OK	OK
iii. confirm that, in the case of the host Party, the proposed CDM project activity contributes to the sustainable development of the country?	VVM	45.c	Please refer to item (1.b) above.	Not applicable	OK	OK
iv. Refers to the precise proposed CDM project activity title in the PDD being submitted for registration?	VVM	45.d	Please refer to item (1.b) above.	Not applicable	OK	OK
d. Is(are) the letter(s) of approval unconditional with respect to (i) to (iv) above?	VVM	46	Please refer to item (1.b) above.	Not applicable	OK	OK
e. Has(ve) the letter(s) of approval been issued by the respective Party's designated national authority (DNA) and is valid for the CDM project activity under validation?	VVM	47	Please refer to item (1.b) above.	Not applicable	OK	OK
f. Is there doubt with respect to the authenticity of the letter of approval?	VVM	48	Please refer to item (1.b) above.	Not applicable	OK	OK
g. If yes, was verified with the DNA that the letter of approval is authentic?	VVM	48	Please refer to item (1.b) above.	Not applicable	OK	OK
2. Participation			<i>PP1 (Omega Energia Renovável S.A.) PP2 (Zeta Energia S.A.)</i>	<i>PP3 (Ecopart Assessoria em Negócios Empresariais Ltda.)</i>		
a. Have all project participants been listed in a consistent manner in the project documentation?	VVM	51	Yes, project participants are: 1. <i>Omega Energia Renovável</i>	See column to the left	OK	OK



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			<p>S.A. (Private Entity)</p> <p>2. Zeta Energia S.A. (Private Entity).</p> <p>3. Ecopart Assessoria em negócios Empresariais Ltda. (Private Entity).</p>		



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
b. Has the participation of the project participants in the project activity been approved by a Party to the Kyoto Protocol?	VVM	51	Please refer to item (1.b) above.		
c. Are the project participants listed in tabular form in section A.3 of the PDD?	VVM	52	Yes, the project participants are listed in tabular form. Please refer to item (2.a) above.	OK	Ok
d. Is the information in section A.3 consistent with the contact details provided in annex 1 of the PDD?	VVM	52	▪ The information in Section A.3 is consistent with the contact details in Annex 1 of the PDD. ▪	OK	OK
e. Has the participation of each of the project participants been approved by at least one Party involved, either in a letter of approval or in a separate letter specifically to approve participation? (Provide reference of the approval document for each of the project participants)	VVM	52	Please refer to item (1.b) above.	OK	OK
f. Are any entities other than those approved as project participants included in these sections of the PDD?	VVM	52	No. See also item (1.b) above.		OK
g. Has the approval of participation issued from the relevant DNA?	VVM	53	Please refer to item (1.b) above.	OK	OK
h. Is there doubt with respect to (g) above?	VVM	53	Please refer to item (1.b) above.	OK	OK
i. If yes, was verified with the DNA that the approval of participation is valid for the proposed CDM project participant?	VVM	53	Please refer to item (1.b) above.	OK	OK

VALIDATION REPORT



CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
3. Project design document					
a. Is the PDD used as a basis for validation prepared in accordance with the latest template and guidance from the CDM Executive Board available on the UNFCCC CDM website?	VVM	55	<p>The template used for preparing the PDD is the latest template: Version 03.0, EB 25, and Annex 15.</p> <p>See Section 3 below for discussions regarding the concordance of the PDD with the applicable guidance (GUIDELINES FOR COMPLETING THE PROJECT DESIGN DOCUMENT (CDM-PDD) AND THE PROPOSED NEW BASELINE AND MONITORING METHODOLOGIES (CDM-NM), VERSION 07).</p>	OK	OK
b. Is the PDD in accordance with the applicable CDM requirements for completing the PDD?	VVM	56	Please refer to Section 3 below.	OK	OK
c. In CDM-PDD section A.1 are the following provided?	EB 41	Ann 12			
i. Title of project	EB 41	Ann 12	Yes. <i>"Lagoa de Touros Wind Power Plants CDM Project Activity"</i>		OK
ii. Current version number and date of document	EB 41	Ann 12	Yes. Version 01, dated 29/09/2011.		OK
d. In CDM-PDD section A.2 are following provided (max. one page)?	EB 41	Ann 12			
i. A brief description of the project activity covering purpose which includes the scenario existing prior to the start of project, present scenario and baseline scenario	EB 41	Ann 12	<p>The PDD version 01, at the Section A.2, didn't described the scenario existing prior to the start of the project nor the baseline scenario, only the present scenario.</p> <p>As per the PDD,</p>	CAR 01 CL 01	OK



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			<p>“The proposed project activity consists of eight wind power plants comprising 193.8 MW of installed capacity, as follows: Lagoas de Touros 1, 2, 4, 6 and 7 Wind Power Plants (28.8 MW), Lagoa de Touros 3 Wind Power Plant (16.2 MW), Lagoas de Touros 5 Wind Power Plant (17.6 MW) and Lagoas de Touros 8 Wind Power Plant (16 MW).”</p> <p>CAR 01: The PDD version 01, Section A.2., didn't describe the scenario existing prior to the start of the project, present scenario and baseline scenario, as required by the EB 41 Ann 12.</p> <p>CL 01: Provide a copy from:</p> <ul style="list-style-type: none"> - the ANEEL Licenses from the Wind Farms; - the Data Sheet (From Portuguese Ficha de Dados); - the Data Sheet – Location and Collection (From portuguese Memorial Descritivo – Localização eAcervo) - the Anexes VII and VIII provided to EPE (Energetic Research Company) 		



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
ii. Explanation on how the GHG emission reductions are effected	EB 41	Ann 12	Yes. According to the PDD: “This indigenous and cleaner source of electricity will also have an important contribution to environmental sustainability by reducing carbon dioxide emissions that would have occurred otherwise in the absence of the project. The project activity reduces emissions of greenhouse gases (GHG) by avoiding electricity generation from fossil fuel sources, which would be generated (and emitted) in the absence of the project.		OK
iii. The PP's vies on the contribution of project activity to sustainable development	EB 41	Ann 12	Yes. The PP listed the following aspects related to the contribution of the project activity to sustainable development: <ul style="list-style-type: none"> - Reducing air pollutants that are emitted from fossil fuel electricity generation from power plants connected to the Brazilian grid; - Creating job opportunities during the project construction, operation and maintenance, improving capacities related to wind farms in Brazil through advanced technology transferred from developed countries; - Efficiently generating electricity, for which there is a growing demand in the country; - Contributing towards national <i>economic</i> 		OK

VALIDATION REPORT



CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			development, adding an Independent Power Producer, leading to energy diversification and creation of additional renewable energy sources;		



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
iv. Are there any changes/modifications compared to the webhosted PDD?	EB 41	Ann 12	No. There are no changes, compared to the webhosted PDD.		OK
e. In CDM-PDD section A.3 are following provided in the tabular format?	EB 41	Ann 12	Yes. All information is given in a tabular form. See below.		OK
i. List of project participants and parties	EB 41	Ann 12	Yes: Omega Energia Renovável S.A. (Private Entity); Zeta Energia S.A. (Private Entity); Ecopart Assessoria em negócios Empresariais Ltda. (Private Entity);		OK
ii. Identification of Host Party			Brazil		OK
iii. Indication whether the Party wishes to be considered as project participant	EB 41	Ann 12	The Party (Brazil) does not to wish to be considered as project participant.		OK
f. In CDM-PDD section A.4.1 are following provided?	EB 41	Ann 12			
i. Technical description, location, host party(ies) and address as required	EB 41	Ann 12	Host: Brazil Region/State/Province: Touros City/Town/Community: Rio Grande do Norte CAR 02: The PDD V 01, at the section A.4.1. informed that the Region/State/Country is Touros, and the City/Town/Community is Rio Grande do Norte. In Fact Rio Grande do Norte is the State, and Touros is the City.	CAR 02	OK

VALIDATION REPORT



CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
ii. Detailed physical location with unique identification of the project activity (eg. Longitude/latitude) – not to exceed one page	EB 41	Ann 12	<p>According to the PDD, the Geographic Coordinates are;</p> <p>Lagoas de Touros 1:</p> <p>Longitude (West): -35.4260 Latitude (South): -5.3007</p> <p>Lagoas de Touros 2:</p> <p>Longitude (West): -35.4521 Latitude (South): -5.3099</p> <p>Lagoas de Touros 3:</p> <p>Longitude (West): -35.4452 Latitude (South): -5.3148</p> <p>Lagoas de Touros 4:</p> <p>Longitude (West): -35.4184 Latitude (South): -5.3124</p> <p>Lagoas de Touros 5:</p> <p>Longitude (West): -35.4428 Latitude (South): -5.3362</p> <p>Lagoas de Touros 6:</p>	CAR 03 CL 02	OK



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			<p>Longitude (West): -35.4588 Latitude (South): -5.3574</p> <p>Lagoas de Touros 7:</p> <p>Longitude (West): -35.5325 Latitude (South): -5.3304</p> <p>Lagoas de Touros 8:</p> <p>Longitude (West): -35.5342 Latitude (South): -5.3230</p> <p>According to the PDD, the Coordinates are the ones corresponding to the location of the first aerogenerator of each power plant, as described in the Wind Certificate.</p> <p>CL 02: The DOE converted the Wind Certificate coordinates from the first aerogenerator, but the conversion is lightly different (e.g.: Touros I: -35.4260 x -35.4253 and -5.3007 x -5.3003) Inform which conversion is adopted, in order to confirm the Location. (it is necessary too to provide the Data Sheet – Location and Collection asked for in another CL, to confirm this location).</p> <p>CAR 03: The PDD V01, states that the PP is Ecopart Assessoria em Negócios Empresariais Ltda, and the Preliminari Environmental Licenses from Touros 1 and 2 are provided to Ecopart</p>		

VALIDATION REPORT



CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			Investimentos S.A. Clarify the relationship between these two companies.		



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
iii. Are there any changes/modifications compared to the webhosted PDD?	EB 41	Ann 12	No, there are no changes/modifications compared to the webhosted PDD.		OK
g. In CDM-PDD section A.4.2 is the list of categories of project activities provided?	EB 41	Ann 12	Yes: Sectoral Scope: 1 - Energy industries (renewable - / non-renewable sources). Category: Renewable electricity generation for a grid.		OK
h. In CDM-PDD section A.4.3 are following provided?	EB 41	Ann 12			
i. A description of how environmentally safe and sound technology, and know-how, is transferred to the Host Party(ies)	EB 41	Ann 12	<p>CAR 04: The PDD V 01, at the Section A.4.3. didn't included:</p> <ul style="list-style-type: none"> - a description of how environmentally safe and sound technology, and know-how to be used, is transferred to the Host Party, - the scenario existing prior to the start of the implementation of the project activity, and - the baseline scenario, - The emissions sources and the greenhouse gases involved in the project activity, <p>as required by EB 41 Annex 12.</p>	CAR 04 CAR 05	OK



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			CAR 05: The PDD version states that Touros 5 and 8 have an installed capacity of 28.8 MW , in disagree with the respective Environmental Preliminary Licenses, # 2011-043867/TEC/LP-0066 and #2011-044375/TEC/LP-0073, which authorize 17.6 and 16 MW.		



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
ii. Explanation of purpose of project activity with scenario existing prior to the start of project, scope or present activities and the baseline scenario	EB 41	Ann 12	Please refer to CAR above.		OK
iii. List and arrangement of the main manufacturing/production technologies, systems and equipments involved	EB 41	Ann 12	<p>According to the PDD:</p> <p>” The project activity is the construction of eight wind power plants summing 193.8 MW of installed capacity. The technology to be employed by each of the sites considered in this project activity is described below in Table 3.”</p> <p>In this Table 3, the PDD presents, for each of the Wind Farms, the model of the Turbine, and manufacturer, the quantity, the nominal power and the installed capacity, the Rotor Diameter, the generator type, the nominal output, the quantity and frequency.</p> <p>CL 03: Clarify if Touros 4,5,6,7,8 will use Vestas or GE turbines. The PDD informs model Vestas, from GE manufacturer, and vice versa. Include the reference of the GE manual, in Table 3.</p>	CL 03	OK
iv. The emissions sources and GHGs involved	EB 41	Ann 12	Please refer to CAR 04.		OK



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
v. Are there any changes/modifications compared to the webhosted PDD?	EB 41	Ann 12	No. There are no changes compared to the webhosted PDD.		OK
i. In CDM-PDD section A.4.4 is the estimation of emission reductions provided as requested in a tabular format?	EB 41	Ann 12	Yes. There is a tabular format, following the model provided at the EB 41 Annex 12. CAR 06: The PDD Version 01, at the Section A.4.4. informs that the emission reductions expected in 2014 are 97,163 tonnes of CO ₂ e, and in 2021 70,122. This is not correct, as the remaining period of 2014 (from Aug 01 to Dec 31) is smaller as the initial period of 2021 (from Jan 01 to Jul 31).	CAR 06	OK
j. In CDM-PDD section A.4.5 is Information regarding Public funding provided?	EB 41	Ann 12	Yes. It is informed: "This project does not receive any public funding and it is not a diversion of ODA."		OK
k. In CDM-PDD section B.1 are following provided?	EB 41	Ann 12			
i. The approved methodology and version number	EB 41	Ann 12	Approved methodology: "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" (Version 12.1.0).		OK
ii. Any methodologies or tools which the above approved methodology draws upon and their version number	EB 41	Ann 12	The PDD refers to all tools referred in the methodology: <ul style="list-style-type: none"> - Tool to calculate the emission factor for an electricity system (version 2.2.0); - Tool for the demonstration and assessment of additionality (version 5.2); - Tool to calculate project or leakage CO₂ 	CL 04	OK



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			<p>emissions from fossil fuel combustion (version 2);</p> <ul style="list-style-type: none"> - Combined tool to identify the baseline scenario and demonstrate additionality (version 3.0.1). <p>The PDD reports that “The Combined tool to identify the baseline scenario and demonstrate additionality and the Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion are not applicable to the project activity, and therefore are not used.”</p> <p>CL 04: The PP are requested to update to the latest version available, the following documents:</p> <ul style="list-style-type: none"> - Tool to calculate the emission factor for an electricity system; - Methodology ACM0002; - Tool for the demonstration and assessment of additionality. 		



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
I. In CDM-PDD section B.2 are following provided?	EB 41	Ann 12			
i. Justification of the choice of methodology that the project activity meets each of the applicability conditions	EB 41	Ann 12	<p>The PDD Version 01 describes all the applicability conditions of the “Consolidated baseline methodology for grid-connected electricity generation from renewable sources”, and how the project meets each of them:</p> <p>“According to this methodology, it is applicable to grid-connected renewable power generation project activities that (a) install a new power plant at a site where no renewable power plant was operated prior to the implementation of the project activity (greenfield plant); (b) involve a capacity addition; (c) involve a retrofit of (an) existing plant(s); or (d) involve a replacement of (an) existing plant(s).</p> <p>The proposed project activity comprises eight greenfield plants corresponding to option a).</p> <p>The methodology also provides the following conditions:</p> <p><i>The project activity is the installation, capacity addition, retrofit or replacement of a power plant/unit of one of the following types: hydro power plant/unit (either with a run-of-river reservoir or an accumulation reservoir), wind power plant/unit, geothermal power plant/unit,</i></p>		OK



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			<p><i>solar power plant/unit, wave power plant/unit or tidal power plant/unit;</i></p> <p>The proposed project activity is the installation of eight new wind power plants.</p> <p><i>In the case of capacity additions, retrofits or replacements (except for wind, solar, wave or tidal power capacity addition projects which use Option 2: on page 10 to calculate the parameter EGPJ,y): the existing plant started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity expansion or retrofit of the plant has been undertaken between the start of this minimum historical reference period and the implementation of the project activity;</i></p> <p>Not applicable. The proposed project activity does not correspond to a capacity addition, retrofit or replacement.</p> <p><i>In case of hydro power plants, one of the following conditions must apply:</i></p> <ul style="list-style-type: none"> <i>o The project activity is implemented in an existing reservoir, with no change in the volume of reservoir; or</i> <i>o The project activity is implemented in an existing</i> 		



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			<p><i>reservoir, where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the Project Emissions section, is greater than 4 W/m²; or</i></p> <p><i>o The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the Project Emissions section, is greater than 4 W/m².</i></p> <p>Not applicable. The proposed project activity does not correspond to a hydropower plant.</p>		



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
ii. Documentations with references that had been used. This can be provided in Annex 3 instead	EB 41	Ann 12	<p>Documentation used by the DOE to validate that the project meets the applicability conditions of the ACM0002 V 12.1.0:</p> <ul style="list-style-type: none"> - Main Office <u>site visit</u>, and interviews with the PPs, held on December 06th and 07th, 2011. - Preliminary <u>Environmental Licences</u>: - Touro 1: # 2010-037817/TEC/LP-0122 - Touro 2: # 2010-037815/TEC/LP-0120 - Touro 3: # 2011-043866/TEC/LP-0065 - Touro 4: # 2011-043868/TEC/LP-0067 - Touro 5: # 2011-043867/TEC/LP-0066 - Touro 6: # 2011-043869/TEC/LP-0068 - Touro 7: # 2011-044376/TEC/LP-0074 - Touro 8: # 2011-044375/TEC/LP-0073 - <u>Wind Study</u> reports: - Touro 1: Report # 2011 C&S – CPE – 558/11 - Touro 2: Report # 2011 C&S – CPE – 559/11 - Touro 3: Report # 2011 C&S – CPE – 560/11 - Touro 4: Report # 2011 C&S – CPE – 594/11 - Touro 5: Report # 2011 C&S – CPE – 		OK



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			595/11 - Touro 6: Report # 2011 C&S – CPE – 627/11 - Touro 7: Report # 2011 C&S – CPE – 629/11 - Touro 8: Report # 2011 C&S – CPE – 630/11		



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
m. In CDM-PDD section B.3 are following provided?	EB 41	Ann 12			
i. Description of all sources and gases included in the project boundary in the table	EB 41	Ann 12	Yes. The boundary is correct described, following the ACM0002, V 12.1.0, and is <i>"the spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system that the CDM project power plant is connected to."</i> The electricity system is correct described, as being a single grid, according to the National DNA definition, from the DNA Resolution #8, dated May 26 th , 2008. The gas included in this boundary is CO2.		OK
ii. A flow diagram of the project boundary physically delineating the project activity	EB 41	Ann 12	Yes.		OK
iii. The flow diagram with all equipments, systems and flows of mass and energy etc	EB 41	Ann 12	Yes, it is a simplified flow.		OK
n. In CDM-PDD section B.4 are following provided?	EB 41	Ann 12			
i. Explanation how the most plausible baseline scenario is identified in accordance with the selected baseline methodology	EB 41	Ann 12	According to the methodology ACM0002, if the project activity is the installation of a new grid-connected renewable power plant/unit (the case of this project activity), 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)	CAR 07	OK



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			<p>calculations described in the Tool to calculate the emission factor for an electricity system. This is correct described in the PDD V01.</p> <p>However:</p> <p>CAR 07: The PDD Version 01, at the Section B.4., states that the “project activity is the installation of a new connected renewable power plant/unit”. In fact, the project activity comprises 8 (eight) power plants.</p>		



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
ii. Justification of key assumptions and rationales	EB 41	Ann 12	The baseline is defined in the methodology ACM0002, and is not necessary present none assumption or rationale.		OK
iii. Transparent illustration of all data used to determine the baseline scenario (variables, parameters, data sources, etc.)	EB 41	Ann 12	The baseline is defined in the methodology ACM0002, and is not necessary present none assumption or rationale.		OK
iv. A transparent and detailed description of the identified baseline scenario, including a description of the technology that would be employed and/or the activities that would take place in the absence of the proposed project activity	EB 41	Ann 12	Electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in the Tool to calculate the emission factor for an electricity system. This is correct described in the PDD V01.		OK
v. Are there any changes/modifications compared to the webhosted PDD?	EB 41	Ann 12	No, there are no changes compared to the webhosted PDD.		OK
o. In CDM-PDD section B.5 are following provided?	EB 41	Ann 12			
i. Explanation of how and why this project activity is additional and therefore not the baseline scenario in accordance with the selected baseline methodology	EB 41	Ann 12	<p>Yes. The PDD followed the Tool for the demonstration and assessment of additionality to demonstrate that the project activity is not a baseline scenario.</p> <p>CL 05: Clarify why the PDD Version 1.0, at the Section B.5., in the identification of alternatives, didn't included other types (e.g.: hydro, biomass, fossil fuel) of power plant with a similar capacity?</p> <p>CL 06: In the PDD Version 1.0, Table 6, there are future events, so informed with a “*”. This is</p>	CAR 08 CAR 09 CAR 10 CL 05 CL 06	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			<p>missing in the expected date of Construction Permit Issuance.</p> <p>CL 07 : Provide a copy from the document:</p> <ul style="list-style-type: none"> - RAS – Environmental Simplified Study <p>CAR 08: The PDD Version 1.0, at the Section B.5. refers to the Guidelines in the demonstration and assessment of prior consideration of the CDM, EB 49,Annex 22. This Guidelines has a updated version</p> <p>CAR 09: The PDD Version 1.0, at the Section B.5. didn't used the Version 06.0.0. of the <i>Tool for the demonstration and assessment of additionality</i>.</p> <p>CAR 10: The PDD V01, at the Section B.5. at pages 15 and 24 has not the correct reference to the Tables ("Error! Reference not found. – In Portuguese: Erro! Fonte de referência não encontrada.)</p>	CL 07	



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
ii. Justification of key assumptions and rationales	EB 41	Ann 12	Yes.		OK
iii. Transparent illustration of all data used to determine the baseline scenario (variables, parameters, data sources etc)	EB 41	Ann 12	Yes.		OK
iv. Evidence that the incentive from the CDM was seriously considered in the decision to proceed with the project activity, if the starting date of the project activity is before the date of validation	EB 41	Ann 12	The Starting date of the project activity is after the date of the validation.		OK
p. In CDM-PDD section B.6.1 are following provided?	EB 41	Ann 12			
i. Explanation as to how the procedures, in the approved methodology to calculate project emissions, baseline emissions, leakage emissions and emission reductions are applied to the proposed project activity	EB 41	Ann 12	<p>Yes. The PDD describes the procedures to calculation of:</p> <p>- <i>Project Emissions:</i></p> <p>According to ACM0002, for most renewable power generation project activities, $PE_y = 0$. However, some project activities may involve project emissions that can be significant. These emissions shall be accounted for as project emissions by using the following equation:</p> $PE_y = PE_{FF,y} + PE_{GP,y} + PE_{HP,y}$ <p>And it is described the emissions, as follows:</p> <p><i>Emissions from fossil fuel combustion ($PE_{FF,y}$)</i></p>		OK



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			<p>According to the methodology, only geothermal and solar thermal projects have to account emissions from the consumption of fossil fuels. Therefore, in the case of the proposed project activity, $PE_{FF,y} = 0$ tCO₂/year.</p> <p><i>Emissions from the operation of geothermal power plants due to the release of non-condensable gases ($PE_{GP,y}$)</i></p> <p>Considering that the proposed project activity consists on the construction of a wind power plant, there are no emissions related to non-condensable gases from the operation of geothermal power plants. Therefore, $PE_{GP,y} = 0$ tCO₂/year.</p> <p><i>Emissions from water reservoirs of hydro power plants ($PE_{HP,y}$)</i></p> <p>New hydro electric power projects resulting in new reservoirs, shall account for CH₄ and CO₂ emissions from reservoirs. Considering that the proposed project activity consists of the construction of a wind power plant, there are no emissions from water reservoirs. Therefore, $PE_{HP,y} = 0$ tCO₂/year.</p> <p>- <i>Baseline Emissions:</i></p>		



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			<p>Baseline emission are calculated as follows:</p> $BE_y = EG_{PJ,y} \times EF_{gridCM,y}$ <p>It is stated that, for Greenfield projects as it is the case of the proposed project activity $EG_{PJ,y}$ is determined as follows.</p> $EG_{PJ,y} = EG_{facility,y}$ <p>$EG_{facility,y}$ = Quantity of net electricity generation supplied by the project plant/unit to the grid in year y (MWh/yr).</p> <p>- <i>Leakage emissions:</i></p> <p>According to the methodology, “no leakage emissions are considered. The main emissions potentially giving rise to leakage in the context of electric sector projects are emissions arising due to activities such as power plant construction and upstream emissions from fossil fuel use (e.g. extraction, processing, and transport). These emissions sources are neglected”. Therefore, leakage emissions related to the implementation of the proposed project activity are 0 tCO₂.</p> <p>- <i>Emission reductions:</i></p>		



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			<p>According to ACM0002 emission reductions by the proposed project activity are calculated as follows.</p> <p>$ER_y = BE_y - PE_y$.</p>		



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
ii. Equations used in calculating emission reductions	EB 41	Ann 12	Yes. Please refer to the question above.		OK
iii. Explanation and justification for all relevant methodological choices, including different scenarios or cases, options and default values	EB 41	Ann 12	Yes.		OK
q. In CDM-PDD section B.6.2 are following provided?	EB 41	Ann 12			
i. A compilation of information on the data and parameters that are not monitored throughout the crediting period but that are determined only once and thus remains fixed throughout the crediting period AND that are available when validation is undertaken	EB 41	Ann 12	Yes. The PP decided to calculate the grid emission factor ex ante, and thus, the related parameters are stated in this Section.		OK
ii. The actual value period	EB 41	Ann 12	Yes.		OK
iii. Explanation and justification for the choice of the source of data	EB 41	Ann 12	Yes.		OK
iv. Clear and transparent references or additional documentation in Annex 3	EB 41	Ann 12	No. This Section is intentionally left in blank.		OK
v. Where values have been measured, a description of the measurement methods and procedures (e.g. which standards have been used), indicated the responsible person/entity having undertaken the measurement, the date of measurement(s) and the measurement results	EB 41	Ann 12	The measured value is the net electricity generated by the power plants connected to the grid (to the EF calculation), and it is informed that Data from the Electric System National Operator (Official Sources) was used.		OK
r. In CDM-PDD section B.6.3 are following provided?	EB 41	Ann 12			
i. A transparent <i>ex ante</i> calculation of project	EB	Ann	Yes, this Section presents a transparent ex ante		



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
emissions, baseline emissions (or, where applicable, direct calculation of emission reductions) and leakage emissions expected during the crediting period, applying all relevant equations provided in the approved methodology	41	12	calculation. The EF calculation is supported by a excel spreadsheet. CAR 11: The PDD V 01, at the Section B.6.3., adopted the EF grid, BM, $y = 0.1164 \text{ tCO}_2\text{e/MWh}$, in disagree with the presented in the support spreadsheet.	CAR 11	OK
ii. Documentation how each equation is applied, in a manner that enables the reader to reproduce the calculation	EB 41	Ann 12	Yes.		OK
iii. Additional background information and or data in Annex 3, including relevant electronic files (i.e. spreadsheets)	EB 41	Ann 12	The PP included background information, in the spreadsheet "BR EF ex ante 2008 to 2010-def EF tool 2.2-2011.10.06"		OK
s. In CDM-PDD section B.6.4 are the results of the <i>ex ante</i> estimation of emission reductions for all years of the crediting period, provided in a tabular format?	EB 41	Ann 12	Yes. The result is provided in a tabular form, following the related form.		OK
t. In CDM-PDD section B.7.1 are following provided?	EB 41	Ann 12			
i. Specific information on how the data and parameters that need to be monitored would actually be collected during monitoring for the project activity	EB 41	Ann 12	Yes. The only monitored parameter is the $EG_{\text{facility},y}$ for every Wind Power Plant.		OK
ii. For each parameter the following below information, using the table provided:	EB 41	Ann 12			
a. The source(s) of data that will be actually used for the proposed project activity (e.g.	EB 41	Ann 12	Yes. "Documented evidence from the local power utility		OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
which exact national statistics). Where several sources may be used, explain and justify which data sources should be preferred.			or CCEE – Câmara de Comercialização de Energia Elétrica, a Brazilian governmental entity which monitors the quantity of electricity in the national interconnected grid.”		
b. Where data or parameters are supposed to be measured, specify the measurement methods and procedures, including a specification which accepted industry standards or national or international standards will be applied, which measurement equipment is used, how the measurement is undertaken, which calibration procedures are applied, what is the accuracy of the measurement method, who is the responsible person/entity that should undertake the measurements and what is the measurement interval; (i) A description of the QA/QC procedures (if any) that should be applied; (ii) Where relevant: any further comment. Provide any relevant further background documentation in Annex 4.	EB 41	Ann 12	“The quantity of electricity delivered to the grid by the project will be quantified through the energy meter located at the substation.” “Energy metering QA/QC procedures are explained in section B.7.2 (the equipments used have, by legal requirements, an extremely low level of uncertainty). In addition, there will be another meter at the substation (backup) to ensure that electricity will be properly measured.”		OK
u. In CDM-PDD section B.7.2 are following provided?	EB 41	Ann 12			
i. A detailed description of the monitoring plan	EB 41	Ann 12	Yes. The Section describes the details of the monitoring plan, which will follow the procedures established by the Electric System national Operator.	CL 08	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			CL 08: Include in the PDD the information that the data will be kept at least for 2 years after the end of the latest crediting period.		



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
ii. The operational and management structure that the project operator will implement in order to monitor emission reductions and any leakage effects generated by the project activity	EB 41	Ann 12	Yes. The company that owns the wind farms will be the responsible for data collection and archiving as well as the calibration and maintenance of the monitoring equipment, for dealing with possible monitoring data adjustments and uncertainties, review of reported results/data, internal audits of GHG project compliance with operational requirements and corrective actions. Also, it is responsible for the project management, as well as for the organizing and training of the staff in the appropriate monitoring, measurement and reporting techniques.		OK
iii. The responsibilities for and institutional arrangements for data collection and archiving	EB 41	Ann 12	Yes.		OK
iv. Indication that the monitoring plan reflect good monitoring practice appropriate to the type of project activity	EB 41	Ann 12	The Monitoring Plan reflects good monitoring practice, appropriate to this type of project activity.		OK
v. Relevant further background information in Annex 4	EB 41	Ann 12	Annex 4 is intentionally left in blank.		OK
v. In CDM-PDD section B.8 are following provided?	EB 41	Ann 12			
i. Date of completion of the application of the methodology to the project activity study in DD/MM/YYYY	EB 41	Ann 12	Yes. 25/07/2011		OK
ii. Contact information of the person(s)/entity(ies) responsible for the application of the baseline and monitoring methodology to the project activity	EB 41	Ann 12	Yes: Name of person/entity determining the baseline: The following information is provided in the PDD		OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			<p>V01:</p> <p>Company: Ecopart Assessoria em Negócios Empresariais Ltda.</p> <p>Contact person: Ana Paula Veiga and Bruna Luíza Marigheto</p> <p>Email: ana.veiga@eqao.com.br and bruna.marigheto@eqao.com.br</p> <p>Address: Rua Padre João Manoel, 222</p> <p>Zip code + city: 01411-000 São Paulo</p> <p>Country: Brazil</p> <p>Telephone number: +55 (11) 3063-9068</p> <p>Fax number: +55 (11) 3063-9069</p>		



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
iii. Indication if the person/entity is also a project participant listed in Annex 1	EB 41	Ann 12	CAR 12: The PDD Version 01, at the Section B.8. didn't indicated if the person/entity is also a project participant listed in Annex 1, as required by the EB 41 Annex 12.	CAR 12	OK
w. In CDM-PDD section C.1.1 are following provided?	EB 41	Ann 12			
i. The starting date of a CDM project activity, which is the earliest of the date(s) on which the implementation or construction or real action of a project activity begins/has begun (EB33, Para 76/CDM Glossary of terms/EB41, Para 67)	EB 41	Ann 12	<p>Yes. 01/09/2012. According to the PDD:</p> <p>"Considering the above information (*), in order to determine project activity's starting date the forecasted date for the following events were considered: construction permit issuance, financing agreement, Power Purchase Agreement, major equipment orders and start of construction. None of these events have yet taken place. However they are forecasted to happen as follows:"</p> <p>(*) DOE Comment: The "above information" refers to the CDM Glossary of terms definition on Starting Date.</p> <p>The PDD present a Table with the events, and the first one wich represent an expenditure commitment is the Major Equipment Orders, represented by the signature of the <u>Engineering, Procurement and Construction (EPC) Contract</u>, expected to be signed in 01/09/2012.</p>		OK

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
ii. A description of how this start date has been determined, and a description of the evidence available to support this start date	EB 41	Ann 12	Yes. Please refer to the question above.		OK
iii. If this starting date is earlier than the date of publication of the CDM-PDD for global stakeholder consultation by a DOE, description in Section B.5 contain a of how the benefits of the CDM were seriously considered prior to the starting date (EB41, Para 68).	EB 41	Ann 12	The starting date (September 01 st , 2012) is earlier to the publication of the CDM-PDD for GSC (26 Oct 11 – 24 Nov 11).		OK
x. In CDM-PDD section C.1.2 is the expected operational lifetime of the project activity in years and months provided?	EB 41	Ann 12	Yes. CL 09: The PDD Version 01, at the Section C.1.2. states that the operational lifetime of the project activity is 25y – 0m. Give the reference to this information.	CL 09	OK
y. In CDM-PDD section C.2 is it stated whether the project activity will use a renewable or a fixed crediting period and is C.2.1 or C.2.2 completed accordingly?	EB 41	Ann 12	CAR 13: The PDD Version 1.0, at the Section C.2., didn't inform whether the project activity will use a renewable or a fixed crediting period, nor completed accordingly the Sections C.2.1. or C.2.2.	CAR13	OK
z. In CDM-PDD section C.2.1 is it indicated that each crediting period shall be at most 7 years and may be renewed at most two times, provided that, for each renewal, a designated operational entity determines and informs the Executive Board that the original project baseline is still valid or has been updated taking account of new data where applicable?	EB 41	Ann 12	CAR 14: The PDD Version 1.0, at the Section C.2.1., didn't indicated hat each crediting period shall be at most 7 years and may be renewed at most two times.	CAR 14	OK
aa. In CDM-PDD section C.2.1.1 are dates in the following format: (DD/MM/YYYY) provided?	EB 41	Ann 12	Yes. 01/08/2014 The PDD completes this information with the		OK

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			stating “or at the date of registration whichever occurs later.”		



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
bb. In CDM-PDD section C.2.1.2 is the length of the first crediting period in years and months provided?	EB 41	Ann 12	Yes. 7y – 0m		OK
cc. In CDM-PDD section C.2.2 is the fixed crediting period at most ten (10) years provided?	EB 41	Ann 12	Not applicable.		OK
dd. In CDM-PDD section C.2.2.1 are the dates provided in the following format: (DD/MM/YYYY)?	EB 41	Ann 12	Not applicable.		OK
ee. In CDM-PDD section C.2.2.2 is the length of the crediting period in years and months Provided?	EB 41	Ann 12	Not applicable.		OK
ff. In CDM-PDD section D.2 are the conclusions and all references to support documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the Host Party, if environmental impacts are considered significant by the project participants or the Host, provided?	EB 41	Ann 12	<p>CL 10: Clarify the national laws related to environmental impacts study, and include in the PDD a brief comment.</p> <p>CAR 15: The PDD version 01 states that the Preliminary Environmental License from Touros II is # 2011-037815/TEC/LP-0020. The correct ones is # <u>2010-03785/TEC/LP-0120</u>.</p>	CAR 15 CL 10	OK
gg. In CDM-PDD section E.1 are the following provided?	EB 41	Ann 12			
i. The process by which comments by local stakeholders have been invited and compiled. An invitation for comments by local stakeholders shall be made in an open and transparent manner, in a way that facilitates comments to be received from local stakeholders and allows for a reasonable time for comments to be submitted.	EB 41	Ann 12	The Brazilian DNA published the DNA Resolution # 7, defining the stakeholders to be invited to send comments. The PP send invitations to all of them.		OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
ii. The project activity is described in a manner, which allows the local stakeholders to understand the project activity, taking into account confidentiality provisions of the CDM modalities and procedures.	EB 41	Ann 12	CL 11: Provide a copy from the letter sent to the Stakeholders.		OK
iii. The local stakeholder process has been completed before submitting the proposed project activity to the DOE for validation.	EB 41	Ann 12	Yes.		OK
hh. In CDM-PDD section E.2 are following provided?	EB 41	Ann 12			
i. Identification of local stakeholders that have made comments	EB 41	Ann 12	According to the PP, no comments have been received.		OK
ii. A summary of this comments.	EB 41	Ann 12	Not applicable.		OK
ii. In CDM-PDD section E.3 is the explanation of how due account have been taken of comments received from local stakeholders provided?	EB 41	Ann 12	Not applicable.		OK
jj. In CDM-PDD Annex 1 are the following provided?	EB 41	Ann 12	Yes.		OK
i. Contact information of project participants	EB 41	Ann 12	Yes.		OK
ii. For each organisation listed in section A.3 the following mandatory fields: Organization, Name of contact person, Street, City, Postfix/ZIP, Country, Telephone and Fax or e-mail	EB 41	Ann 12	Yes.		OK
kk. In CDM-PDD Annex 2 is information from Parties included in Annex I on sources of public funding for the project activity which shall provide an affirmation that such funding does not result in a	EB 41	Ann 12	It is informed that no public funding is involved in this project.		OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
diversion of official development assistance and is separate from and is not counted towards the financial obligations of those Parties provided?					
II. In CDM-PDD Annex 3 is the background information used in the application of the baseline methodology provided?	EB 41	Ann 12	No. It is intentionally left in blank.		OK
mm. In CDM-PDD Annex 4 is the background information used in the application of the monitoring methodology provided?	EB 41	Ann 12	No. It is intentionally left in blank.		OK
4. Project description					
a. Does the PDD contain a clear description of the project activity that provides the reader with a clear understanding of the precise nature of the project activity and the technical aspects of its implementation?	VVM	58	Yes. Yes, in Section A.2 and in Section A.4.3, the PDD provides a clear description of the project activity and the technical aspects of its implementation.		OK
b. Is the description of the proposed CDM project activity as contained in the PDD:	VVM	59			
i. sufficiently covering all relevant elements?	VVM	59	Yes. To detailed discussion, please refer to Section 3.		OK
ii. accurate?	VVM	59	Yes. To detailed discussion, please refer to Section 3.		OK
iii. providing the reader with a clear understanding of the nature of the proposed CDM project activity?	VVM	59	Yes. To detailed discussion, please refer to Section 3.		OK
iv. Are there any changes/modifications compared to the webhosted PDD?	VVM	59	No, there are no changes compared to the webhosted PDD.		OK
c. Is the proposed CDM project activity in existing facilities or or utilizing existing equipments?	VVM	60	No, the proposed project activity is a Greenfield project activity, consisting in eight Wind Plants		OK

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			with 193.8 MW of installed capacity.		



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
d. Is the CDM project activity one of the following types:	VVM	60			
i. Large scale?	VVM	60	Yes. It is a large scale project, following the methodology ACM0002.		OK
ii. Non-bundled small scale projects with emission reductions exceeding 15,000 tonnes per year?	VVM	60	No. The project is a large scale project activity.		OK
iii. Bundled small scale projects, each with emission reductions not exceeding 15,000 tonnes?	VVM	60	No. The project is a large scale project activity.		OK
e. If yes to (c) and (d) above, was a physical site inspection conducted to confirm that the description in the PDD reflects the proposed CDM project activity, unless other means are specified in the methodology?	VVM	60	No. The project is a large scale project activity.		OK
f. If yes to (d.iii) above, was the number of physical site visits base on sampling?	VVM	60	No. The project is a large scale project activity.		OK
g. If yes is the sampling size appropriately justified through statistical analysis?	VVM	60	No. The project is a large scale project activity.		OK
h. For other individual proposed small scale CDM project activities with emission reductions not exceeding 15,000 tonnes per year, was a physical site inspection conducted?	VVM	61	No. The project is a large scale project activity.		OK
i. For all other proposed CDM project activities not referred to in paragraphs 59 – 61, was a physical site inspection conducted?	VVM	62	Yes. A site visit was conducted on December, 06 th and 07 th , 2011. As in this date, there was not construction in the sites, and the site visit was conducted in the Main Office of PP.		OK
j. If no, was it appropriately justified?	VVM	62	Not Applicable.		OK



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k. Does the proposed CDM project activity involve the alteration of an existing installation or process?	VVM	63	No, the proposed project activity is a Greenfield project activity, consisting in eight Wind Plants with 198.3 MW of installed capacity.		OK
l. If yes, does the project description clearly state the differences resulting from the project activity compared to the pre-project situation?	VVM	63	No, the proposed project activity is a Greenfield project activity, consisting in eight Wind Plants with 198.3 MW of installed capacity.		OK
5. Baseline and monitoring methodology					
a. General requirement					
a. Do the the baseline and monitoring methodologies selected by the project participants comply with the methodologies previously approved by the CDM Executive Board?	VVM	65	Yes. The project adopted the methodology ACM0002 V 12.1.0 - Consolidated baseline methodology for grid-connected electricity generation from renewable sources.		OK
b. Is the selected methodology applicable to the project activity?	VVM	66	Refer to (5.b.a) below	-	-
c. Had the PP correctly applied the selected methodology?	VVM	66	Refer to (5.b.d) below	-	-
d. Had the selected methodology been correctly applied with respect to project boundary?	VVM	67	Refer to (5.c) below	-	-
e. Had the selected methodology been correctly applied with respect to baseline identification?	VVM	67	Refer to (5.d) below	-	-
f. Had the selected methodology been correctly applied with respect to Algorithms and/or formulae used to determine emission reductions?	VVM	67	Refer to (5.e) below	-	-
g. Had the selected methodology been correctly applied with respect to additionality?	VVM	67	Please refer to item (6) below: Additionality of a project activity		OK



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i. Has the additionality of the project activity been demonstrated and assessed using the latest version of the “Tool for the demonstration and assessment of additionality” agreed by the Board, which is available on the UNFCCC website?	ACM	0002 v.11	Yes.		OK
h. Had the selected methodology been correctly applied with respect to monitoring methodology?	VVM	67	Refer to (7.g), (7.h), (7.i), (7.j) and (7.k) below		OK
<i>b. Applicability of the selected methodology to the project activity</i>					
a. Is the selected baseline and monitoring methodology, previously approved by the CDM Executive Board, applicable to the project activity? Is the used version valid?	VVM	68	Yes. The selected baseline and monitoring methodology is applicable to the project activity. However, the PP are using methodology ACM0002 Version 12.1.0. As there is a later version available, the PP are being requested to update it. The DOE issued a specific request for it.		OK
i. This methodology is applicable to grid-connected renewable power generation project activities that (a) install a new power plant at a site where no renewable power plant was operated prior to the implementation of the project activity (greenfield plants); (b) involve a capacity addition; (c) involve a retrofit of (an) existing plant(s); or (d) involve a replacement of (an) existing plant(s).	ACM	0002	Yes. The project activity is a new power plant at a site where no renewable power plant was operated prior to the implementation of the project activity (greenfield plant).		OK
b. Has the DOE applied specific guidance provided by the CDM Executive Board in respect to the	VVM	69	Yes, the following guidance were applied:		OK



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applicable approved methodology?			<p>Methguide04: Clarifications on how, through the methodology, it may be demonstrated that a project is additional and therefore not the baseline scenario.</p> <p>Methguide 31: guidance related to use of additionality tool</p> <p>Methguide 35: Guidelines for the reporting and validation of plant load factors.</p> <p>Regguide03: Guidelines on the assessment of investment analysis.</p> <p>Regguide04: Guidelines on the demonstration and assessment of prior consideration of the CDM.</p>		
c. Is the methodology correctly quoted?	VVM	70	<p>Yes.</p> <p>"Consolidated baseline methodology for grid connected electricity generation from renewable sources" version 12.1.0.</p>		OK
d. Are the applicability conditions of the methodology met?	VVM	71			
i. The project activity is the installation, capacity addition, retrofit or replacement of a power plant/unit of one of the following types: hydro	ACM	0002	Yes, the proposed project activity is a Greenfield project activity, consisting in eight Wind Plants with 198.3 MW of installed capacity.		OK



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power plant/unit (either with a run-of-river reservoir or an accumulation reservoir), wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit					
ii. In the case of capacity additions, retrofits or replacements (except for wind, solar, wave or tidal power capacity addition projects which use Option 2: on page 10 to calculate the parameter $EG_{PJ,y}$): the existing plant started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity expansion or retrofit of the plant has been undertaken between the start of this minimum historical reference period and the implementation of the project activity.	ACM	0002	This is not the case of this project activity.		OK
iii. In case of hydro power plants, one of the following conditions must apply: - The project activity is implemented in an existing reservoir, with no change in the volume of reservoir; or - The project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the Project Emissions section, is greater than	ACM	0002	This is not the case of this project activity.		OK OK



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4 W/m ² ; or - The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the Project Emissions section, is greater than 4 W/m ² .					
iv. The methodology is not applicable to the following conditions. Please confirm - Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity - Biomass fired power plants; - Hydro power plants that result in new reservoirs or in the increase in existing reservoirs where the power density of the power plant is less than 4 W/m ² .	ACM	0002	This is not the case of this project activity.		OK
v. In the case of retrofits, replacements, or capacity additions, this methodology is only applicable if the most plausible baseline scenario, as a result of the identification of baseline scenario, is "the continuation of the current situation, i.e. to use the power generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance".	ACM	0002	This is not the case of this project activity.		OK
e. Is the project activity expected to result in emissions other than those allowed by the methodology?	VVM	71	No, the project activity doesn't expect to result in emissions other than those allowed by the methodology.		OK
f. Is the choice of the methodology justified?	VVM	71	Yes.		OK



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g. Have the project participants shown that the project activity meets each of the applicability conditions or the approved methodology?	VVM	71	Refer to (5.b.d) above	-	-
h. Have the project participants shown that the project activity meets each of the applicability conditions of any tool or other methodology component referred to the methodology?	VVM	71	Yes. Please refer to Section 3 above.		OK
i. Are each of the applicability conditions of the "Tool to calculate the emission factor for an electricity system" met?	EB 50	Ann 40	Yes.		OK
ii. Are each of the applicability conditions of the "Tool for the demonstration and assessment of additionality" met?	EB 39	Ann 10	Yes.		OK
iii. Are each of the applicability conditions of the "Combined tool to identify the baseline scenario and demonstrate additionality" met?	EB 28	Ann 14	This Tool was not applied to this project activity.		OK
iv. Are each of the applicability conditions of the "Tool to calculate project or leakage CO ₂ emissions from fossil fuel combustion" met?	EB 41	Ann 11	This Tool was not applied to this project activity.		OK
i. Is the DOE, based on local and sectoral knowledge, aware that comparable information is available from sources other than that used in the PDD?	VVM	71	Yes, see below:		OK
j. If yes, was the PDD cross checked against the other sources to confirm that the project activity meets the applicability conditions of the methodology? (provide the reference to these choices)	VVM	71	Yes, the PDD was cross checked to other sources as: - Environmental Licenses; - DNA Resolution # 8		OK
k. Can a determination regarding the applicability of	VVM	72	Yes. The methodology is applicable to this project		OK



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the selected methodology to the proposed CDM project activity be made?			activity.		
l. If no, clarification of the methodology was requested, in accordance with the guidance provided by the CDM Executive Board?	VVM	72	Not applicable.		OK
m. If answer to (5.b.d) above is “no”, revision or deviation from the methodology was requested, in accordance with the guidance provided by the CDM Executive Board?	VVM	73	Not applicable.		OK
n. If yes to (5.b.l) and (5.b.m) above, a request for registration was submitted before the CDM Executive Board has approved the proposed deviation or revision?	VVM	74	Not applicable.		OK
c. Project boundary					
a. Does the PDD correctly describe the project boundary, including the physical delineation of the proposed CDM project activity included within the project boundary for the purpose of calculating project and baseline emissions for the proposed CDM project activity?	VVM	78	See Section 3 above for a discussion regarding project boundary.		OK
i. Does the extent of the project boundary, as described in the PDD, includes the project power plant and all power plants connected physically to the electricity system that the CDM project power plant is connected to?	ACM	0002	Yes. According to the PDD: “According to ACM0002, the spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system that the CDM project power plant is connected to.”		OK
ii. Are the greenhouse gases and emission sources that are included in or excluded from the project boundary shown in a table format as	ACM	0002	Yes.		OK



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per applicable methodology?					
b. Is the delineation in the PDD of the project boundary correct and include identification of all locations, processes and equipment including secondary equipment and associated processes such as logistics etc.?	VVM	79	In case of this project, it is included the Wind farms, the substation, and the National Grid.		OK
c. Does the delineation in the PDD of the project boundary meet the requirements of the selected baseline?	VVM	79	Yes.		OK
d. Have changes been made to the project boundary in comparison to the webhosted PDD. If yes please comment on the reason for the changes.	VVM	79	No. There are no changes in comparison with the webhosted PDD.		OK
e. Have all sources and GHGs required by the methodology been included within the project boundary?	VVM	79	Yes. The main source is the "CO2 emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity."		OK
f. Does the methodology allow project participant to choose whether a source or gas is to be included within the project boundary	VVM	79	No, the methodology prescribes which gases are to be included in the project boundary.		OK
g. If yes, have the project participants justified that choice?	VVM	79	Not applicable.		OK
h. If yes, is the justification provided reasonable? (provide reference to the supporting documented evidence provided by the project participants)	VVM	79	Not applicable.		OK
d. Baseline identification					
a. Does the PDD identify the baseline for the proposed CDM project activity, defined as the scenario that reasonably represents the	VVM	81	Yes. According to the PDD, the baseline is: <i>"Electricity delivered to the grid by the project activity would have otherwise been generated by</i>		OK



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anthropogenic emissions by sources of GHGs that would occur in the absence of the proposed CDM project activity?			<i>the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations as described in the "Tool to calculate the emission factor for an electricity system".</i>		
b. Has any procedure contained in the methodology to identify the most reasonable baseline scenario, been correctly applied?	VVM	82	No procedure is to be applied to this kind of project activity, according to the methodology.		OK
i. If the project activity is the install a new grid-connected renewable power plant/unit (greenfield plant), is the baseline scenario identified appropriately in accordance with the ACM0002 ver.11?	ACM	0002	Yes.		OK
ii. If the project activity is a capacity addition to existing grid-connected renewable power plant/unit, is the baseline scenario identified appropriately in accordance with the ACM0002 ver. 11? And is the point of time at which the generation facility would likely be replaced or retrofitted (DATE Baseline Retrofit) reasonably defined?	ACM	0002	The project activity is not a capacity addition.		OK
iii. If the project activity is the retrofit or replacement of existing grid-connected renewable power plant/unit, is the baseline scenario identified following the step-wise procedure in accordance with the ACM0002 ver.11?	ACM	0002	The project activity is not a retrofit or replacement.		OK
iv. Are the realistic and credible alternative baseline scenarios for power generation	ACM	0002	Not applicable. The project is a Greenfield plant.		OK



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appropriately identified following the Step 1 of the “Combined tool to identify the baseline scenario and demonstrate additionality”? (Step 1)					
v. Are the realistic and credible alternative baseline scenarios i.e. P1, P2 and P3 appropriately applied Barrier analysis following the Step 2 of the “Combined tool to identify the baseline scenario and demonstrate additionality”? (Step 2)	ACM	0002	Not applicable. The project is a Greenfield plant.		OK
vi. If more than one alternative is remaining after Step 2, is Investment analysis appropriately applied (apply an Investment Comparison as per step 3 of the “Combined tool to identify the baseline scenario and demonstrate additionality” or a Benchmark Analysis as per step 2b of the “Tool for the demonstration and assessment of additionality”)? (Step 3)	ACM	0002	Not applicable. The project is a Greenfield plant.		OK
c. Does the selected methodology require use of tools (such as the “Tool for the demonstration and assessment of additionality” and the “Combined tool to identify the baseline scenario and demonstrate additionality”) to establish the baseline scenario?	VVM	82	Not applicable. The project is a Greenfield plant.		OK
d. If yes, was the methodology consulted on the application of these tools? (In such cases, the guidance in the methodology shall supersede the tool.)	VVM	82	Not applicable. The project is a Greenfield plant.		OK
e. Does the methodology require several alternative	VVM	83	Not applicable. The project is a Greenfield plant.		OK



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scenarios to be considered in the identification of the most reasonable baseline scenario?					
f. If yes, are all scenarios that are considered by the project participants and are supplementary to those required by the methodology reasonable in the context of the proposed CDM project activity?	VVM	83	Not applicable. The project is a Greenfield plant.		OK
g. Has any reasonable alternative scenario been excluded?	VVM	83	Not applicable. The project is a Greenfield plant.		OK
h. Is the baseline scenario identified reasonably supported by:	VVM	84			
i. Assumptions?	VVM	84	The project activity is the installation of eight wind farms. The baseline scenario is provided by the methodology.		OK
ii. Calculations?	VVM	84	The project activity is the installation of eight wind farms. The baseline scenario is provided by the methodology.		OK
iii. Rationales?	VVM	84	The project activity is the installation of eight wind farms. The baseline scenario is provided by the methodology.		OK
i. Are the documents and sources referred to in the PDD correctly quoted and interpreted?	VVM	84	Yes.		OK
j. Was the information provided in the PDD cross checked with other verifiable and credible sources, such as local expert opinion, if available? (identify the sources)	VVM	84	Yes. - Environmental License, - CIMGC website.		OK
k. Have all applicable CDM requirements been taken into account in the identification of the baseline scenario for the proposed CDM project activity?	VVM	85	The project activity is the installation of eight wind farms. The baseline scenario is provided by the methodology.		OK



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l. Have all relevant policies and circumstances been identified and correctly considered in the PDD, in accordance with the guidance by the CDM Executive Board?	VVM	85	The project activity is the installation of eight wind farms. The baseline scenario is provided by the methodology.		OK
m. Does the PDD provide a verifiable description of the identified baseline scenario, including a description of the technology that would be employed and/or the activities that would take place in the absence of the proposed CDM project activity?	VVM	86	No, it is not required by the relevant methodology.		OK
e. Algorithms and/or formulae used to determine emission reductions					
a. Do the steps taken and equations applied to calculate project emissions, baseline emissions, leakage and emission reductions comply with the requirements of the selected baseline and monitoring?	VVM	89	Yes. The steps comply with the requirements of the methodology ACM0002. Please refer to Section 3.		OK
b. Have the equations and parameters in the PDD been correctly applied with respect to those in the selected approved methodology?	VVM	90	Yes. The equations and parameters were correctly applied, with respect to the methodology ACM0002. Please refer to Section 3.		OK
i. Are the Project emissions appropriately calculated?	ACM	0002	Yes. Please refer to Section 3.		OK
ii. Are the Baseline emissions appropriately calculated specifically for (a) greenfield plants or (b) retrofit and replacements or (c) capacity additions?	ACM	0002	Yes. The project is a Greenfield project, and the baseline emissions are appropriately calculated.		OK
iii. Are the Leakage appropriately calculated?	ACM	0002	No leakage is to be considered according to the methodology ACM0002.		OK



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iv. Are the Emission reductions appropriately calculated?	ACM	0002	Yes.		OK
c. Have project participants prepared as part of the CDM-PDD an estimate of likely emission reductions for the proposed crediting period? This estimate should, in principle, employ the same methodology as selected for the calculation of emission reductions. Where the grid emission factor (EFCM,grid,y) is determined ex post during monitoring, project participants may use models or other tools to estimate the emission reductions prior to validation.	ACM	0002	Yes. However, the calculation of the grid emission factor presented some minor errors. Please refer to Section 3.		OK
d. Does the methodology provide for selection between different options for equations or parameters?	VVM	90	Yes, depending on the type of project activity. The project correctly adopted the equation related to Greenfield projects.		OK
e. If yes, has adequate justification been provided (based on the choice of the baseline scenario, context of the proposed CDM project activity and other evidence provided)?	VVM	90	Yes.		OK
f. If yes, have correct equations and parameters been used, in accordance with the methodology selected?	VVM	90	Refer to (5.e.b) above	-	-
g. Will data and parameters be monitored throughout the crediting period of the proposed CDM project activity?	VVM	91	Yes. The monitored data is the energy delivered to the grid, $EG f_{\text{facility},y}$		OK
h. If no, and these data and parameters will remain fixed throughout the crediting period, are all data sources and assumptions:	VVM	91			
i. Appropriate and correct?	VVM	91	The fixed parameter is the EF CM, and some		OK

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			minor errors were found in the calculation. Refer to Section 3.		



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ii. Applicable to the proposed CDM project activity?	VVM	91	Yes.		OK
iii. Resulting in a conservative estimate of the emission reductions?	VVM	91	Yes.		OK
i. Will data and parameters be monitored on implementation and hence become available only after validation of the project activity?	VVM	91	Yes.		OK
j. If yes, are the estimates provided in the PDD for these data and parameters reasonable?	VVM	91	Yes.		OK
6. Additionality of a project activity					
a. Does the PDD describe how a proposed CDM project activity is additional?	VVM	94	Yes. The PDD, at the Section B.5. provides by mean an investment analysis, following the Tool for the demonstration and assessment of additionality, an explanation of the project additionality.		OK
b. Does the CDM-PDD state the latest version of the additionality tool being used?	ACM	0002	No. Please refer to Section 3.		OK
c. Were the following steps of the tool to assess additionality used:	EB 39	Ann 10			
i. Identification of alternatives to the project activity?	EB 39	Ann 10	Yes, see item (6.d) below.		OK
ii. Investment analysis to determine that the proposed project activity is either: 1) not the most economically or financially attractive, or 2) not economically or financially feasible?	EB 39	Ann 10	Yes, see item (6.l) below.		OK
iii. Barriers analysis?	EB 39	Ann 10	Yes, see item (6.t) below.		OK
iv. Common practice analysis?	EB 39	Ann 10	Yes, see item (6.y) below.		OK



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d. In step 1 (i) have all the sub-steps as below been followed?	EB 39	Ann 10			
i. Sub-step 1a: Define alternatives to the project activity	EB 39	Ann 10	<p>Yes. Identified alternatives are:</p> <p>Scenario 1: continuation of the current (previous) situation of electricity supplied by the Brazilian Interconnected Grid.</p> <p>Scenario 2: The proposed project activity undertaken without being registered as a CDM project activity.</p> <p>Please refer to section 3 above.</p>		OK
ii. Sub-step 1b: Consistency with mandatory laws and regulations	EB 39	Ann 10	Yes.		OK
e. Have the following alternatives been included while defining alternatives as per sub-step 1a?	EB 39	Ann 10			
i. (a) The proposed project activity undertaken without being registered as a CDM project activity;	EB 39	Ann 10	Yes.		OK
ii. (b) Other realistic and credible alternative scenario(s) to the proposed CDM project activity scenario that deliver outputs services or services with comparable quality, properties and application areas, taking into account, where relevant, examples of scenarios identified in the underlying methodology;	EB 39	Ann 10	No, Please refer to Section 3 above.		OK
iii. (c) If applicable, continuation of the current situation (no project activity or other alternatives undertaken).	EB 39	Ann 10	Yes.		OK



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f. Has the project participant included the technologies or practices that provide outputs or services with comparable quality, properties and application areas as the proposed CDM project activity and that have been implemented previously or are currently being introduced in the relevant country/region?	EB 39	Ann 10	No. See Section 3 above.		OK
g. Has the outcome of Step 1a: Identified realistic and credible alternative scenario(s) to the project activity done correctly? Please briefly mention the outcome.	EB 39	Ann 10	The PDD identified as alternatives: Scenario 1: continuation of the current (previous) situation of electricity supplied by the Brazilian Interconnected Grid. Scenario 2: The proposed project activity undertaken without being registered as a CDM project activity., And concludes that both are in compliance with regulatory requirements.		OK
h. Is the alternative(s) in compliance with all mandatory applicable legal and regulatory requirements, even if these laws and regulations have objectives other than GHG reductions, e.g. to mitigate local air pollution.?	EB 39	Ann 10	Yes.		OK
i. If an alternative does not comply with all mandatory applicable legislation and regulations, has it been shown that, based on an examination of current practice in the country or region in which the law or regulation applies, those applicable legal or regulatory requirements are systematically not enforced and that	EB 39	Ann 10	There are no alternatives which do not comply with applicable legislation and requirements.		OK



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noncompliance with those requirements is widespread in the country?					
j. Has the outcome of Step 1b: Identified realistic and credible alternative scenario(s) to the project activity that are in compliance with mandatory legislation and regulations taking into account the enforcement in the region or country and EB decisions on national and/or sectoral policies and regulations done correctly? Please state the outcome.	EB 39	Ann 10	Yes. The outcome is: Scenario 1: continuation of the current (previous) situation of electricity supplied by the Brazilian Interconnected Grid. Scenario 2: The proposed project activity undertaken without being registered as a CDM project activity.		OK
k. Has PP selected Step 2 (Investment analysis) or Step 3 (Barrier analysis) or both Steps 2 and 3?	EB 39	Ann 10	The PP selected Step 2 – Investment Analysis.		OK
l. In step 2, have all the sub-steps as below been followed?	EB 39	Ann 10			
i. Sub-step 2a: Determine appropriate analysis method;	EB 39	Ann 10	Yes. Please refer to Section <i>Investment Analysis</i> , below.		OK
ii. Sub-step 2b: Option I. Apply simple cost analysis;	EB 39	Ann 10	Not applied. Please refer to Section <i>Investment Analysis</i> , below.		OK
iii. Sub-step 2b: Option II. Apply investment comparison analysis;	EB 39	Ann 10	Not applied. Please refer to Section <i>Investment Analysis</i> , below.		OK
iv. Sub-step 2b: Option III. Apply benchmark analysis;	EB 39	Ann 10	Yes. Please refer to Section <i>Investment Analysis</i> , below.		OK
v. Sub-step 2c: Calculation and comparison of financial indicators (only applicable to Options II and III);	EB 39	Ann 10	Yes. Please refer to Section <i>Investment Analysis</i> , below.		OK
vi. Sub-step 2d: Sensitivity analysis (only applicable to Options II and III).	EB 39	Ann 10	Yes. Please refer to Section <i>Investment Analysis</i> , below.		OK
m. In sub-step 2a has the determination of	EB	Ann	Yes. Please refer to Section <i>Investment Analysis</i> ,		OK



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appropriate method of analysis done as per the guidance as below?	39	10	below.		
i. Simple cost analysis if the CDM project activity and the alternatives identified in Step 1 generate no financial or economic benefits other than CDM related income (Option I).	EB 39	Ann 10	Please refer to Section <i>Investment Analysis</i> , below.		OK
ii. Otherwise, use the investment comparison analysis (Option II) or the benchmark analysis (Option III). Specify option used with justification.	EB 39	Ann 10	Please refer to Section <i>Investment Analysis</i> , below.		OK
n. Has the below guideline followed for sub-step 2b Option I. Apply simple cost analysis? Document the costs associated with the CDM project activity and the alternatives identified in Step1 and demonstrate that there is at least one alternative which is less costly than the project activity.	EB 39	Ann 10	Please refer to Section <i>Investment Analysis</i> , below.		OK
o. Has the below guideline followed for sub-step 2b Option II. Apply investment comparison analysis? Identify the financial indicator, such as IRR, NPV, cost benefit ratio, or unit cost of service most suitable for the project type and decision-making context. Please specify	EB 39	Ann 10	Please refer to Section <i>Investment Analysis</i> , below.		OK
p. Has the below guideline followed for Sub-step 2b: Option III. Apply benchmark analysis?	EB 39	Ann 10	Please refer to Section <i>Investment Analysis</i> , below.		OK
i. Identify the financial/economic indicator, such as IRR, most suitable for the project type and decision context.	EB 39	Ann 10	Please refer to Section <i>Investment Analysis</i> , below.		OK
ii. When applying Option II or Option III, the financial/economic analysis shall be based on	EB 39	Ann 10	Please refer to Section <i>Investment Analysis</i> , below.		OK



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parameters that are standard in the market, considering the specific characteristics of the project type, but not linked to the subjective profitability expectation or risk profile of a particular project developer. Only in the particular case where the project activity can be implemented by the project participant, the specific financial/economic situation of the company undertaking the project activity can be considered.					
iii. Discount rates and benchmarks shall be derived from: (a) Government bond rates, increased by a suitable risk premium to reflect private investment and/or the project type, as substantiated by an independent (financial) expert or documented by official publicly available financial data; (b) Estimates of the cost of financing and required return on capital (e.g. commercial lending rates and guarantees required for the country and the type of project activity concerned), based on bankers views and private equity investors/funds' required return on comparable projects; (c) A company internal benchmark (weighted average capital cost of the company), only in the particular case referred to above in 2. The project developers shall demonstrate that this benchmark has been consistently used in the past, i.e. that project activities under similar conditions	EB 39	Ann 10	Yes. Please refer to Section <i>Investment Analysis</i> , below.		OK



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developed by the same company used the same benchmark; (d) Government/official approved benchmark where such benchmarks are used for investment decisions; (e) Any other indicators, if the project participants can demonstrate that the above Options are not applicable and their indicator is appropriately justified. Please specify benchmark and justify.					
q. Has the below guideline followed for Sub-step 2c: Calculation and comparison of financial indicators (only applicable to Options II and III)?	EB 39	Ann 10	Please refer to Section <i>Investment Analysis</i> , below.		OK
i. Calculate the suitable financial indicator for the proposed CDM project activity and, in the case of Option II above, for the other alternatives. Include all relevant costs (including, for example, the investment cost, the operations and maintenance costs), and revenues (excluding CER revenues, but possibly including inter alia subsidies/fiscal incentives, ODA, etc, where applicable), and, as appropriate, non-market cost and benefits in the case of public investors if this is standard practice for the selection of public investments in the host country.	EB 39	Ann 10	Please refer to Section <i>Investment Analysis</i> , below.		OK
ii. Present the investment analysis in a transparent manner and provide all the relevant assumptions, preferably in the CDM-PDD, or in separate annexes to the CDM-PDD.	EB 39	Ann 10	Please refer to Section <i>Investment Analysis</i> , below.		OK
iii. Justify and/or cite assumptions.	EB	Ann	Please refer to Section <i>Investment Analysis</i> ,		OK

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	39	10	below.		



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iv. In calculating the financial/economic indicator, the project's risks can be included through the cash flow pattern, subject to project-specific expectations and assumptions.	EB 39	Ann 10	Please refer to Section <i>Investment Analysis</i> , below.		OK
v. Assumptions and input data for the investment analysis shall not differ across the project activity and its alternatives, unless differences can be well substantiated.	EB 39	Ann 10	Yes. Please refer to Section <i>Investment Analysis</i> , below.		OK
vi. Present in the CDM-PDD a clear comparison of the financial indicator for the proposed CDM activity. Please specify details for above.	EB 39	Ann 10	Yes. Please refer to Section <i>Investment Analysis</i> , below.		OK
r. Has the below guideline followed for Sub-step 2d: Sensitivity analysis (only applicable to Options II and III)? Include a sensitivity analysis that shows whether the conclusion regarding the financial/economic attractiveness is robust to reasonable variations in the critical assumptions.	EB 39	Ann 10	Yes. Please refer to Section <i>Investment Analysis</i> , below.		OK
s. Has the outcome of Step 2 clearly mentioned with justification?	EB 39	Ann 10	Yes. Please refer to Section <i>Investment Analysis</i> , below.		OK
t. In step 3: Barrier analysis have all the sub-steps as below been followed?	EB 39	Ann 10	The additionality of the project activity is not demonstrated by barriers.		OK
i. Sub-step 3a: Identify barriers that would prevent the implementation of the proposed CDM project activity;	EB 39	Ann 10	The additionality of the project activity is not demonstrated by barriers.		OK
ii. Sub-step 3 b: Show that the identified barriers would not prevent the implementation of at least one of the alternatives (except the proposed project activity).	EB 39	Ann 10	The additionality of the project activity is not demonstrated by barriers.		OK
u. Has the below guideline followed for Sub-step 3a:	EB	Ann	The additionality of the project activity is not		OK



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Identify barriers that would prevent the implementation of the proposed CDM project?	39	10	demonstrated by barriers.		
i. (a) Investment barriers: For alternatives undertaken and operated by private entities: Similar activities have only been implemented with grants or other non-commercial finance terms. No private capital is available from domestic or international capital markets due to real or perceived risks associated with investment in the country where the proposed CDM project activity is to be implemented, as demonstrated by the credit rating of the country or other country investments reports of reputed origin.	EB 39	Ann 10	The additionality of the project activity is not demonstrated by barriers.		OK
ii. (b) Technological barriers: Skilled and/or properly trained labour to operate and maintain the technology is not available in the relevant country/region, which leads to an unacceptably high risk of equipment disrepair and malfunctioning or other underperformance; Lack of infrastructure for implementation and logistics for maintenance of the technology, Risk of technological failure: the process/technology failure risk in the local circumstances is significantly greater than for other technologies that provide services or outputs comparable to those of the proposed CDM project activity, as demonstrated by relevant scientific literature or technology	EB 39	Ann 10	The additionality of the project activity is not demonstrated by barriers.		OK



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manufacturer information, The particular technology used in the proposed project activity is not available in the relevant region.					
iii. (c) Barriers due to prevailing practice: The project activity is the “first of its kind”.	EB 39	Ann 10	The additionality of the project activity is not demonstrated by barriers.		OK
iv. (d) Other barriers, preferably specified in the underlying methodology as examples.	EB 39	Ann 10	The additionality of the project activity is not demonstrated by barriers.		OK
v. Has the outcome from Step 3a clearly mentioned in PDD?	EB 39	Ann 10	The additionality of the project activity is not demonstrated by barriers.		OK
w. Has the below guideline followed for Sub-step 3 b: Show that the identified barriers would not prevent the implementation of at least one of the alternatives (except the proposed project activity)?	EB 39	Ann 10	The additionality of the project activity is not demonstrated by barriers.		OK
i. If the identified barriers also affect other alternatives, explain how they are affected less strongly than they affect the proposed CDM project activity. In other words, demonstrate that the identified barriers do not prevent the implementation of at least one of the alternatives. Any alternative that would be prevented by the barriers identified in Sub-step 3a is not a viable alternative, and shall be eliminated from consideration.	EB 39	Ann 10	The additionality of the project activity is not demonstrated by barriers.		OK
ii. Provide transparent and documented evidence, and offer conservative interpretations of this documented evidence, as to how it demonstrates the existence and significance of the identified barriers and whether alternatives	EB 39	Ann 10	The additionality of the project activity is not demonstrated by barriers.		OK



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are prevented by these barriers.					
iii. The type of evidence to be provided should include at least one of the following: (a) Relevant legislation, regulatory information or industry norms; (b) Relevant (sectoral) studies or surveys (e.g. market surveys, technology studies, etc) undertaken by universities, research institutions, industry associations, companies, bilateral/multilateral institutions, etc; (c) Relevant statistical data from national or international statistics; (d) Documentation of relevant market data (e.g. market prices, tariffs, rules); (e) Written documentation of independent expert judgments from industry, educational institutions (e.g. universities, technical schools, training centres), industry associations and others. Please specify.	EB 39	Ann 10	The additionality of the project activity is not demonstrated by barriers.		OK
x. Has the outcome from Step 3 clearly mentioned in PDD?	EB 39	Ann 10	The additionality of the project activity is not demonstrated by barriers.		OK
y. In step 4: Common practise analysis have all the sub-steps as below followed?	EB 39	Ann 10			
i. Sub-step 4a: Analyze other activities similar to the proposed project activity;	EB 39	Ann 10	Yes.		OK
ii. Sub-step 4b: Discuss any similar Options that are occurring.	EB 39	Ann 10	Yes.		OK
z. Has the below guideline followed for Sub-step 4a: Analyze other activities similar to the proposed project activity? Provide an analysis of any other activities that are operational and that are similar	EB 39	Ann 10	Yes.		OK



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to the proposed project activity. Other CDM project activities are not to be included in this analysis. Provide documented evidence and, where relevant, quantitative information. On the basis of that analysis, describe whether and to which extent similar activities have already diffused in the relevant region.					
aa. Has the below guideline followed for Sub-step 4b: Discuss any similar Options that are occurring? If similar activities are identified, then it is necessary to demonstrate why the existence of these activities does not contradict the claim that the proposed project activity is financially/economically unattractive or subject to barriers. This can be done by comparing the proposed project activity to the other similar activities, and pointing out and explaining essential distinctions between them that explain why the similar activities enjoyed certain benefits that rendered it financially/economically attractive (e.g., subsidies or other financial flows) and which the proposed project activity cannot use or did not face the barriers to which the proposed project activity is subject. In case similar projects are not accessible, the PDD should include justification about non-accessibility of data/information.	EB 39	Ann 10	Yes.		OK
bb. Has the outcome from Step 4 clearly mentioned	EB 39	Ann 10	Yes.		OK



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in PDD?					
cc. Has it been proved that the porject is additional?	EB 39	Ann 10	There are still pending issues to demonstrate that the project is additional.		OK



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<i>a. Prior consideration of the clean development mechanism</i>					
a. Is the project activity start date prior to the date of publication of the PDD for stakeholder comments?	VVM	98	Yes. The Starting date is 01/09/2012. The PDD was public for comments from 26 Oct 11 - 24 Nov 11, and the Starting date is after this publication.		OK
b. If yes, were the CDM benefits considered necessary in the decision to undertake the project as a proposed CDM project activity?	VVM	98	Yes. The PP sent to UNFCCC and to DNA communication regarding the intention to seek CDM status. Please refer to Section 3.		OK
c. Is the start date of the project activity, reported in the PDD, in accordance with the "Glossary of CDM terms", which states that "The starting date of a CDM project activity is the earliest date at which either the implementation or construction or real action of a project activity begins."?	VVM	99	Yes. The Starting date is the earliest date at which either the implementation or construction or real action began. In this case, a real action, is defined as the Starting Date, the signature of the EPC contract.		OK
d. Does the project activity require construction, retrofit or other modifications?	VVM	99	The Project activity requires construction of 8 Wind farms.		OK
e. If yes, is it ensured that the date of commissioning cannot be considered as the project activity start date?	VVM	99	Yes.		OK
f. Is it a new project activity (a project activity with a start date on or after 02 August 2008) or an existing project activity (a project activity with a start date before 02 August 2008)?	VVM	100	It is a new project activity.		OK



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g. For a new project, for which PDD has not been published for global stakeholder consultation or a new methodology proposed to the CDM Executive Board before the project activity start date, had PP informed the host Party DNA and the UNFCCC secretariat in writing of the commencement of the project activity and of their intention to seek CDM status? (Provide reference to such confirmation from host Party DNA and UNFCCC secretariat).	VVM	101	Yes.		OK
h. For an existing project activity, for which the start date is prior to the date of publication of the PDD for global stakeholder consultation, are the following evidences provided:	VVM	102	Not applicable.		OK
ii. evidence that must indicate that awareness of the CDM prior to the project activity start date, and that the benefits of the CDM were a decisive factor in the decision to proceed with the project, including, inter alia:	VVM	102	Not applicable.		OK
a. minutes and/or notes related to the consideration of the decision by the Board of Directors, or equivalent, of the project participant, to undertake the project as a proposed CDM project activity?	VVM	102	Not applicable.		OK
iii. reliable evidence from project participants that must indicate that continuing and real actions were taken to secure CDM status for the project in parallel with its implementation, including, inter alia:	VVM	102	Not applicable.		OK



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a. contract with consultants for CDM/PDD/methodology services?	VVM	102	Not applicable.		OK
b. Emission Reduction Purchase Agreements or other documentation related to the sale of the potential CERs (including correspondence with multilateral financial institutions or carbon funds)?	VVM	102	Not applicable.		OK
c. evidence of agreements or negotiations with a DOE for validation services?	VVM	102	Not applicable.		OK
d. submission of a new methodology to the CDM Executive Board?	VVM	102	Not applicable.		OK
e. publication in newspaper?	VVM	102	Not applicable.		OK
f. interviews with DNA?	VVM	102	Not applicable.		OK
g. earlier correspondence on the project with the DNA or the UNFCCC secretariat?	VVM	102	Not applicable.		OK
h. Has the chronology of events including time lines been appropriately captured and explained/detailed in the PDD?	VVM	102	Not applicable.		OK
b. Identification of alternatives					
a. Does the approved methodology that is selected by the proposed CDM project activity prescribe the baseline scenario and hence no further analysis is required?	VVM	105	Yes. The methodology ACM0002 prescribes the baseline scenario, and no further analysis is required.		OK
b. If no, does the PDD identify credible alternatives to the project activity in order to determine the	VVM	105	Not applicable. The methodology ACM0002 prescribes the baseline scenario, and no further		OK



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most realistic baseline scenario?			analysis is required.		
c. Does the list of alternatives given in the PDD ensure that:	VVM	106			
i. the list of alternatives includes as one of the options that the project activity is undertaken without being registered as a proposed CDM project activity?	VVM	106	Not applicable. The methodology ACM0002 prescribes the baseline scenario, and no further analysis is required.		OK
ii. the list contains all plausible alternatives that the DOE, on the basis of its local and sectoral knowledge, considers to be viable means of supplying the outputs or services that are to be supplied by the proposed CDM project activity?	VVM	106	Not applicable. The methodology ACM0002 prescribes the baseline scenario, and no further analysis is required.		OK
iii. the alternatives comply with all applicable and enforced legislation?	VVM	106	Not applicable. The methodology ACM0002 prescribes the baseline scenario, and no further analysis is required.		OK
c. Investment analysis					
a. Has investment analysis been used to demonstrate the additionality of the proposed CDM project activity?	VVM	108	Yes. The proposed project activity used the investment analysis to demonstrate the additionality.		OK
b. If yes, does the PDD provide evidence that the proposed CDM project activity would not be:	VVM	108	See Below.		OK
i. the most economically or financially attractive alternative?	VVM	108	Not Applicable.		NA
ii. economically or financially feasible, without the revenue from the sale of certified emission reductions (CERs)?	VVM	108	Yes. The PDD and the spreadsheet demonstrate that the project is not attractive without the revenue from the sale of certified emission reductions (CERs)		OK
c. Was this shown by one of the following	VVM	109	See Below.		OK



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approaches?					
i. The proposed CDM project activity would produce no financial or economic benefits other than CDM-related income. Document the costs associated with the proposed CDM project activity and the alternatives identified and demonstrate that there is at least one alternative which is less costly than the proposed CDM project activity.	VVM	109	Not Applicable.		NA
ii. The proposed CDM project activity is less economically or financially attractive than at least one other credible and realistic alternative.	VVM	109	Not Applicable		NA
iii. The financial returns of the proposed CDM project activity would be insufficient to justify the required investment.	VVM	109	Yes.The PP demonstrated in the spreadsheet that the financial returns of the proposed CDM project activity are insufficient to justify the required investment.		OK
d. Is the period of assessment limited to the proposed crediting period of the CDM project activity?	EB 61	Ann 13	No.		OK
e. Does the project IRR and equity IRR calculations reflect the period of expected operation of the underlying project activity (technical lifetime), or - if a shorter period is chosen - include the fair value of the project activity assets at the end of the assessment period?	EB 61	Ann 13	CAR BQA 1 – According to the Guidelines on the Assessment of Investment Analysis version 5, “The period of assessment should not be limited to the proposed crediting period of the CDM project activity. Both project IRR and equity IRR calculations shall as a preference reflect the period of expected operation of the underlying project activity (technical lifetime), or if a shorter period is chosen include the fair value of the	CAR BQA 1	OK

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			project activity assets at the end of the assessment period".		



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f. Does the IRR calculation include the cost of major maintenance and/or rehabilitation if these are expected to be incurred during the period of assessment?	EB 61	Ann 13	Yes. The Spreadsheet contains the costs of major maintenance through the O&M costs.		OK
g. Do the project participants justify the appropriateness of the period of assessment in the context of the underlying project activity, without reference to the proposed CDM crediting period?	EB 61	Ann 13	Refer to CAR BQA 1.	CAR BQA 1	OK
h. Does the cash flow in the final year include a fair value of the project activity assets at the end of the assessment period?	EB 61	Ann 13	Refer to CAR BQA 1.	CAR BQA 1	OK
i. Has the fair value been calculated in accordance with local accounting regulations where available, or international best practice?	EB 61	Ann 13	Refer to CAR BQA 1.	CAR BQA 1	OK
j. Does the fair value calculations include both the book value of the asset and the reasonable expectation of the potential profit or loss on the realization of the assets?	EB 61	Ann 13	Refer to CAR BQA 1.	CAR BQA 1	OK
k. Was depreciation, and other non-cash items related to the project activity, which have been deducted in estimating gross profits on which tax is calculated, added back to net profits for the purpose of calculating the financial indicator (e.g. IRR, NPV)?	EB 61	Ann 13	Yes.		OK
l. Has taxation been included as an expense in the IRR/NPV calculation in cases where the benchmark or other financial indicator is intended for post-tax comparisons?	EB 61	Ann 13	Yes, it has been included.		OK



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m. Are the input values used in all investment analysis valid and applicable at the time of the investment decision taken by the project participant?	EB 61	Ann 13	CL BQA 1 – Clarify with evidences the moment of investment decision, in order to guarantee that the input values are the correct ones at this moment in the project chronology.	CL BQA 1	OK
n. Is the timing of the investment decision consistent and appropriate with the input values?	EB 61	Ann 13	Refer to the CL BQA 1.	CL BQA 1	OK
o. Are all the listed input values been consistently applied in all calculations?	EB 61	Ann 13	Yes.		OK
p. Does the investment analysis reflect the economic decision making context at point of the decision to recommence the project in the case of project activities for which implementation ceases after the commencement and where implementation is recommenced due to consideration of the CDM?	EB 61	Ann 13	Not Applicable.		NA
q. Have project participants supplied the spreadsheet versions of all investment analysis?	EB 61	Ann 13	Yes.		OK
r. Are all formulas used in this analysis readable and all relevant cells be viewable and unprotected?	EB 61	Ann 13	Yes. All formulas and cells are viewable and could be verified by de DOE.		OK
s. In cases where the project participant does not wish to make such a spreadsheet available to the public has the PP provided an exact read-only or PDF copy for general publication?	EB 61	Ann 13	Not Applicable.		NA
t. In case the PP wishes to black-out certain elements of the publicly available version, is it justifiable?	EB 61	Ann 13	Not Applicable.		NA
u. Was the cost of financing expenditures (i.e. loan repayments and interest) included in the	EB 61	Ann 13	Not applicable.		NA



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calculation of project IRR?					
v. In the calculation of equity IRR, has only the portion of investment costs which is financed by equity been considered as the net cash outflow?	EB 61	Ann 13	Yes.		OK
w. Has the portion of the investment costs which is financed by debt been considered a cash outflow in the calculation of equity IRR? (this is not allowed)	EB 61	Ann 13	No.		OK
x. Was a pre-tax benchmark be applied?	EB 61	Ann 13	No.		OK
y. In cases where a post-tax benchmark is applied, is actual interest payable taken into account in the calculation of income tax?	EB 61	Ann 13	CAR BQA 2 – Interest was not calculated according to the prevailing commercial interest rates in the region, preferably by assessing the cost of other debt recently acquired by the project developer and by applying a debt-equity ratio	CAR BQA 2	OK
z. In such situations, was interest calculated according to the prevailing commercial interest rates in the region, preferably by assessing the cost of other debt recently acquired by the project developer and by applying a debt-equity ratio used by the project developer for investments taken in the previous three years?	EB 61	Ann 13	Refer to CAR BQA 2.	CAR BQA 2	OK
aa. In cases where a benchmark approach is used is the applied benchmark appropriate to the type of IRR calculated?	EB 61	Ann 13	Refer to CAR BQA 2.	CAR BQA 2	OK
bb. Has local commercial lending rates or weighted average costs of capital (WACC) selected as appropriate benchmarks for a project IRR?	EB 61	Ann 13	Refer to CAR BQA 2.	CAR BQA 2	OK



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cc. Has required/expected returns on equity selected as appropriate benchmark for an equity IRR?	EB 61	Ann 13	Yes.		OK
dd. In case benchmarks supplied by relevant national authorities selected is it applicable to the project activity and the type of IRR calculation presented?	EB 61	Ann 13	Not Applicable.		NA
ee. In the cases of projects which could be developed by an entity other than the project participant is the benchmark applied based on parameters that are standard in the market?	EB 61	Ann 13	Yes.		OK
ff. Whether a company-specific benchmark or a benchmark based on parameters that are standard in the market is suitable in the context of the underlying project activity?	EB 61	Ann 13	Not Applicable.		NA
gg. Have internal company benchmarks/expected returns (including those used as the expected return on equity in the calculation of a weighted average cost of capital - WACC) been applied in cases where there is only one possible project developer?	EB 61	Ann 13	Not Applicable.		NA
hh. In such cases, have these values been used for similar projects with similar risks, developed by the same company or, if the company is brand new, would have been used for similar projects in the same sector in the country/region?	EB 61	Ann 13	Not Applicable.		NA
ii. Has a minimum clear evidence of the resolution by the company's Board and/or shareholders been provided to the effect as above?	EB 61	Ann 13	Not Applicable.		NA
jj. Has a thorough assessment of the financial	EB	Ann	Not Applicable.		NA



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statements of the project developer - including the proposed WACC - to assess the past financial behavior of the entity during at least the last 3 years in relation to similar projects been conducted?	61	13			
kk. If the benchmark is based on parameters that are standard in the market, is the cost of equity determined either by: (a) selecting the values provided in Appendix A; or by (b) calculating the cost of equity using best financial practices, based on data sources which can be clearly validated by the DOE, while properly justifying all underlying factors?	EB 61	Ann 13	Yes.		OK
ll. If a company internal benchmark is used, are the values in the table in Appendix A used, as a simple default option?	EB 61	Ann 13	Not applicable.		NA
mm. If a company's internal benchmark is used for the expected return on equity, is the cost of debt based on the weighted average cost of debt financing of the legal entity owning the CDM project activity?	EB 61	Ann 13	Not applicable.		NA
nn. For loans, is the weighted average cost of outstanding long-term debt used?	EB 61	Ann 13	Not applicable.		NA
oo. For bonds, is the weighted average yield of the bonds during the last three months prior to the submission of the CDM-PDD for validation or prior to the investment decision, whichever is earlier, used? The use of bonds to determine the cost of debt is only appropriate for corporate	EB 61	Ann 13	Not applicable.		NA



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bonds issued in the host country of the CDM project.					
pp. In cases where the debt finance structure of the project is not yet available (e.g. a letter of intent for debt funding is not available), the cost of debt can be assumed as the commercial lending rate in the country or the yield of a 10 year bond issued by the government of the host country or, if this is not available, the bond with the maturity which is closest to 10 years. Was the following documented in the CDM-PDD?	EB 61	Ann 13	Not applicable.		NA
i. for bonds: the key parameters of the bond including the time of maturity, yield, registration issuance in the financial system and set-up in the market;	EB 61	Ann 13	Not applicable.		NA
ii. for loans from a financial institution: the contract of lending between the financial institution and the legal entity owning the assets of the project activity, or, in absence of the contract, a letter from the bank stating its intention to award the loan and the key terms for the loan;	EB 61	Ann 13	Not applicable.		NA
iii. for debt financing from a parent company: the transfer of capital to the legal entity, documented with the contract of lending between the parent company and the legal entity owning the assets of the project activity and/or the parameters of the corporate bonds as mentioned above. (This	EB 61	Ann 13	Not applicable.		NA



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latter option is only valid for corporate bonds issued in the host country of the CDM project activity)					
qq. If the benchmark is based on parameters that are standard in the market, is the cost of debt calculated as the cost of financing in the capital markets (e.g. commercial lending rates and guarantees required for the country and the type of project activity concerned), based on documented evidence from financial institutions with regard to the cost of debt financing of comparable projects?	EB 61	Ann 13	Yes.		OK
rr. In cases where this data is not available, is the commercial lending rate in the host country used to calculate the cost of debt?	EB 61	Ann 13	Not applicable.		NA
ss. If a company's internal benchmark is used for the expected return on equity, is the percentage of debt financing and equity financing reflect the long-term debt/equity finance structure of the legal entity owning the assets of the project activity?	EB 61	Ann 13	Not applicable.		NA
tt. If: (a) the legal entity owning the assets of the project activity has balance sheets audited by a third party within two years prior to the submission of the CDM-PDD for validation; and (b) the accounting books of the legal entity reflect at least the total value of all the assets needed for the project activity. Is the percentage determined based on the latest balance sheet	EB 61	Ann 13	Not applicable.		NA



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provided under local fiscal/accounting standards and rules?					
uu. If the debt/equity finance structure is not yet available, was 50% debt and 50% equity financing assumed as a default?	EB 61	Ann 13	Not applicable.		NA
vv. Is the benchmark based on parameters that are standard in the market?	EB 61	Ann 13	See below.		OK
ww. If yes, is the typical debt/equity finance structure observed in the sector of the country used?	EB 61	Ann 13	Yes.		OK
xx. If such information is not readily available, was 50% debt and 50% equity financing assumed as a default?	EB 61	Ann 13	Not Applicable.		NA
yy. Has an investment comparison analysis and not a benchmark analysis used when the proposed baseline scenario leaves the project participant no other choice than to make an investment to supply the same (or substitute) products or services?	EB 61	Ann 13	Not Applicable.		NA
zz. Have variables, including the initial investment cost, that constitute more than 20% of either total project costs or total project revenues been subjected to reasonable variation (positive and negative) and the results of this variation been presented in the PDD and be reproducible in the associated spreadsheets?	EB 61	Ann 13	Yes.		OK
aaa. Have a corrective action been raised for a variable to be included in the sensitivity analysis which constitute less than 20% and have a	EB 61	Ann 13	Not Applicable.		NA



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material impact on the analysis ?					
bbb. Is the range of variations selected is reasonable in the project context?	EB 61	Ann 13	Yes.		OK
ccc. Dos the variations in the sensitivity analysis at least cover a range of +10% and - 10%, unless this is not deemed appropriate in the context of the specific project circumstances?	EB 61	Ann 13	Yes..		OK
ddd. In cases where a scenario will result in the project activity passing the benchmark or becoming the most financially attractive alternative, is an assessment done of the probability of the occurrence of this scenario in comparison to the likelihood of the assumptions in the presented investment analysis, taking into consideration correlations between the variables as well as the specific socio-economic and policy context of the project activity?	EB 51	Ann 58	Not Applicable.		NA
eee. Was the plant load factor defined ex-ante in the CDM-PDD according to one of the following options:	EB 48	Ann 11	See Below.		OK
i. The plant load factor provided to banks and/or equity financiers while applying the project activity for project financing, or to the government while applying the project activity for implementation approval?	EB 48	Ann 11	CAR BQA 03 – Explain how was determined the plant load factor.	CAR BQA 3	OK
ii. The plant load factor determined by a third party contracted by the project participants (e.g. an engineering company)?	EB 48	Ann 11	<u>Refer to CAR BQA 03.</u>	CAR BQA 3	OK
fff. Was a thorough assessment of all parameters	VVM	111	Yes. All parameters and assumptions used in		OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
and assumptions used in calculating the relevant financial indicator, and determine the accuracy and suitability of these parameters using the available evidence and expertise in relevant accounting practices conducted?			calculating the relevant indicator are suitable and accurate.		
ggg. Were the parameters cross-checked against third-party or publicly available sources, such as invoices or price indices?	VVM	111	<p>CAR BQA 04 – Present all evidences to support the followings input values. Make sure that all information and evidences are based on the relevant information available at the time of the investment decision and not information available at an earlier or later point. Provide the dates of each evidence.</p> <ul style="list-style-type: none"> - Plant export capacity: 193.80 - Number of towers: 16 - Plant load factor: 43.8% - Energy price - Gerenciamento do contrato, Frete, Seguros, Comissionamento: BRL 3,448,471.82 - SE'S UNITÁRIAS 34,5KV: BRL 9,381,507.78 - SUBESTAÇÃO 138KV - BANCO DE TRANSFORMADORES: BRL 6,100,367.68 - Civil: BRL 38,868,389.16 - Meio ambiente: BRL 5,000,000.00 - Pessoal: BRL 8,354,081.21 - Engenharia do proprietário: 1,311,875.00 - Projeto executivo: BRL 1,450,000.00 - Seguro: BRL 1,875,000.00 - O&m: 115,000.00 	CAR BQA 4	OK



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			<ul style="list-style-type: none"> - Land lease: 1.60% of revenues - Despesas com pessoal: BRL 456,342.00 - Recursos humanos: BRL 8,415.00 - Servicos de terceiros: BRL 180,000 - Despesa de escritorio: BRL 50,391 - Despesas administrativas: BRL 59,400 - Gastos institucionais: BRL 50,000 - Viagens: BRL 73,035.00 - Tecnologia da informacao: BRL 140,000.00 - Investimentos: BRL 36,000 - Insurance: 0.27% - TUSD: custom - ANEEL: BRL 385.7 		



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
hhh. Were feasibility reports, public announcements and annual financial reports related to the proposed CDM project activity and the project participants reviewed?	VVM	111	<u>Refer to BQA 04.</u>		OK
iii. Was the correctness of computations carried out and documented by the project participants assessed?	VVM	111	Yes. Although, refer to <u>CAR BQA 04.</u>		OK
jjj. Was the sensitivity analysis by the project participants to determine under what conditions variations in the result would occur, and the likelihood of these conditions assessed?	VVM	111	Yes. PP has applied the variables to significant variations and in addition determined the value of the variation that would reach the IRR for each variable analysed. All values were validated and it is unlikely that these values could occur.		OK
kkk. Is the type of benchmark applied is suitable for the type of financial indicator presented?	VVM	112	Yes.		OK
lll. Do any risk premiums applied determining the benchmark reflect the risks associated with the project type or activity?	VVM	112	Yes.		OK
mmm. To determine this, was it assessed whether it is reasonable to assume that no investment would be made at a rate of return lower than the benchmark by:	VVM	112	See Below.		OK
i. assessing previous investment decisions by the project participants involved?	VVM	112	Not Applicable.		OK
ii. determining whether the same benchmark has been applied?	VVM	112	Not Applicable.		OK
iii. determining if there are verifiable circumstances that have led to a change in the benchmark?	VVM	112	Not Applicable.		OK



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
nnn. Did the project participants rely on values from Feasibility Study Reports (FSR) that are approved by national authorities for proposed CDM project activities?	VVM	113	CL BQA 02 - Did the project participants rely on values from Feasibility Study Reports (FSR) that are approved by national authorities for proposed CDM project activities?		OK
ooo. If yes:	VVM	113	See Below.		O
i. has the FSR been the basis of the decision to proceed with the investment in the project, i.e. that the period of time between the finalization of the FSR and the investment decision is sufficiently short for the DOE to confirm that it is unlikely in the context of the underlying project activity that the input values would have materially changed?	VVM	113	Refer to CL BQA 02.		OK
ii. Are the values used in the PDD and associated annexes fully consistent with the FSR?	VVM	113	Refer to CL BQA 02.		OK
iii. If not, was the appropriateness of the values validated?	VVM	113	Refer to CL BQA 02.		OK
iv. On the basis of its specific local and sectoral expertise, is confirmation provided, by cross-checking or other appropriate manner, that the input values from the FSR are valid and applicable at the time of the investment decision?	VVM	113	Refer to CL BQA 02.		OK
d. Barrier analysis					
a. Has barrier analysis been used to demonstrated the additionality of the proposed CDM project activity?	VVM	115	No, the additionality is not demonstrated by barrier analysis.		OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
b. If yes, does the PDD demonstrate that the proposed CDM project activity faces barriers that:	VVM	115	The additionality is not demonstrated by barrier analysis.		OK
i. prevent the implementation of this type of proposed CMD project activity?	VVM	115	The additionality is not demonstrated by barrier analysis.		OK
ii. do not prevent the implementation of at least one of the alternatives?	VVM	115	The additionality is not demonstrated by barrier analysis.		OK
c. Are there any issues that have a clear direct impact on the financial returns of the project activity, other than: risk related barriers, for example risk of technical failure, that could have negative effects on the financial performance; or barriers related to the unavailability of sources of finance for the project activity? {If yes, these issues cannot be considered barriers and shall be assessed by investment analysis. [Refer to (6.c) above]}	VVM	116	The additionality is not demonstrated by barrier analysis.		OK
d. Were the barriers determined as real by:	VVM	117	The additionality is not demonstrated by barrier analysis.		OK
i. assssing the available evidence and/or undertaking interviews with relevant individuals (including members of industry associations, government officials or local experts if necessary) to determine whether the barriers listed in the PDD exist?	VVM	117	The additionality is not demonstrated by barrier analysis.		OK
ii. ensuring that existence of barriers is substantiated by independent sources of data such as relevant national legislation, surveys of local conditions and national or international statistics?	VVM	117	The additionality is not demonstrated by barrier analysis.		OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
iii. Is existence of a barrier substantiated only by the opinions of the project participants? (If yes, this barrier cannot be considered as adequately substantiated)	VVM	117	The additionality is not demonstrated by barrier analysis.		OK
e. Were the barriers determined as preventing the implementation of the project activity but not the implementation of at least one of the possible alternatives by applying local and sectoral expertise to judge whether a barrier or set of barriers would prevent the implementation of the proposed CDM project activity and would not equally prevent implementation of <i>at least one of</i> the possible alternatives, in particular the identified baseline scenario?	VVM	117	The additionality is not demonstrated by barrier analysis.		OK
e. Common practice analysis					
a. Is this a proposed large-scale, or first-of-its kind small-scale project activity?	VVM	119	It is a large scale project activity.		OK
b. If yes, was common practice analysis carried out as a credibility check of the other available evidence used by the project participants to demonstrate additionality?	VVM	119	Yes. A common practice analysis was carried out, but didn't follow the Guidelines on Common Practice. Refer to Section 3 above.		OK
c. Was it assessed whether the geographical scope (e.g. defined region) of the common practice analysis is appropriate for the assessment of common practice related to the project activity's technology or industry type? (For certain technologies the relevant region for assessment will be local and for others it may be transnational/global).	VVM	120	Yes. The geographical scope is the whole country, and is appropriate to this kind of project activity.		OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
d. Was a region other than the entire host country chosen?	VVM	120	No.		OK
e. If yes, was the explanation why this region is more appropriate assessed?	VVM	120	The entire host country is adopted in the common practice analysis.		OK
f. Using official sources and local and industry expertise, was it determined to what extent similar and operational projects (e.g., using similar technology or practice), other than CDM project activities, have been undertaken in the defined region?	VVM	120	Yes.		OK
g. Are similar and operational projects, other than CDM project activities, already "widely observed and commonly carried out" in the defined region?	VVM	120	No.		OK
h. If yes, was it assessed whether there are essential distinctions between the proposed CDM project activity and the other similar activities?	VVM	120	Not applicable.		OK
7. Monitoring plan					
a. Does the PDD include a monitoring plan?	VVM	122	Yes.		OK
b. Is this monitoring plan based on the approved monitoring methodology applied to the proposed CDM project activity?	VVM	122	Yes. The monitoring plan is based in the methodology ACM0002, version 12.1.0		OK
c. Were the list of parameters required by the the selected methodology identified?	VVM	123	Yes. As the PP adopted the EF calculation ex ante, the only parameter to be monitored is the EG facility.		OK
d. Does the monitoring plan contains all necessary parameters?	VVM	123	Yes. Please refer to 7.b.		OK
e. Are the parameters clearly described?	VVM	123	Yes.		OK
f. Does the means of monitoring described in the plan comply with the requirements of the	VVM	123	Yes.		OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
methodology?					
g. Are all data and parameters monitored as per monitoring methodology?	ACM	0002	Yes.		OK
h. Are all data collected as part of monitoring archived electronically and kept at least for 2 years after the end of the last crediting period?	ACM	0002	Not clear in the PDD. It is raised a specific issue to the PPs.		OK
i. Are 100% of the data monitored, if not indicated otherwise?	ACM	0002	Yes.		OK
j. Are measurements conducted with calibrated measurement equipment according to relevant industry standards?	ACM	0002	Yes. The project shall follow the national requirements from ONS: "The Project owner will proceed with the necessary monitoring measures as established in the procedures from the Electric System National Operator (ONS – from the Portuguese Operador Nacional do Sistema), Brazilian Electricity Regulatory Agency (ANEEL from the Portuguese Agência Nacional de Energia Elétrica) and the Electric Power Commercialization Chamber (CCEE from the Portuguese Câmara de Comercialização de Energia Elétrica). Among ONS rules are the ones related to calibration.		OK
k. Are the monitoring provisions in the tools referred to in the methodology correctly applied?	ACM	0002	Not applicable. The EF is fixed ex ante.		OK
l. Are the monitoring arrangements described in the monitoring plan feasible within the project design?	VVM	123	Yes.		OK
m. Are the following means of implementation of the	VVM	123	Yes.		OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
monitoring plan sufficient to ensure that the emission reductions achieved by/resulting from the proposed CDM project activity can be reported ex post and verified:					
i. data management procedures?	VVM	123	Yes.		OK
ii. quality assurance procedures?	VVM	123	Yes.		OK
iii. quality control procedures?	VVM	123	Yes.		OK
8. Sustainable development					
a. Does the CDM project activity assists Parties not included in Annex I to the Convention in achieving sustainable development?	VVM	125	Please refer to item 1.b. above.		OK
b. Does the letter of approval by the DNA of the host Party confirm the contribution of the proposed CDM project activity to the sustainable development of the host Party?	VVM	126	Please refer to item 1.b. above.		OK
9. Local stakeholder consultation					
a. Were local stakeholders (public, including individuals, groups or communities affected, of likely to be affected, by the proposed CDM project activity or actions leading to the implementation of such an activity) invited by the PPs to comment on the proposed CDM project activity prior to the publication of the PDD on the UNFCCC website?	VVM	128	Yes. However, refer to Section 3 above to a detailed discussion.		OK
b. Have comments by local stakeholders that can reasonably be considered relevant for the proposed CDM project activity been invited?	VVM	129	Yes. However, refer to Section 3 above to a detailed discussion.		OK
c. Is the summary of the comments received as	VVM	129	No comments have been received.		OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
provided in the PDD complete?					
d. Have the project participants taken due account of any comments received and described this process in the PDD?	VVM	129	No comments have been received.		OK
10. Environmental impacts					
a. Have the project participants submitted documentation on the analysis of the environmental impacts of the project activity?	VVM	131	Yes. However the DOE didn't had access to this document. Refer to Section 3 to this discussion.		OK
b. Have the project participants undertaken an analysis of environmental impacts?	VVM	132	Yes.		OK
c. Does the host Party require an environmental impact assessment?	VVM	132	Refer to Section 3 above.		OK
d. If yes, have the project participants undertaken an environmental impact assessment?	VVM	132	Refer to Section 3 above.		OK

Table 2 Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1 and 2	Summary of project owner response	Validation team conclusion
CAR 01: The PDD version 01, Section A.2., didn't describe the scenario existing prior to the start of the project, present scenario and baseline	EB 41 Annex 12	<u>Answer 27/01/2012</u> The requested information was included	The required information is included in the PDD V 02.



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scenario, as required by the EB 41 Ann 12.		in section A.2. of the second version of the PDD, dated 27/01/2012.	CAR 01 is closed
CAR 02: The PDD V 01, at the section A.4.1. informed that the Region/State/Country is Touros, and the City/Town/Community is Rio Grande do Norte. In Fact Rio Grande do Norte is the State, and Touros is the City.	EB 41 Annex 12	<u>Answer 27/01/2012</u> The information regarding the location of the project was corrected. Please refer to the second version of the PDD, dated 27/01/2012.	The information is corrected in the PDD V 02. CAR 02 is closed
CAR 03: The PDD V01, states that the PP is Ecopart Assessoria em Negócios Empresariais Ltda, and the Preliminari Environmental Licenses from Touros 1 and 2 are provided to Ecopart Investimentos S.A. Clarify the relationship between these two companies.	EB 41 Annex 12	<u>Answer 27/01/2012</u> Ecopart Assessoria em Negócios Empresariais Ltda. is the company name of the CDM consultancy. Ecopart Investimentos S.A. was the owner of the assets which were assigned to Zeta Energia S.A. The formal documentation of the project will be updated in the due course. Nevertheless, the documentation is in line with the local regulations. Additionally, a document evidencing that the assets owned by Ecopart Investimentos S.A. were transferred to Zeta Energia S.A. is attached.	The question is clarified. CAR 03 is closed
CAR 04: The PDD V 01, at the Section A.4.3. didn't included: <ul style="list-style-type: none"> - a description of how environmentally safe and sound technology, and know-how to be used, is transferred to the Host Party, - the scenario existing prior to the start of the implementation of the project activity, 	EB 41 Annex 12	<u>Answer 27/01/2012</u> The requested information was included in section A.4.3. of the revised version of the PDD, dated 27/01/2012.	The PDD V 02 is updated as required. CAR 04 is closed.



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<p>and</p> <ul style="list-style-type: none"> - the baseline scenario, - The emissions sources and the greenhouse gases involved in the project activity, as required by EB 41 Annex 12. 			
<p>CAR 05: The PDD version states that Touros 5 and 8 have an installed capacity of 28.8 MW , in disagree with the respective Environmental Preliminary Licenses, # 2011-043867/TEC/LP-0066 and #2011-044375/TEC/LP-0073, which authorize 17.6 and 16 MW.</p>	<p>EB 41 Annex 12</p>	<p><u>Answer 27/01/2012</u></p> <p>The CDM Project Activity considers that the wind power plants are going to participate in the energy auction to be conducted by the Chamber for the Commercialization of Electric Power (CCEE) in March 2012. However, do to technical constraints, Lagoa de Touros VIII was not qualified to participate. In this sense, this wind power plant is not being considered in the revised version of the PDD and all information related to it was taken from the document. The installed capacity of Lagoas de Touros 5 was wrongly informed in table presented in section A.4.3. The requested information was corrected in the second version of the PDD, dated 27/01/2012.</p>	<p>The PDD V 02 is updated and corrected.</p> <p>CAR 05 is closed.</p>
<p>CAR 06: The PDD Version 01, at the Section A.4.4. informs that the emission reductions expected in 2014 are 97,163 tonnes of CO₂e, and in 2021 70,122. This is not correct, as the remaining period of 2014 (from Aug 01 to Dec 31) is smaller as the initial period of 2021 (from Jan</p>	<p>EB 41 Annex 12</p>	<p><u>Answer 27/01/2012</u></p> <p>The information regarding the emission reductions expected in 2014 and 2021 was corrected. Please refer to the second version of the PDD, dated 27/01/2012.</p>	<p>The PDD V 02 is correctly updated.</p> <p>CAR 06 is closed.</p>



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01 to Jul 31).			
CAR 07: The PDD Version 01, at the Section B.4., states that the “project activity is the installation of a new connected renewable power plant/unit”. In fact, the project activity comprises 8 (eight) power plants.	EB 41 Annex 12	<u>Answer 27/01/2012</u> Lagoas de Touros VIII is not being considered in the revised version of the PDD. Please refer to the explanation provided above in CAR 05. The requested information was corrected in the second version of the PDD, dated 27/01/2012.	The PDD V 02 is correctly updated. CAR 07 is closed.
CAR 08: The PDD Version 1.0, at the Section B.5. refers to the Guidelines in the demonstration and assessment of prior consideration of the CDM, EB 49, Annex 22. This Guidelines has a updated version	EB 41 Annex 12	<u>Answer 27/01/2012</u> The version of the Guidelines was updated. Please refer to the second version of the PDD, 27/01/2012.	The PDD V 02 is correctly updated to Annex 13, EB62. CAR 08 is closed.
CAR 09: The PDD Version 1.0, at the Section B.5. didn't used the Version 06.0.0. of the <i>Tool for the demonstration and assessment of additionality</i> .	EB 41 Annex 12	<u>Answer 27/01/2012</u> The version of the Tool was updated. The main revisions are connected to the new guidance provided by the tool regarding the common practice analysis. Please refer to the second version of the PDD, 27/01/2012. Documents used in the common practice are referenced in the PDD and/or attached to this protocol.	The PDD V 02 is updated and changed the geographical analysis, from the country, to the Rio Grande do Norte state, justifying the environmental changes due e.g., costs related to tariffs and environmental requests. CAR 09 is closed.
CAR 10: The PDD V01, at the Section B.5. at pages 15 and 24 has not the correct reference to	EB 41 Annex 12	<u>Answer 27/01/2012</u>	The PDD V02 is updated and corrected,



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the Tables ("Error! Reference not found. – In Portuguese: Erro! Fonte de referência não encontrada.)		The requested information was corrected in the second version of the PDD, dated 27/01/2012.	CAR 10 is closed.
CAR 11: The PDD V 01, at the Section B.6.3., adopted the EF grid, BM, $y = 0.1164 \text{ tCO}_2\text{e/MWh}$, in disagree with the presented in the support spreadsheet.	EB 41 Annex 12	<u>Answer 27/01/2012</u> Project Participants have opted to change the data vintage used for the calculation of the emission factor of the grid. Instead of ex-ante option, the revised version of the PDD used the ex-post option. With the purpose of estimating the ex-post emission factor, data from 2010 which is available at the Brazilian DNA website, was used. Please refer to the second version of the PDD and CERs calculation spreadsheet, both dated 27/01/2012.	The PDD V 02 is updated, with the calculation of the EF ex post. The DOE verified the figures in the PDD, and they are in accordance with the Brazilian DNA publication. CAR 11 is closed.
CAR 12: The PDD Version 01, at the Section B.8. didn't indicated if the person/entity is also a project participant listed in Annex 1, as required by the EB 41 Annex 12.	EB 41 Annex 12	<u>Answer 27/01/2012</u> The requested information was included in section B.8. of the revised version of the PDD, dated 27/01/2012.	The PDD V 02 is updated as required. CAR 12 is closed.
CAR 13: The PDD Version 1.0, at the Section C.2., didn't inform whether the project activity will use a renewable or a fixed crediting period, nor completed accordingly the Sections C.2.1. or C.2.2.	EB 41 Annex 12	<u>Answer 27/01/2012</u> The requested information was included in section C.2 of the revised version of the PDD. Please note that only section C.2.1. was completed since this section refers to the option actually chosen by the Project Participants (PPs). It is PPs understanding that, since the fixed	The PDD V 02 is updated as required. CAR 13 is closed.



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		crediting period was not the chosen one, the sections referring to it must not be completed. Please refer to the second version of the PDD, dated 27/01/2012.	
CAR 14: The PDD Version 1.0, at the Section C.2.1. didn't indicated hat each crediting period shall be at most 7 years and may be renewed at most two times.	EB 41 Annex 12	<u>Answer 27/01/2012</u> It is PPs understanding that this section does not have to be completed since this information corresponds to the ruling provided by the EB 41, Annex 12. However, this information was included in section C.2.1 as requested by the DOE. Please refer to the second version of the PDD, dated 27/01/2012.	The PDD V02 is updated as requested. CAR 14 is closed.
CAR 15: The PDD version 01 states that the Preliminary Environmental License from Touros II is # 2011-037815/TEC/LP-0020. The correct ones is # <u>2010-03785/TEC/LP-0120</u> .	EB 41 Annex 12	<u>Answer 27/01/2012</u> This requested information was corrected in the second version of the PDD, dated 27/01/2012.	The PDD V 02 is updated as required. CAR 15 is closed.
CAR 16: CAR: The Local Stakeholder consultation, according to the Brazilian DNA resolution # 7, shall include, among others, the municipal government, the city council, the municipal environmental agency and community associatons from the involved municipalities. The Preliminary Environmental Licenses from Lagoa de Touros IV, V and VI, states that the project acivity is respectively in the municipalities of (LT IV) Rio do Fogo and Touros, (LT V) Pureza and (LT VI) Pureza. The local stakeholder consultation only is conducted in the Touros	EB 41 Annex 12	<u>Answer 27/03/2012</u> The information provided in the environmental permits is not precise. The Project design of the wind power plants supplied to EPE is attached. In accordance with this documents, Lagoas de Touros V Wind Power Plant is to be implemented in Fazenda Canaã and Lagoas de Touros VI is to be implemented in Fazenda Curicaca. The register of these properties is attached	The question is answered and the DOE observed that the involved municipalities are neighboring, and due this fact the information in the Preliminary License had a wrong information. The question is clarified, and: <ul style="list-style-type: none">- The PDD is updated, including the Rio do Fogo municipality.- The invitations were sent to



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municipality.		confirming that the lands are located in the Rio do Fogo municipality. Therefore, it is evidenced that none of the projects are to be implemented in the Pureza municipality. However, as evidenced above, the mentioned Wind Power Plants are all partially (Lagoas de Touros IV) or totally located at Rio do Fogo (Lagoa de Touros V and VI). Please note that the proposed project activity consists of a Wind Power Plant Complex for which the majority of the plants (5 out of 7) is located in the Touros municipality. On September 29th, 2012, invitation letters were sent to Touros' institutions and to the other agents required by Resolution #7 of the Brazilian DNA. Considering the project is to be partially implemented in the Rio do Fogo municipality, invitation letters were also sent to the municipal government, the city council, the municipal environmental agency and to a community association from Rio do Fogo on March 28th, 2012	<p>the Rio do Fogo Stakeholders on March 28, 2012.</p> <p>The Brazilian DNA regulation # 7, states that the invitations shall be sent 15 days before the validation beginning, in order to ensure that any comments are included in the documentation to be submitted to this (the DNA) commission. Due this requirement, the DOE waited until April 13, 2012, and as no comments were received,</p> <p>CAR 16 is closed.</p>
CAR BQA 1 – According to the Guidelines on the Assessment of Investment Analysis version 5, “The period of assessment should not be limited to the proposed crediting period of the CDM project activity. Both project IRR and equity IRR calculations shall as a preference reflect the	EB 62 Annex 5	<p><u>Answer 27/01/2012</u></p> <p>The typical lifecycle of a wind turbine is 20 years of operation. This information is provided by VESTAS at http://www.vestas.com/en/wind-power-</p>	<p>The answer was accepted.</p> <p>According to the manufacturers the period of operation is 20 years.</p>



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period of expected operation of the underlying project activity (technical lifetime), or . if a shorter period is chosen . include the fair value of the project activity assets at the end of the assessment period". Provide evidences to support the period of expected operation used in the investment analysis.		plants/operation-and-service.aspx#/vestas-univers and by GE at http://www.ge-energy.com/content/multimedia/files/downloads/GEA18178C_1.6-100%20Wind%20Turbine_r1.pdf . VESTAS and GE are the manufacturers of the turbines that are planned to be used at the wind parks. In addition to this, the 20 years period is the term of the PPA.	CAR BQA 01 is closed.
CAR BQA 2 – Clarify whether a post-tax or pre-tax benchmark was used.	EB 62 Annex 5	<u>Answer 27/01/2012</u> The benchmark used is post-tax. The explanation is provided in section B.5., <i>Sub-step 2c</i> while the calculation of the cost of debt is explained. Please note that some additional information related to the Debt/Equity structure used in the calculation of the benchmark is provided in the second version of the PDD. In addition to this, the source of information used to determine the US expected inflation was modified. These two modifications aims at increasing consistency amongst the CDM Project Activities being developed by the Project Participants and increase the conservativeness of the benchmark applied in the investment analysis.	First Answer (14/02/2012) All changes have been accepted. CAR BQA 02 is closed.



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<p>CAR BQA 03 – Present all evidences to support the followings input values. Make sure that all information and evidences are based on the relevant information available at the time of the investment decision and not information available at an earlier or later point. Provide the dates of each evidence.</p> <p>(a) Plant capacity: 193,8 MW; (b) Plant Load Factor: 43,8%; (c) O&M costs: BRL 115.000 (BRL/tower/year) (d) Land Lease: 1,6% (% of revenues) (e) Environmental/Managerial: BRL 1.053.982 (BRL/year) (f) - Insurance: 0.27%</p>	VVV 111	<p><u>Answer 27/01/2012</u></p> <p>As mentioned in the PDD, the starting date of the project activity is after the commencement of the validation, or rather, the investment decision has not been made yet. Therefore, the input values are based on the most recent information available at the time the GSP of the project started.</p> <p>The documents confirming the requested information are:</p> <p>(a) Due to technical constraints, Lagoas de Touros VIII is no longer being considered in the proposed project activity. Details are provided above in CAR 05 response. Therefore, the installed capacity of the proposed project activity has being updated to 177,80MW. This is in line with the Wind Certification conducted by a third party as referenced in the Table 9 of the PDD. The certificates were provided to the DOE during the site visit;</p> <p>(b) The plant capacity factor considered in the investment analysis corresponds to the average capacity factor of all sites. This number was updated as a consequence of the</p>	<p>First Answer (24/02/2012):</p> <p>All evidences have been checked and were considered in accordance to the CDM rules.</p> <p>CAR BQA 3 is closed.</p>
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		<p>exclusion of Lagoa de Touros VIII Wind Power Plant from the CDM Project Activity. The revised version of the IRR calculation spreadsheet is attached. The capacity factor of each site is provided by the third party certification as referenced in the Table 9 of the PDD. The certificates were provided to the DOE during the site visit;</p> <p>(c) O&M costs were taken from manufacturer quotation (page 11) dated July 2011. In line with this document, there are no O&M expenses during the first two years of operation. Therefore the IRR calculation spreadsheet was revised;</p> <p>(d) The Land Lease agreement is attached. Please refer to the attached file named "CAR BQA 03 - Contrato_RN_Ecopart Dianorte_Locação Touros";</p> <p>(e) This input value was based on PPs experience;</p> <p>(f) Based on PPs experience and consistent with the insurance of other operational small hydro power plants. Please refer to the files named "Apólice - Hidrelétrica Pipoca - RCG" and "Apólice - Hidrelétrica Pipoca -</p>	
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		RO". The value used is slightly higher to account for the risk perception related to the implementation of wind power plants in Brazil;	
CL 01: Provide a copy from: <ul style="list-style-type: none"> - the ANEEL Licenses from the Wind Farms; - the Data Sheet (From Portuguese Ficha de Dados); - the Data Sheet – Location and Collection (From portuguese Memorial Descritivo – Localização eAcervo) - the Anexes VII and VIII provided to EPE (Energetic Research Company) 	EB 41 Annex 12	<u>Answer 27/01/2012</u> Regarding the requested documents, the Project Participants inform that: <ul style="list-style-type: none"> - The proposed project activity is in an early stage of development. In this sense the ANEEL Ordinances were not issued yet; - The data sheet of each wind power plant is attached; - The Project Design, which presents details about the location and access to the plants, is attached; - Annexes VII (Land Use Rights Declaration) and VIII (Grid Connection Declaration) of all the sites are attached. The documents described above were all forwarded to the Brazilian Energy Research Company (EPE) as part of the technical qualification of the plants in the auction conducted by the CCEE.	The PP provided the requested annexes. CL 01 is closed.



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<p>CL 02: The DOE converted the Wind Certificate coordinates from the first aerogenerator, but the conversion is lightly different (e.g.: Touros I: -35.4260 x -35.4253 and -5.3007 x -5.3003) Inform which conversion is adopted, in order to confirm the Location. (it is necessary too to provide the Data Sheet – Location and Collection asked for in another CL, to confirm this location).</p>	<p>EB 41 Annex 12</p>	<p><u>Answer 27/01/2012</u></p> <p>The coordinates were corrected and the conversion was made following the Córrego Alegre system, available at <http://www.carto.eng.uerj.br/cgi/index.cgi?x=utm2geo.htm>. Please refer to the second version of the PDD, dated 27/01/2012.</p> <p>The requested documentation is forwarded as part of the answer to CL 1.</p>	<p>The question is clarified, and the PDD V02 updated and corrected.</p> <p>CL 02 is closed.</p>
<p>CL 03: Clarify if Touros 4,5,6,7,8 will use Vestas or GE turbines. The PDD informs model Vestas, from GE manufacturer, and vice versa. Include the reference of the GE manual, in Table 3.</p>	<p>EB 41 Annex 12</p>	<p><u>Answer 27/01/2012</u></p> <p>Lagoas de Touros VIII is not being considered in the revised version of the PDD. Please refer to the explanation provided above in CAR 05. Touros 4, 5, 6 and 7 will use GE Turbines. This information was corrected and the GE manual was included in the second version of the PDD, dated 27/01/2012.</p>	<p>The question is clarified, and the PDD V 02 is updated and corrected.</p> <p>CL 03 is closed.</p>
<p>CL 04: The PP are requested to update to the latest version available, the following documents:</p> <ul style="list-style-type: none"> - Tool to calculate the emission factor for an electricity system; - Methodology ACM0002; - Tool for the demonstration and assessment of additionality. 	<p>EB 41 Annex 12</p>	<p><u>Answer 27/01/2012</u></p> <p>The versions of the Tools and of the Methodology were updated. Please refer to the second version of the PDD, 27/01/2012.</p>	<p>The documents were updated in the PDD V02.</p> <p>CL 04 is closed.</p>
<p>CL 05: Clarify why the PDD Version 1.0, at the</p>	<p>EB 41</p>	<p><u>Answer 27/01/2012</u></p>	<p>The PDD V02 included an</p>



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Section B.5., in the identification of alternatives, didn't included other types (e.g.: hydro, biomass, fossil fuel) of power plant with a similar capacity?	Annex 12	Other types of alternatives are not realistic. An explanation for not including other alternatives was included in the second version of the PDD, dated 27/01/2012.	explanation due the exclusion of these alternatives. CL05 is closed.
CL 06: In the PDD Version 1.0, Table 6, there are future events, so informed with a “*”. This is missing in the expected date of Construction Permit Issuance.	EB 41 Annex 12	<u>Answer 27/01/2012</u> Table 6 was excluded from the PDD. The information previously disclosed in this table is provided in section C.1.1. of the revised version of the PDD (identification of the starting date of the project activity). Nevertheless, it is worth mentioning that none of these events has happened yet. In this sense, the table was amended to clearly confirm that all the dates of the listed events are estimated. Please refer to the second version of the PDD, dated 27/01/2012.	The PDD V02 is updated and clarified. CL 06 is closed.
CL 07: Provide a copy from the document: - RAS – Environmental Simplified Study	EB 41 Annex 12	<u>Answer 27/01/2012</u> A copy of the requested document is attached.	The PP provided a copy from the RAS. CL 07 is closed.
CL 08: Include in the PDD the information that the data will be kept at least for 2 years after the end of the latest crediting period.	EB 41 Annex 12	<u>Answer 27/01/2012</u> The requested information was included in section B.7.2. of the revised version of the PDD, dated 27/01/2012.	The PDD V02 is updated and included the required information. CL 08 is closed.
CL 09: The PDD Version 01, at the Section C.1.2.	EB 41	<u>Answer 27/01/2012</u>	The question is clarified, and the



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states that the operational lifetime of the project activity is 25y – 0m. Give the reference to this information.	Annex 12	In accordance with the answer provided above in CAR BQA 1, the typical lifetime of a wind turbine is 20 years of operation. Reference to this information is also mentioned above in CAR BQA 1 response. The Section C.1.2. of the PDD was revised accordingly. Please refer to the revised version of the document, dated 27/01/2012.	PDD V02 updated in accordance. CL 09 is closed.
CL 10: Clarify the national laws related to environmental impacts study, and include in the PDD a brief comment.	EB 41 Annex 12	<u>Answer 27/01/2012</u> Sections D.1 and D.2 of the PDD were revised in order to reflect the local environmental regulations related to the implementation of wind power plants. The second version of the PDD, dated 27/01/2012, as well as a copy of the CONAMA Resolutions mentioned in the PDD, are attached.	The question is clarified, and the PDD V02 is updated in accordance. CL 10 is closed.
CL 11: Provide a copy from the letter sent to the Stakeholders.	EB 41 Annex 12	<u>Answer 27/01/2012</u> Copies of all letters sent to the local stakeholder consultation process are attached.	The copies from the letters are provided. CL 11 is closed.
CL BQA 1 – Clarify with evidences the moment of investment decision, in order to guarantee that the input values are the correct ones at this moment in the project chronology.	EB 62 Annex 5	<u>Answer 27/01/2012</u> As mentioned above in CAR BQA 03 response and in the PDD, the starting date of the project activity is after the commencement of the validation, or rather, the investment decision has not	Answer 1 (20/02/2012) DOE agrees to the approach used.



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		been made yet. Therefore, the input values are based on the most recent information available at the time the GSP of the project started.	CL BQA 01 is closed.
CL BQA 02 – Explain the suitability of the beta used in the calculation of the benchmark. And why it was not used the value suggested in the EB 62 annex 5.	EB 62 Annex 5	<p><u>Answer 27/01/2012</u></p> <p>The PPs understand that the use of the beta is suitable since it captures the risk of investing in a given industry sector. However, it was identified that there is not significant amount of Brazilian electricity companies listed in the stock exchange. In this sense, the available information would not be sufficient for the beta estimation.</p> <p>For this reason, the beta from the US based companies was adopted. The US information was unlevered using specifics variables from the United States, such as their tax rate and financing percentage, and re-leveraged considering the Brazilian tax rate and financing percentage.</p> <p>As per paragraph 15 of Annex 5, EB62, the use of the values presented in its Appendix A is not mandatory. In fact, project participants calculated the benchmark using parameters that are standard in the market clearly presenting</p>	<p>Answer 1 (24/02/2012)</p> <p>Explanation about beta has been accepted and the DOE agrees to the premises and lack of comparable companies in the Brazilian scenario.</p> <p>CL BQA 02 is closed.</p>



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		the source of data used, as stipulated in <i>option b</i>).	
CL BQA 03 - Did the project participants rely on values from Feasibility Study Reports (FSR) that are approved by national authorities for proposed CDM project activities?	VVM 113	<u>Answer 27/01/2012</u> No Feasibility Study Report approved by national authorities was used.	The answer was accepted. CL BQA 03 is closed.