



VALIDATION REPORT DEUTSCHE BANK AG, LONDON BRANCH

VALIDATION OF THE LAJEADO GRANDE I WIND POWER PLANT

REPORT NO. **BRAZIL-VAL/ BR.1112105**
REVISION NO. **02**

BUREAU VERITAS CERTIFICATION

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



VALIDATION REPORT

Date of first issue: 23/03/2012	Organizational unit: Bureau Veritas Certification Holding SAS
Client: Deutsche Bank AG, London Branch	Client ref.: Milena Lopez

Summary:

Bureau Veritas Certification has made the validation of the [Lajeado Grande I Wind Power Plant](#) located in [municipality of São Francisco de Paula, Rio Grande do Sul state, region of Brazil](#) to be included in the [Wind Power Programme of Activities in 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 specific CPA-DD, the baseline study, monitoring plan and other relevant documents, and consisted of the following three phases: i) desk review of the CPA design and the baseline and monitoring plan; ii) follow-up interviews with the 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 Coordinating/Managing Entity revised its CPA-DD.

In summary, it is Bureau Veritas Certification's opinion that the CPA is correctly included in the [Wind Power Programme of Activities in Brazil](#) and meets the relevant UNFCCC requirements for the CDM and the relevant host country criteria.

Report No.: BRAZIL-val/ BR.1112105	Subject Group: CDM
Project title: Lajeado Grande I Wind Power Plant	
Work carried out by: Rubens Ferreira – Lead Verifier Karina Polido – Verifier Bernardo Lima – Financial Specialist Antonio Vinicius Gomes – Financial Specialist	
Internal Technical Review carried out by: Guilherme Lefèvre	
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Work approved by:

[Flavio Gomes – Global Product Manager](#)

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1 INTRODUCTION

[Deutsche Bank AG, London Branch](#) has commissioned Bureau Veritas Certification to validate its CPA [Lajeado Grande I Wind Power Plant](#) at [municipality of São Francisco de Paula, Rio Grande do Sul state, region of Brazil](#) to be included in [Wind Power Programme of Activities in Brazil](#).

This report summarizes the findings of the validation of the CPA, 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 CPAs'. The validation is an independent third party assessment of the project design. In particular, the CPA'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 CPAs 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 documents, the CPA'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	TA 1.2	TASK PERFORMED*
Team Leader	Rubens Ferreira	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> DR <input checked="" type="checkbox"/> SV <input checked="" type="checkbox"/> RI
Team Member	Karina Polido	<input type="checkbox"/>	<input type="checkbox"/> DR <input type="checkbox"/> SV <input checked="" type="checkbox"/> RI
Technical Specialist	N.A.	<input type="checkbox"/>	<input type="checkbox"/> DR <input type="checkbox"/> SV <input type="checkbox"/> RI
Financial Specialist	Bernardo Lima	<input type="checkbox"/>	<input checked="" type="checkbox"/> DR <input type="checkbox"/> SV <input checked="" type="checkbox"/> RI
Financial Specialist	Antonio Vinicius Gomes	<input type="checkbox"/>	<input checked="" type="checkbox"/> DR <input type="checkbox"/> SV <input checked="" type="checkbox"/> RI
Internal Technical Reviewer (ITR)	Guilherme Lefèvre	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> DR <input type="checkbox"/> SV <input type="checkbox"/> RI
Specialist supporting ITR	N.A.	<input type="checkbox"/>	<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 Clean Development Mechanism Validation and Verification Manual (version1.2)., Procedures for registration of a programme of activities as a single CDM project activity and issuance of certified emission reductions for a programme of activities (Version04.1) issued by the Executive Board at its 55th meeting on 30/06/2010. 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 specific CPA-DD submitted by [Deutsche Bank AG, London Branch](#) and additional background documents related to the project design and baseline, i.e. country Law, CPA-DD form, 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, [Deutsche Bank AG, London Branch](#) revised the specific CPA-DD and resubmitted it on [09/04/2012](#).

The validation conclusions presented in this report relate to the project as described in the specific CPA-DD version [04](#).

2.2 Follow-up Interviews

On [01/12/2012](#) Bureau Veritas Certification performed interviews with stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of [Deutsche Bank AG, London Branch](#), [Ecopart Assessoria em Negócios Empresariais Ltda](#) and [Zeta Energia S.A.](#) were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
CME: Deutsche Bank AG, London Branch	<ul style="list-style-type: none"> ➤ PoA-DD and specific CPA-DD (CPA Lajeado Grande I Wind Power Plant) project design document ➤ Technology description ➤ Additionality assessment ➤ Environmental assessment ➤ Monitoring plan ➤ Monitoring methodology ➤ Baseline emissions estimation ➤ Project emissions estimation ➤ Emission reductions estimation ➤ Stakeholder consultation process ➤ Record keeping system of the PoA
Implementer: Zeta Energia S.A.	<ul style="list-style-type: none"> ➤ PoA-DD and specific CPA-DD (CPA Lajeado Grande I Wind Power Plant) project design document ➤ Technology description ➤ Additionality of the real case CPA-DD (CPA Lajeado Grande I Wind Power Plant) ➤ Monitoring plan ➤ Monitoring methodology ➤ Baseline emissions estimation ➤ Project emissions estimation ➤ Emission reductions estimation. ➤ Environmental requirements compliance. ➤ Stakeholder consultation process
Consultant: Ecopart Assessoria em Negócios Empresariais Ltda	<ul style="list-style-type: none"> ➤ PoA-DD and specific CPA-DD (CPA Lajeado Grande I Wind Power Plant) project design document ➤ Technology description ➤ Additionality of the real case CPA-DD (CPA Lajeado Grande I Wind Power Plant) ➤ Monitoring plan ➤ Monitoring methodology ➤ Baseline emissions estimation ➤ Project emissions estimation ➤ Emission reductions estimation. ➤ Environmental requirements compliance. ➤ Stakeholder consultation process

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 CME/project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions;
- (b) The applicable CDM requirements have not been met;
- (c) There is a risk that emission reductions cannot be monitored or calculated.

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.

The validation team may also raise a forward action request (FAR) during validation to identify issues related to programme implementation that require review during the first verification of the CPA under the PoA.

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 programme.

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

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

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

- The validation activity has been performed by the team by exercising utmost diligence and complete adherence to the CDM rules and requirements.
- The review encompasses all aspects related to the project which includes PoA design, baseline, additionality, monitoring plans and emission reduction calculations, internal quality assurance systems of the CME as well as the PoA, 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 Team Leader and Validation Team and discusses these matters with Team Leader.

After the agreement of the responses on the 'Clarification Request' from the Team Leader 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 [35](#) Corrective Action Requests (CARs) and [23](#) 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 corresponds to the VVM paragraph.

3.1 Project design document (57)

The validation team hereby confirms that the CPA-DD complies with the latest CPA-DD form and validated generic CPA DD.

3.2 CPA description (64)

[The entity responsible for the proposed CPA is Zeta Energia S.A. \(hence forth referred to as CPA implementer\). Zeta Energia S.A. is a company which prospects renewable energy projects, focusing on wind energy. The CPA implementer is not listed as a project participant of the PoA.](#)

The proposed CDM programme activity (CPA) consists of the implementation of the *Lajeado Grande I* Wind Power Plant with 30MW of installed capacity. The plant is expected to become operational in 2015 and is located in São Francisco de Paula municipality, Rio Grande do Sul, Brazil.

The CPA is being proposed in the context of the *Wind Power Programme of Activities in Brazil* which has the primary objective of helping Brazil to meet its rising demand for energy due to economic growth and improving the supply of electricity, while contributing to environmental, social and economic sustainability by increasing the share of renewable energy in total electricity consumption of the country (and for the region of Latin America and the Caribbean).

The PoA is a voluntary coordinated action by the managing entity Deutsche Bank AG, London Branch consisting of the implementation of renewable energy projects in Brazil. The hub of the PoA is the construction of Greenfield wind power plants connected to the Brazilian Interconnected System (from the Portuguese *Sistema Interligado Nacional – SIN*).

The *Lajeado Grande I* Wind Power Plant is being developed in the municipality of São Francisco de Paula, Rio Grande do Sul state, **Erro! Fonte de referência não encontrada.** region of Brazil. The geographic coordinates of the site where the wind power plant is going to be implemented as well as a figure illustrating where the plant is located within the PoA geographical boundary (i.e. Brazil) are presented below.



Geographic Coordinates*	Lajeado Grande I Wind Power Plant
Longitude (West)	-50.66
Latitude (South)	-29.17

Figure 1 - Location of the Project Activity – Lajeado Grande I Wind Power Plant - under the PoA – Wind Power Programme of Activities in Brazil.

* The information refers to the location of the first generation unit (wind turbine) of the plant as provided in the construction permit and wind certification provided by a third party.



The full implementation of this project activity will generate estimated annual reductions of 21,063 tCO₂e.

The expected operational lifetime of the CPA is 20 years.

The crediting period is renewable and the length of this crediting period is 7 years.

Bureau Veritas Certification confirms that the CPA boundary is included in the PoA boundary.

The validation team hereby confirms that the programme description in CPA-DD ([ref/33/](#)) is accurate and complete in all respects.

The DOE validate the accuracy and completeness of the project description by a document review of the CDM-CPA-DD specific, version 4 ([ref/33/](#)), the [Wind Certification](#) ([ref/12/](#)), the methodology ACM0002 version 12.3.0 ([ref/A/](#)) and a site visit on 01/12/2011. Also, the following documents were analyzed during the DOE's validation of the project description as provided in the specific CDM-CDA-DD, version 4 ([ref/33/](#)): [/14/](#) and [/37/](#).

3.3 Baseline and monitoring methodology

3.3.1 Applicability of the selected baseline and monitoring methodology (76-77)

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

The *Lajeado Grande I* Wind Power Plant consists of a Greenfield wind power plant that will be connected to the Brazilian Interconnected System. In this sense, it complies with the applicability conditions of ACM0002 (version 12.3.0) as detailed below.

According to the applicability conditions the ACM0002 methodology *is applicable to grid-connected renewable power generation project activities that (a) install a new power plant at a site where no renewable power plant was operated prior to the implementation of the project activity (greenfield plant); (b) involve a capacity addition; (c) involve a retrofit of (an) existing plant(s); or (d) involve a replacement of (an) existing plant(s).*

The *Lajeado Grande I* Wind Power Plant is a grid connected Greenfield wind power plant, thus corresponding to option (a) provided in the above paragraph.

Steps taken to assess the applicability condition: document review of the CDM-CPA-DD specific, version 4 ([ref/33/](#)), the [Wind Certification](#) ([ref/12/](#)) and a site visit on 01/12/2011.



The methodology also provides the following conditions:

- *The project activity is the installation, capacity addition, retrofit or replacement of a power plant/unit of one of the following types: hydro power plant/unit (either with a run-of-river reservoir or an accumulation reservoir), wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit;*

The *Lajeado Grande I* Wind Power Plant consists of the installation of new wind power plant.

Steps taken to assess the applicability condition: document review of the CDM-CPA-DD specific, version 4 (ref/33/), the Wind Certification (ref/12/) and a site visit on 01/12/2011.

- *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 *Lajeado Grande I* Wind Power Plant consists of the implementation of Greenfield wind power plants. Therefore, this applicability condition is not applicable.

Steps taken to assess the applicability condition: document review of the CDM-CPA-DD specific, version 4 (ref/33/), the Wind Certification (ref/12/) and a site visit on 01/12/2011.

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



In case of hydro power plants using multiple reservoirs where the power density of any of the reservoirs is lower than $4W/m^2$ 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 $4W/m^2$;*
- All reservoirs and hydro power plants are located at the same river and where are designed together to function as an integrated project that collectively constitute 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 $4W/m^2$, is lower than 15MW;*
- The total installed capacity of the power units, which are driven using water from reservoirs with power density lower than $4W/m^2$, is less than 10% of the total installed capacity of the project activity from multiple reservoirs.*

Not applicable. The proposed CPA does not correspond to a hydropower plant.

Steps taken to assess the applicability condition: document review of the CDM-CPA-DD specific, version 4 (ref/33/), the Wind Certification (ref/9/) and a site visit on 01/12/2011.

Finally, the methodology has the following restrictions – i.e. project activities may not be applicable in the following cases:

- 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 result in new single reservoir or in the increase in existing single reservoir where the power density of the reservoir is less than $4W/m^2$.*

The proposed CPA is still eligible to the use of ACM0002 since it does not correspond to any of the restrictions listed above.

Steps taken to assess the applicability condition: document review of the CDM-CPA-DD specific, version 4 (ref/33/), the Wind Certification (ref/12/) and a site visit on 01/12/2011.

In addition to the applicability conditions of the ACM0002 methodology, the applicability conditions of the tools used must also be assessed. In order to estimate the baseline emissions occurring after the implementation of the CPA the “Tool to calculate the emission factor for an electricity system” is used. This tool provides the steps required to estimate the CO₂ emission factor, which consists of a “combined margin”, for the displacement of electricity generated by plants connected to an electric grid.



As described in section E.6.1 of the PoA-DD, off-grid power plants were not considered. Hence, the requirements of Annex 2 of the tool, referring to the applicability conditions that shall be met when this kind of plants are considered, are not applicable. Besides, the Brazilian Electric System is neither partially nor totally located in any Annex-I country.

In this sense, it can be concluded that there are no applicability conditions preventing the use of this tool to estimate the CO₂ emission factor of the Brazilian Electricity System in the context of the proposed CPA project activity.

The eligibility criteria of the applicability of the selected baseline and monitoring methodology is set as:

Conditions that ensure compliance with applicability and other requirements of single or multiple methodologies applied by CPAs

The *Lajeado Grande I* Wind Power Plant consists of a Greenfield wind power plant that will be connected to the Brazilian Interconnected System. In this sense, it complies with the applicability conditions of ACM0002.

The DOE hereby confirms that the selected baseline and monitoring methodology [ACM 0002, version 12.3.0 \(ref/A/\)](#), “[Tool for the demonstration and assessment of additionality](#)”, [version 06.0.0 \(ref/B/\)](#) and “[Tool to calculate the emission factor for an electricity system](#)”, [version 02.2.1 \(ref/C/\)](#) are applicable to CPAs to be included in the PoA, which complies with all the applicability conditions and relevant eligibility criteria therein.

The DOE confirms that there are not greenhouse gas emissions occurring within the proposed CDM project activity boundary as a result of the implementation of the proposed CDM project activity which are expected to contribute more than 1% of the overall expected average annual emission reductions, which are not addressed by the applied methodology

3.3.2 CPA boundary

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

[Lajeado Grande I Wind Power Plant](#) is located in Brazil and, therefore, the project boundary is within the geographical area established in the PoA.

3.3.3 Baseline identification (87-88)

The steps taken to assess the requirement given in paragraph 87 and 88 of the VVM are described below.



The CPAs to be included in the proposed PoA will correspond to the installation of a new grid-connected wind power plant. Therefore, according to ACM0002 (version 12.3.0), the baseline scenario for this option is the following:

- Greenfield wind power plants:

“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”.

According to the applicability conditions the ACM0002 methodology is applicable to grid-connected renewable power generation project activities that (a) install a new power plant at a site where no renewable power plant was operated prior to the implementation of the project activity (greenfield plant); (b) involve a capacity addition; (c) involve a retrofit of (an) existing plant(s); or (d) involve a replacement of (an) existing plant(s).

The Lajeado Grande I Wind Power Plant is a grid connected Greenfield wind power plant, thus corresponding to option (a) provided in the above paragraph.

The DOE has verified the baseline scenario by cross-checking the CPA-DD (ref/33/), against the Methodology ACM0002, version 12.3.0 (ref/A/).

Based on the above assessment, the validation team hereby confirms that:

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

3.3.4 Emission reductions (92-93)

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

Baseline emissions (BE_y)



The proposed CPA corresponds to the installation of a new grid-connected Greenfield wind power plant. Therefore, the baseline emissions are calculated as follows:

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

Equation 1

Where,

BE_y = Baseline emissions in year y (tCO₂);

$EG_{PJ,y}$ = 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);

$EF_{grid,CM,y}$ = 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 this kind of project, $EG_{PJ,y}$ is determined as follows.

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

Equation 2

Where,

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

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

The quantity of net electricity generation supplied by the project' plant to the grid in year y ($EG_{facility,y}$, in MWh) is determined, for the purpose of ex-ante estimative as being equal to the installed capacity of the plant multiplied by the capacity factor (Plant Load Factor) as determined by the Wind Certification (ref/12/) specially conducted for the site considered in the CPA (as verified in the description of the executive summary from the Wind Certification) – and by the number of hours in which the plant is forecasted to be operational during year y .

The installed capacity of *Lajeado Grande I* Wind Power Plant is 30MW, as described previously in this CPA. The Wind Certification at the project site was conducted by Camargo Shubert, a reputed wind certification company. The results of the study show that the capacity factor of the plant is 35.7%. Considering the plant will be operational 8760 hours/year, the electricity generated by the plant is 93,699MWh/year.

The Plant Load Factor (PLF) of the *Lajeado Grande I* Wind Power Plant was defined as 35.7 %, this value was presented in the Wind Certification dated 16 November 2011 (ref/9/). The Wind Certification, dated 16 November 2011, was done by a third party



contracted by the project participants: Camargo-Schubert, in this way, it's in accordance with the EB 48, Annex 11 GUIDELINES FOR THE REPORTING AND VALIDATION OF PLANT LOAD FACTORS version 01 paragraph 3(b) (ref/K/)

As described in the registered PoA, the calculation of the combined margin CO₂ emission factor for grid connected power generation ($EF_{grid,CM,y}$) follows the steps established in the “Tool to calculate the emission factor for an electricity system”. For methodological choices and details as to how the emission factor was calculated, please refer to the PoA. The final results to be applied while calculation the emission reductions by each CPA are presented below.

$$EF_{grid,CM,y} = 0.2248tCO_2/MWh$$

The data and parameters used to calculate the OM and BM emission factor were presented by PP in calculation spreadsheets (ref/31/) and was crosschecked with data from the ONS (Electric System National Operator*) as demonstrated on the PoA Validation Report.

Finally, baseline emissions can be determined applying the results of $EG_{facility,y}$ and $EF_{grid,CM,y}$ to Equation 1 as follows,

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

$$EG_{PJ,y} = EG_{facility,y} = 93,699MWh$$

$$BE_y = 93,699MWh \times 0.2248tCO_2/MWh$$

$$BE_y = \text{Erro! Fonte de referência não encontrada.}tCO_2$$

Project Emissions (PE_y)

As explained in section E.6.1. of the registered PoA-DD, there are no sources of project emissions associated with the implementation of the proposed CPA.

Therefore, $PE_y = 0$.

Leakage Emissions (LE_y)

As explained in section E.6.1. of the registered PoA-DD, there are no sources of leakage emissions associated with the implementation of the proposed CPA.

* www.ons.org.br



Therefore, $LE_y = 0$.

Emission Reductions (ER_y)

According to ACM0002 emission reductions by a typical CPA are calculated as follows.

$$ER_y = BE_y - PE_y$$

Equation 3

Where,

ER_y = Emission reductions in year y (t CO₂e);

BE_y = Baseline emissions in year y (t CO₂);

PE_y = Project emissions in year y (t CO₂e).

Applying the results discussed above to Equation 3 we obtain,

$$ER_y = BE_y - PE_y$$

$$ER_y = \text{Erro! Fonte de referência não encontrada.tCO}_2 - 0 \text{ tCO}_2$$

$$ER_y = \text{Erro! Fonte de referência não encontrada.tCO}_2$$

Based on the above assessment, the validation team hereby confirms that:

- (a) All assumptions and data used by the project participants are listed in the PoA-DD and in the specific CPA-DD, 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 PoA-DD and in the specific CPA-DD;
- (c) All values used in the PoA-DD and in the specific CPA-DD 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 PoA-DD.

The DOE has verified the data and parameters used in the equations, including references to any other data sources used, by cross-checking them against the PoA-DD version 04 (ref/32/), CPA-DD version 04 (ref/33/), the methodology ACM0002 version 12.3.0 (ref/A/), the “Tool to calculate the emission factor for an electricity system” version 02.2.1 (ref/C/), the Wind Certification at the project site (ref/12/), excel file BR EF ex ante 2008 to 2010-def EF tool 2.2-2011.10.06 (ref/31 /), Emission Reduction Excel Spreadsheet - LGI_CERs_2012.04.09_v.3.xls (ref/15/) and during the site visit.



3.4 Additionality of the CPA

3.4.1 Start date of the CPA

Start of the CPA is identified as [22/12/2012](#) which is the date when the PPA (Power Purchase Agreement) is expected to be signed.

The starting date of the CPA is the date of first “real action” for the project implementation, *i.e.* the date when the Engineering, Procurement and Construction (EPC) contract will be signed.

The GLOSSARY OF CDM TERMS (Version 06.0) defines the start date as:

“In the context of a CDM project activity or PoA, the earliest date at which either the implementation or construction or real action of a CDM project activity or PoA begins.”

Since no actions were taken for the project implementation (no major expenditures committed for the project construction), the project starting date is based on the date when the [the PPA \(Power Purchase Agreement\) is expected to be signed](#) as Estimated based on A-3 2012 New Energy Auction which requires the plant to be operational by January 1st, 2015 as presented in ANEEL Ordinance nr. 554 dated September 23, 2011 (ref/43/).

The DOE was able to validate this start date by a document review of the CDM-CPA-DD version 4 (ref/33/) and the ANEEL Ordinance nr. 554 dated September 23, 2011 (ref/43/).

Bureau Veritas Certification confirms that the start date of the CPA is not prior to the commencement of the validation of the PoA, which is the date of the CDM-PoA-DD is first published for global stakeholder consultation.

3.4.2 Identification of alternatives (107)

The validation team considers the listed alternatives to be credible and complete.

3.4.3 Investment analysis (114)

The project proponent decided to use the Tool for the demonstration and assessment of additionality, version 06.0.0. /**Ref-B**/, which refers to the Guidelines on the assessment of investment analysis, version 05.0, /Ref-F/ and, therefore, these guidelines were used in the following analysis.

Validation Team adopted a five 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) Review feasibility reports, public announcements and annual financial reports related to the proposed CDM project activity and the project participants;
- d) Assessing the correctness of computations carried out and documented; and
- e) 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) Appropriateness of the financial indicator and benchmark:

Financial indicator: The project participant has chosen project IRR to demonstrate the additionality of the project. The Additionality Tool (Ver. 06.0.0) 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, 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 project IRR as financial indicator to demonstrate the additionality of the project is appropriate according to the Additionality Tool.

Benchmark: The additionality tool states that the discount rates and benchmarks shall be derived from “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;”, among others. The paragraph 29 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.”

The project participant has chosen the weighted cost of capital methodology (WACC), based on estimates of the cost of financing and required return on capital, regarding the project financing structure. Also, the PP used the CAPM methodology to calculate the required return on capital



BVC has accepted the benchmark based on the following:

The PP used the WACC to calculate the benchmark. The WACC (Weighted Average Cost of Capital) consists on a valid methodology used to determine the rate of return for the project, as stated in paragraph 12 of Annex5, EB62. WACC considers the project financing structure and determine the required project return based on a weighted average of the required returns for each financing source (basically, debt and equity financing).

Basically, the WACC combines the equity required return of 14.05% (real), estimated by the CAPM methodology (see below) over a 50.0% of equity in the capital structure and the debt estimated cost of 4.71% over a 50.0% of debt in the capital structure, resulting in a WACC of 9.38% (real rate), in accordance to calculations provided in **/Ref-09/**

The Capital Asset Pricing Model (CAPM) is one of the most widely accepted models used to determine the required rate of return on equity. As per option b) provided in the paragraph 15 of Annex5, EB62, it was estimated using the best financial practices. The CAPM calculates a newly introduced asset's non-diversifiable risk. CAPM takes into account the asset's sensitivity to non-diversifiable risk, better referred to as Beta (β). Embedded in the model is also the market premium which can be tracked using historical data from the local or relevant equity market. Basically, CAPM consists into a government bond rate increased by a suitable risk premium. It was used a risk-free government bond rate (30-year US Treasury bond rate of 2.22% in real terms) increased by a risk premium rate of 11.83% **/Ref-09/**

The cost of debt was calculated used the information provided by BNDES, the Brazilian development bank, following the best practices in the market.

Benchmark calculation was considered suitable because it followed the best practices in the market.

BVC agrees with all the data used in benchmark calculations (**/Ref-09/**) 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
Total	BRL	The PP provided a spreadsheet /ref 35/ – spreadsheet



Investment	98,876,116.49	<p><Capex>, which shows the components of total investment. The values of the investment components are backed by ref /38/, ref /39/, ref /40/ and ref /20/, which are based on the investment costs of other projects of the group. All the calculations are correct. According to ref/35/, the total investment cost equals 3,923,665 BRL/MW installed, considering that the data applied at the projection is backed by audited balance sheet by a third party. This value can be crosschecked with the total investment cost (BRL/MW) of other Brazilian wind farms, according to /ref 17/, which refers to BNDES approval for financing part of their investment cost, whose total value is estimated as 801.8 million BRL, or 4.26 million BRL/MW. In addition, when compared with other wind farms - and assuming that this project's total investment per installed capacity is around USD 2 million/MW (considering an exchange rate of 2 BRL / USD), the suitability was assessed by comparing such value with other projects:</p> <ul style="list-style-type: none"> - Rio do Fogo Wind Farm[*] (Brazil) – USD 2 million/ MW ; - Osorio Wind Farm[†] (Brazil) – USD 2.6 million/ MW; - Fuerza Eólica del Istmo Wind Farm[‡] (Mexico) – USD 2.5 million/ MW; - Electrica del Valle de Mexico Wind Farm[§](Mexico) – USD 2.6 million/ MW; - Los Cocos Wind Farm (Dominican Republic)^{**} – USD 2.7 million/ MW;
O&M costs	BRL 115,000/tower/year	PP has provided a document containing the estimates for O&M costs for a similar wind farm /ref 20/. The value was crosschecked by the DOE with a third party available source /ref 21/ that establishes that the O&M costs for a wind farm stands between 2% and 5% of the investment costs per year, with an average of 3.5%. Thus, for this Wind Farm, we would have: $3.5\% \times 98,876,116.49 / 14 = 247,190.29$ BRL/tower/year. So the number used by the PP is far more conservative.
Sales price for energy	BRL 120.25/MWh (average)	The PP provided evidence for project price in ref/35/ - spreadsheet "PDL NE", which is backed by ref /41/, a study from PSR consulting related to energy price

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

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

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

[§]<http://cdm.unfccc.int/UserManagement/FileStorage/J1HGRV0CNP9LBOEWA7FT6MI8S3XD52> accessed on 10/12/2011.

^{**}http://www.oficinascomerciales.es/icex/cda/controller/pageOfecomes/0,5310,5280449_5282927_5284940_4315472_DO,00.html accessed on 30/12/2011.



		forecasts. The value was crosschecked with the price of the auction of 2011 for renewable sources /ref 16/. According to this document, the final price for wind farms was 105.12 BRL/MWh, less conservative in comparison with the price informed by the PP. In general, the prices in the auction and the prices in the spot market may follow the same pattern. As described above, the sales price was cross-checked by using a third party available source: the validation team cross-checked the referred input value with a energy forecast from PSR a leading energy consulting company in Brazil and other countries. It is a study prepared to the project proponent based on 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 (ref /41/). PSR has been a global provider of technological solutions and consulting services in the areas of electricity and natural gas since 1987.
Transmission costs	BRL 3.13/kW/month	In accordance with ANEEL resolution # 1.127 / 2011/ref 27/ and /ref 28/
ANEEL Fee	BRL 1.929/kW /year	In accordance with ANEEL document # 360 / 2011/ref 26/
Taxes	PIS: 0.65% COFINS: 3% Income Taxes: 2% Social Taxes: 1.08%	PIS: Law nr. 10,637, December 31st, 2002/ref 29/ COFINS: Law nr. 10,833, December 29th, 2003/ref 23/ Income Taxes: Law nr. 9,430, December 27th, 1996/ref 24/ Social Taxes: Law nr. 8,981, January 20th, 1995/ref 25/
Other costs	Land Lease: 1.80% of revenues Insurance: 0.27% of investment	Those are minor costs, which accounts for 3.92% of revenues. The PP necessary evidence for the land lease is present on /ref 22/. For the insurance costs, the PP has provided an estimation based on other project estimates /ref 18/ and /ref 19/, which was crosschecked with the data present in /ref 21/ (page 8), which poses the insurance costs as 0.4% of investment.
Plant Load Factor	36.4%	The PP provided evidence in /ref 44/ for the plant load factor used in the investment analysis. The evidence stands for a load factor of 36.4%, which was the value at the moment of the submission of the project for Global



		Stakeholders Consultation (GSC), considered to be the date that the investment analysis was prepared. (the investment will happen in a future date). The value was crosschecked with the capacity load factor of Antonio Moran Wind Power Plant (ref /42/), registered in UNFCCC under number 0130, whose value for the input value is 34.76%.
Investment Decision date	29/10/2011	Since the start date as defined by the glossary /J/ has not yet happened, and seeing that no clear investment decision has been made, the investment analysis has been validated to be correct at the point of the commencement of validation (Project's submission for GSC).

Regarding the input values above and according to the spreadsheet containing the financial analysis(/ref 35/), the project IRR is **0.55%**, real. However, the input values listed above refer to the project's situation on the submission date of Global Stakeholders Consultation (GSC), since the investment decision has not occurred yet. Since then, the project configuration has changed due to an optimization process, which has altered some input values. Despite of the UNFCCC communication that defines the commencement of validation process as the date for the investment analysis, in cases where no clear investment decision has been made*, the DOE has opted to validate also the investment analysis of the optimized project. This additional analysis was carried in order to ensure the conservativeness of the additionality analysis presented in the CPA-DD version 4 (according to paragraph 30 of VVM). In order to assess the project IRR in the new conditions for the project, the PP provide the evidences for new total investment cost, energy output and plant load factor, as listed in the table below. The other input values do not change, since they are defined over the wind farm capacity/output.

Input Values/Assumptions	Value	Means of validation
Total Investment	BRL 117,709,622	The investment cost was calculated based on the wind farm new capacity – 30MW, backed by ref /12/ (versus 25.2MW of the previous configuration), and the same cost per MW as before, 3,923,665 BRL/MW, backed by ref /38/, ref /39/, ref/40/ and ref /20/.

** According to the UNFCCC communication of 21st July 2010, send by Mr. Conor Barry, "the investment analysis should be validated to be correct at the point of the investment decision or the commencement of validation if no clear investment decision has been made."



Plant Load Factor	35.7%	The PP provided evidence in /ref 12/ for the plant new Plant Load Factor. Since the value is close to the value used in the investment analysis (36.4%), there is no need for an additional crosscheck, being valid the ref /42/.
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Taking into consideration the new project configuration and according to the spreadsheet containing the additional financial analysis, /ref 36/ the project IRR is **0.75%**, real. Even after the optimization, the project remains additional.

Depreciation and other non-cash items related to the project activity were not included on IRR calculation. The PP included the standard taxes for electric ventures in Brazil.

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) [Review feasibility reports, public announcements and annual financial reports related to the proposed CDM project activity and the project participants: since the project has not started operating, there are no financial reports. Moreover, there's no public announcement or review feasibility reports related to the project.](#)

d) Assessment of correctness of computation: BVC checked all formulas in all spreadsheets presented by the project proponent /ref 35/. 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 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 benchmark. However, the conclusion was checked by subjecting the critical assumptions to reasonable variations.

e) 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 ($\pm 10\%$, in order to build up scenarios in which the project IRR is increased). To confirm how solid the investment analysis is, project participants presented a sensitivity analysis varying the most important parameters: (i) energy price (tariff increase: $+10\%$), (ii) project output (energy output increase: $+10\%$), and (iii) Investment reduction (-10%).

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 8 of CPA-DD.

Based on the foregoing, BVC has concluded that the project activity's IRR is less than the benchmark and will 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.

CLs BQA 1 to 2 and CARs BQA 1 to 2 were issued and they have been satisfactorily solved and closed. Refer to Appendix A.

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

3.4.4 Barrier analysis (118)

This section is not applicable.

3.4.5 Common practice analysis (121)

The common practice analysis of a typical CPA shall be conducted analysing wind power plants implemented within the PoA's boundary, by applying the stepwise approach presented in section E.5.1. of the CDM-PoA-DD to official and publicly available database (e.g. ANEEL database). If any similar option is identified, it shall be discussed why the existence of a similar project does not contradict the outcome of step2 and/or 3 of the additionality test.

The result for each one of the steps described in the CDM-PoA-DD is:

Step 1: The installed capacity of the plant being considered in the proposed CPA is 30MW. Therefore, only wind power plants possessing an installed capacity ranging from 15MW to 45MW are going to be considered.

Step 2: The wind power plant considered in the proposed CPA is located in the Rio Grande do Sul state. Therefore, plants located in this state which are not considered in CDM Projects Activities are taken into account. In addition, the starting date of the



project activity is after the commencement of the validation. Therefore, only plants that became operational before the proposed CPA was published for GSP (October 29th, 2011) were considered. The result is that $N_{all} = 0$.

Step 3: As discussed above in Step 2, no similar wind power plant located in Rio Grande do Sul was identified. Hence, $N_{diff} = 0$.

Step 4: From the results discussed above, we have:

$$N_{all} - N_{diff} = 0 < 3 \text{ and,}$$

$$F = 1 - N_{diff} / N_{all} = 0 < 0.2$$

No comparable activities occur without incentives, the project cannot be considered common practice and therefore is not a business as usual type scenario. In this sense, it is clear that, in the absence of the incentive created by the CDM this project would not be the most attractive scenario.

So the proposed CPA is additional since it meets the eligibility criteria listed in the PoA-DD, as discussed above.

The geographical scope of the common practice analysis has been validated by cross checking the related information (VESELKA, T. D. Balance power: A warming climate could affect electricity. Geotimes. Earth, energy and environment news. American Geological Institute: August, 2008. Available at: < http://www.agiweb.org/geotimes/aug08/article.html?id=feature_electricity.html >; ANEEL - Agência Nacional de Energia Elétrica. Atlas de energia elétrica do Brasil. 3ed. – Brasília: Aneel, 2008. Available at <<http://www.aneel.gov.br/biblioteca/EdicaoLivros2009atlas.cfm>>, ; the ANEEL Resolution nr. 1,139 on April 19, 2011 related to the value of the TUSD in Rio Grande do Norte state available at: < <http://www.aneel.gov.br/cedoc/reh20111139.pdf> >, and the ANEEL Resolution nr. 1,193 on August 23, 2011 related to the value of the TUSD in Alagoas state, available at < <http://www.aneel.gov.br/cedoc/reh20111193.pdf> >) presented on the PoA-DD, Section E.5.1, sub-item Step 4. Common practice analysis – Step 2 (ii) Applicable Geographical Area.

The DOE has undertaken an assessment of the existence of similar projects by cross-checking the CPA-DD with related information presented on the PoA-DD, Section E.5.1, sub-item Step 4. Common practice analysis – Step 2 (ii) Applicable Geographical Area, the excel file LGI_Prática Comum_2012.02.13 (ref/13/) and the source <http://www.eletrabras.com/elb/data/Pages/LUMISABB61D26PTBRIE.htm>.

The DOE has undertaken an assessment of the essential distinctions between the proposed CDM project activity and any similar projects that are widely observed and commonly carried out by cross-checking the CPA-DD with related information presented on the PoA-DD, Section E.5.1, sub-item Step 4. Common practice analysis –



Step 3, the excel file LGI_Prática Comum_2012.02.13 (ref/13/) and the source <http://www.elektrobras.com/elb/data/Pages/LUMISABB61D26PTBRIE.htm>.

Also, the DOE crosschecked data provided in the CPA-DD version 4 and the excel file “LGI_Prática Comum_2012.02.13” (ref/13/) with the following third party available sources:

- ANEEL official online database (containing all power plants operating in Brazil): <http://www.aneel.gov.br/15.htm>

- CDM Project database: <http://cdm.unfccc.int/Projects/projsearch.html>

The validation team hereby confirms that the proposed CPA is not common practice.

3.5 Monitoring plan (124)

The validation team 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 programme design are described below.

In accordance with the monitoring methodology ACM0002, version 12.3.0, the parameter that needs to be monitored is the quantity of net electricity generation supplied by the project plant/unit to the grid in year y ($EG_{facility,y}$).

The quantity of electricity delivered to the grid by the project will be quantified through the energy meter located at the substation. The monitoring of this parameter will be conducted separately for each plant.

In addition, there will be another meter at the substation (backup) to ensure that electricity will be properly measured.

The Project sponsor of *Lajeado Grande I* Wind Power Plant will proceed with the necessary monitoring measures as established in the procedures detailed in the CDM-PoA-DD form.

The DOE has verified the monitoring arrangements by cross-checking them against the PoA-DD, the CPA-DD, the Methodology ACM0002, version 12.3.0 and the Wind Certification.

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



3.6 Environmental impacts (133)

The CME has undertaken an analysis of environmental impacts [at CPA level](#).

In general, the environmental impacts of a wind power plant are considered small given the other sources of electricity generation. As per Resolution #279, dated June 27th, 2001, issued by the National Environmental Council Resolution – CONAMA (from the Portuguese *Conselho Nacional do Meio Ambiente*) Wind Power Plants must do a simplified environmental impact assessment in order to obtain the necessary permits to the project. Permits required by this resolution are:

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

The process starts with a previous analysis (preliminary studies) conducted by the project sponsor which is submitted to the environmental agency. Once the environmental local agency has a positive understanding about the environmental project concept, the Preliminary Permit (LP) is issued.

In order to obtain the Construction Permit (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 Permit (LO) is a result of pre-operational tests during the construction phase to verify if all exigencies made by environmental local agency were completed.

The simplified environmental impact assessment developed specifically to the *Lajeado Grande I* Wind Power Plant evaluated the possible impacts occurring during two different phases of the project implementation: construction and operation. The impacts were also classified according to its effect (positive or negative), duration (short term or long term), scope (local or regional), reversibility (reversible or not). Depending of the identified impact, mitigation measures were proposed.

Negatives impacts are mostly expected to occur during the implementation phase and are related to influences in the soil, air quality, and vegetation. Examples of these impacts are the increase in the particulate matter production due to the construction, vegetation suppression, noise, fauna disturbances and erosion. However, the duration of these impacts is short (only while the project is being constructed) and the majority of them are reversible and fully mitigated.

Positive impacts are expected to be observed since in the socio-economic field. The implementation of wind farms commonly increases job opportunities and municipal income trough the payment of royalties. In contrast with the negative aspects, these impacts are forecasted to occur in the operational phase of the project, have a long duration and a regional influence.



Project sponsor has already presented the environmental assessment to the local environmental agency while requesting the preliminary environmental permit. Relevant documentation was presented to the DOE validating the CPA.

The DOE has verified the Preliminary License nº 208/2010-DL (ref/14/). As stated above the issuance of the Preliminary License is only made after the approval of the simplified environmental impact assessment (ref/37/).

3.7 Local stakeholder consultation (130)

The CME has undertaken the local stakeholder consultation [at PoA level](#).

4 ELIGIBILITY CRITERIA (167)

As described above, validation team has assessed the CPA against the eligibility criteria specified in the PoA-DD. Please refer to [Table 1 of the Appendix A for details](#).

Complying with paragraph 167/VVM, Validation team confirms the compliance with the requirements set in the PoA-DD.

5 VALIDATION OPINION

Bureau Veritas Certification has performed a validation of the [Lajeado Grande I Wind Power Plant](#) in [Brazil](#) to be included in [Wind Power Programme of Activities 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 design and the baseline and monitoring plan; ii) follow-up interviews with stakeholders; iii) the resolution of outstanding issues and the issuance of the final validation report and opinion.

By reviewing VVM, Procedures for registration of a programme of activities as a single CDM project activity and issuance of certified emission reductions for a programme of activities, Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities, etc, Bureau Veritas Certification is of the opinion that management system of CME is robust and



efficient to ensure eligibility and quality of CPAs. Eligibility criteria are sufficient so that the inclusion of CPAs could fulfill all requirements of EB rules. Emission reductions attributable to the CPA under the PoA are additional to any that would occur in the absence of the PoA, and hence are likely to be achieved.

The review of the CPA-DD [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 CPA is correctly included in the [Wind Power Programme of Activities in Brazil](#).

6 REFERENCES

Category 1 Documents:

Documents provided by [Deutsche Bank AG, London Branch](#) that relate directly to the GHG components of the PoA.

- /1/ [PoA-DD version 01 dated 03 October 2011;](#)
- /2/ [PoA-DD version 02 dated 13 February 2012;](#)
- /3/ [PoA-DD version 03 dated 09 March 2012;](#)
- /4/ [CPA-DD Specific version 01 dated 03 October 2011;](#)
- /5/ [CPA-DD Specific version 02 dated 13 February 2012;](#)
- /6/ [CPA-DD Specific version 03 dated 09 March 2012;](#)
- /7/ [Excel file WACC ElectricGen_2011 01 v.1;](#)
- /8/ [Excel file WACC ElectricGen_2011 01 v.2;](#)
- /9/ [Excel file WACC ElectricGen_2011 01 v.3;](#)
- /10/ [Emission Reduction Excel Spreadsheet - LGI_CERs_2011.10.03_v.1;](#)
- /11/ [Emission Reduction Excel Spreadsheet - LGI_CERs_2012.02.13_v.2;](#)
- /12/ [Wind Certification from 16/11/2011, elaborated by Camargo-Schubert;](#)
- /13/ [Excel file LGI_Prática Comum_2012.02.13;](#)
- /14/ [Preliminary License nº 208/2010-DL;](#)
- /15/ [Emission Reduction Excel Spreadsheet - LGI_CERs_2012.04.09_v.3;](#)
- /16/ [Inform to the Press – Energy Auction - 20/12/2011 – Energy Research Firm \(EPE from the Portuguese Empresa de Pesquisa Energética\);](#)
- /17/ [Third Party Cross check for total investment cost of wind farms, available at < http://www.ambienteenergia.com.br/index.php/2010/09/eolica-bndes-aprova-credito-para-parques-da-cpfl/6394>;](#)
- /18/ [Insurance policy from Hydropower Pipoca S.A. \(RO\) from October 28, 2010 –](#)



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- /19/ Insurance policy from Hydropower Pipoca S.A. (RCG) from October 29, 2010 - FairfaxBrasil;
- /20/ WTG - Vestas / 25211-PR-OME-V100-2.0-95m REV0 25072011.pdf;
- /21/ Wind Energy – The Facts volume 2 – Costs & Prices - page 3 - Poul Erik Morthorst - Senior Research Specialist at Risø National Laboratory Denmark;
- /22/ Contrato_RS_Ecopart.GlassyBoff_LocazEo.Lajeado.pdf;
- /23/ Law nr. 10,833, December 29th, 2003 - <http://www.receita.fazenda.gov.br/legislacao/leis/2003/lei10833.htm>;
- /24/ Law nr. 9,430, December 27th, 1996 - <http://www.receita.fazenda.gov.br/legislacao/leis/ant2001/lei943096.htm>;
- /25/ Law nr. 8,981, January 20th, 1995 - <http://www81.dataprev.gov.br/sislex/paginas/42/1995/8981.htm>;
- /26/ "DESPACHO Nº 360.pdf";
- /27/ "TUSD CEPISA_reh20111195.pdf";
- /28/ "TUSD COSERN_reh20111139.pdf";
- /29/ Law nr. 10,637, December 31st, 2002 - <http://www.receita.fazenda.gov.br/legislacao/leis/2002/lei10637.htm>;
- /30/ EQAO PoA - database_2011.07.22
- /31/ BR EF ex ante 2008 to 2010-def EF tool 2.2-2011.10.06
- /32/ PoA-DD version 04 dated 09 April 2012;
- /33/ CPA-DD Specific version 04 dated 09 April 2012;
- /34/ CPA-DD Generic version 04 dated 09 April 2012;
- /35/ FCF_Lajeado Grande I_EQAO (REV20120409);
- /36/ FCF_Lajeado Grande I_EQAO (REV20120409) - 30MW;
- /37/ Simplified Environmental Report ("RAS" from the portuguese: Relatório Ambiental Simplificado).
- /38/ Investment Cost Evidence: Planilha de Preços Complexo Eólico Parnaíba - Rev.2 OPÇÃO VESTAS.pdf
- /39/ Investment Cost Evidence: Engecorps_ PP-01-10098-OER-R1.pdf
- /40/ Investment Cost Evidence: Carta Proposta Delta do Parnaíba Rev03.pdf
- /41/ Energy Price Evidence: PSR Consulting Frecasts, file: PLD – "Estudo PSR.pdf"
- /42/ Antonio Moran Wind Plant PDD: "130_PDD_renewal creditng period.pdf"



[/43/](#) ANEEL Ordinance nr. 554 dated September 23, 2011, available at <
<http://www.aneel.gov.br/cedoc/prt2011554mme.pdf>>.

[/44/](#) Wind Certification from 28/03/2011, elaborated by Camargo-Schubert

Category 2 Documents:

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

- [/A/](#) Methodology ACM0002, version 12.3.0;
- [/B/](#) Tool for the demonstration and assessment of additionality, version 06.0.0;
- [/C/](#) Tool to calculate the emission factor for an electricity system, version 02.2.1;
- [/D/](#) Validation and Verification Manual, version 01.2, EB 55, dated 30/07/2010;
- [/E/](#) CDM Programme Activity Design Document Form (CDM-PoA-DD), version 01;
- [/F/](#) Guidelines on the Assessment of Investment Analysis version 05;
- [/G/](#) CDM Programme Activity Design Document Form (CDM-CPA-DD), version 01;
- [/H/](#) Procedure for registration of a Programme of Activities as a single CDM Project Activity and issuance of certified emission reduction for a Programme of Activities, version 04.1;
- [/I/](#) Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities, version 1;
- [/J/](#) Glossary of CDM Terms (version 06.0) EB 66 ANNEX 63;
- [/K/](#) Guidelines for the Reporting and Validation of Plant Load Factors - [EB 48, Annex 11](#) version 01.

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/](#) Milena Lopez – Deutsche Bank
- [/2/](#) Ana Paula Veiga - Ecopart Assessoria em Negócios Empresariais Ltda
- [/3/](#) Ademair de Proença Filho – Zeta Energia S/A



7 CURRICULA VITAE OF THE DOE'S VALIDATION TEAM MEMBERS

Bureau Veritas Certification - Lead Verifier

Rubens Ferreira – is graduated in Chemical Engineering with experience in Quality and Environmental management in glass industries. He is ISO 9001:2008, ISO 14001:2004 and OHSAS 18001:2007 Lead Auditor and has also experience in the implementation of Quality and Environmental Management Systems. Rubens is qualified as Verifier GHG – 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 Lima - 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.

Bureau Veritas Certification – Financial Specialist

Antonio Vinicius is graduated in Industrial Engineering and holds a MBA from Coppead/UFRJ School of Business with previous experience in economic assessment of greenfield projects in electrical sector, as well as projects related to renewable energy and energy conservation.

Bureau Veritas Certification – Internal Technical Reviewer

Guilherme 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 degree in Environmental Science - São Paulo University.. Guilherme trained as a lead auditor in the fields of environment (ISO 14001) and GHG – Green House Gas.



APPENDIX A: CDM COMPONENT PROJECT ACTIVITY VALIDATION PROTOCOL (VERSION 04)

TABLE 1 Validation requirements based on the Clean Development Mechanism Validation and Verification Manual (Version 01.2)

TABLE 2 RESOLUTION OF CORRECTIVE ACTION AND CLARIFICATION REQUESTS



VALIDATION PROTOCOL

Table 1 Validation requirements based on the Clean Development Mechanism Validation and Verification Manual (Version 01.2)

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

CHECKLIST QUESTION	Ref.	§	COMMENTS		Draft Concl	Final Concl
1. Approval			COUNTRY A (Brazil)	COUNTRY B (United Kingdom of Great Britain and Northern Ireland)		
a. Have all Parties involved approved the project activity?	VVM	44	The final decision from the 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 nº 1 of CIMGC – Comissão Interministerial de Mudança Global do Clima.	CL01 – Please, inform the present situation of the approval by the United Kingdom of Great Britain and Northern Ireland.	CL01	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	Refer to item 1.a.	Refer to CL01	CL01	OK



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS		Draft Concl	Final Concl
c. Does the letter of approval from DNA of each Party involved:	VVM	45	Refer to item 1.a.	Refer to CL01	CL01	OK
i. confirm that the Party is a Party of the Kyoto Protocol?	VVM	45.a	Refer to item 1.a.	Refer to CL01	CL01	OK
ii. confirm that participation is voluntary?	VVM	45.b				
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	Refer to item 1.a.	Refer to CL01	CL01	OK
iv. Refers to the precise proposed CDM project activity title in the PDD being submitted for registration?	VVM	45.d	Refer to item 1.a.	Refer to CL01	CL01	OK
d. Is(are) the letter(s) of approval unconditional with respect to (i) to (iv) above?	VVM	46	Refer to item 1.a.	Refer to CL01	CL01	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	Refer to item 1.a.	Refer to CL01	CL01	OK
f. Is there doubt with respect to the authenticity of the letter of approval?	VVM	48	Refer to item 1.a.	Refer to CL01	CL01	OK
g. If yes, was verified with the DNA that the letter of approval is authentic?	VVM	48	Refer to item 1.a.	Refer to CL01	CL01	OK
2. Participation			<i>PP1 (Ecopart Assessoria em Negócios Empresariais Ltda. (private entity))</i>	<i>PP2 (Deutsche Bank AG, London Branch)</i>		
a. Have all project participants been listed in a consistent manner in the project documentation?	VVM	51	Yes.	Yes.	OK	OK



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	Refer to item 1.a.	Refer to CL01	CL01	OK
c. Are the project participants listed in tabular form in section A.3 of the PDD?	VVM	52	Yes.	Yes.	OK	OK
d. Is the information in section A.3 consistent with the contact details provided in annex 1 of the PDD?	VVM	52	Yes.	Yes.	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	Refer to item 1.a.	Refer to CL01	CL01	OK
f. Are any entities other than those approved as project participants included in these sections of the PDD?	VVM	52	No.		OK	OK
g. Has the approval of participation issued from the relevant DNA?	VVM	53	Refer to item 1.a.	Refer to CL01	CL01	OK
h. Is there doubt with respect to (g) above? I	VVM	53	Refer to item 1.a.	Refer to CL01	CL01	OK
i. If yes, was verified with the DNA that the approval of participation is valid for the proposed project participant?	VVM	53	Refer to item 1.a.	Refer to CL01	CL01	OK
3. Project desing 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	VVM	55	Yes.		OK	OK

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
available on the UNFCCC CDM website?					
b. Is the PDD in accordance with the applicable CDM requirements for completing the PDD?	VVM	56	<p>CAR 01: The CDM-CPA-DD version 01 presents the sections A.4.1 and A.4.1.1 as one. The two sections should be filled.</p> <p>CAR 02: CDM-CPA-DD – Lajeado Grande I version 01, Section A.4.2.2. is blank.</p> <p>CAR 03: The section B.5.1 from the CDM-CPA-DD - Lajeado Grande I version 01 need not be filled.</p> <p>CAR 04: The field “Date of document” is not to be filled on the CDM-CPA-DD - generic – Section A.1.</p> <p>CAR 05: CDM-CPA-DD - generic, version 1, Section A.4.1. is blank.</p> <p>CAR 06: CDM-CPA-DD - generic, version 1, Section A.4.1.2 presents the “Plant Name” on the first paragraph, this not happens on the CDM-CPA-DD – Lajeado Grande I version 01. The same situation occurs related to the figure 1 at the same section (See also: Section B.2. – Item 2; Section B.3 – Table 6; Section B.4. – first paragraph; Section B.5.2; B.6.1 – two times; C.2.; C.3.).</p> <p>CAR 07: CDM-CPA-DD - generic, version 1, Section A.4.2.1 does not present the phrase “...,”</p>	CAR01 to CAR15 CAR32 CL02 to CL08	OK



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			<p>estimated date of the major equipment orders (see Table 1) as presented on the CDM-CPA-DD – Lajeado Grande I version 01.</p> <p>CAR 08: CDM-CPA-DD – generic, version 01, Section A.4.2.2. is blank.</p> <p>CAR 09: All the data referred to the Section A.4.3.1 from the CDM-CPA-DD – generic, version 01, should be filled.</p> <p>CAR 10: The CDM-CPA-DD – generic, version 01, presents a Table 1 on Section A.4.4, when the same Section at the CDM-CPA-DD – Lajeado Grande I version 01 presents the Table 2.</p> <p>CAR 11: The “justification/source of information used” presented on the CDM-CPA-DD – generic, version 01, Section B.3., table 4, is not the same presented on the CDM-CPA-DD – Lajeado Grande I version 01 (Table 5).</p> <p>CAR 12: Related to the parameter “Industrialized Products Tax” presented on the CDM-CPA-DD – generic, version 01, Section B.3., table 4, the field “values” is not filled in accordance with the CDM-CPA-DD – Lajeado Grande I version 01 (Table 5).</p>		



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			<p>CAR 13: The eligibility criteria presented on the CDM-CPA-DD – Lajeado Grande I version 01, Section A.4.2.2 are not the same presented on the CDM-CPA-DD - generic, version 1, Section B.2. (please also refer to CAR 18)</p> <p>CAR 14: During the site visit was observed that the the document “Certificação de Medições Anemométricas - Certificação de Produção de energia” (Wind Certification) has a new revision (16/11/11), in this way the values presented on Table 5 from the CDM-CPA-DD – Lajeado Grande I version 01, Section B.3. should be updated and the calculations that use of such data.</p> <p>CL 02: Please provide the source related to the geographic coordinates presented on the CDM-CPA-DD – Lajeado Grande I version 01, Section A.4.1.2.</p> <p>CL 03: Please clarify the reference related to the action “construction permit issuance” listed on Table 1 from the CDM-CPA-DD – Lajeado Grande I version 01, Section A.4.2.1..</p> <p>CAR 15: Related to the spreadsheet</p>		



CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			<p>LGI_CERs2011.10.03._v.1.xls: update the values from the wind certification; on table A.4.4, and table 5.3. the final date (July, 31st, 2022) is wrong; the value referred to the sum of “Estimation of overall emission reductions” is wrong.</p> <p>CL 04: Please clarify the source related to the phrase “According to the Brazilian environmental regulations, an environmental impact assessment is required for every CPA to be included in a Programme of Activities.” listed on the CDM-CPA-DD – Lajeado Grande I version 01, Section C.3..</p> <p>CL 05: Please, provide the evidence that a relevant energy auction is expected to take place in August 2013 (CPA-DD related).</p> <p>CL 06: Please, explain the starting date of the crediting period of the CPA (Section A.4.3)</p> <p>CL 07: Please, inform the sources of data in CERs Calc spreadsheets v1, <Technical Description>.</p> <p>CL 08: Please, clarify why hasn't CDM project 843 been mentioned I CPA-DD v1, Section A.4.6.</p> <p>CAR 32: PoA-DD v01, Section E.5.1, and both</p>		



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			CPA-DDs (Lajeado Grande I v1 and Generic), Section B.3, present discrepant formulae for K_d and K_e .		

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
c. The completed CDM-POA-DD, the specific CDM-CPA-DD with generic information relevant to all CPAs and the completed CDM-CPA-DD which is to be based on the application of the PoA to one real case are established in mutual accordance?	EB 55	Ann ex 38	Refer to (3.b.) above.	OK	OK
d. Specific questions for PoA-DD			http://cdm.unfccc.int/Reference/PDDs_Forms/PoA/index.html		
i. On the item A.1 from the CDM-PoA-DD is the title of the programme of activities provided?	PoA form	v1	Yes. "Wind Power Programme of Activities in Brazil".	OK	OK
ii. On the item A.2. from the CDM-PoA-DD, are the following information included:	PoA form	v1			
ii.1 General operating and implementing framework of PoA.	PoA form	v1	CL 09: Please, provide a web link address related to footnotes 1 and 2, so that information can be verified. CL 10: Please, make it clear in the Section A.2 from the CDM-PoA-DD that the project activity comprises greenfield and capacity addition CPAs.	CL09 CL10	OK
ii.2 Policy/mesure or stated goal of the PoA.	PoA form	v1	Yes.	OK	OK
ii.3 Confirmation that the proposed PoA is a voluntary action by the coordinating/managing entity.	PoA form	v1	Yes.	OK	OK
iii. On the item A.3 from the CDM-PoA-DD, are the following information included:	PoA form	v1			

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
iii.1 Coordinating or managing entity of the PoA as the entity which communicates with the Board.	PoA form	v1	Yes. The Coordinating or managing entity of PoA, which is the entity responsible for communicating with the CDM Executive Board, is Deutsche Bank AG, London Branch.	OK	OK
iii.2 Project participants being registered in relation to the PoA (Project participants may or may not be involved in one of the CPAs related to the PoA).	PoA form	v1	Yes.	OK	OK
iv. On the item A.4.1 from the CDM-PoA-DD is the Location of the programme of activities provided?	PoA form	v1	CAR 16: PoA-DD v01, Section A.4.1, is blank.	CAR16	OK
v. On the item A.4.1.1 from the CDM-PoA-DD is the Host Party(ies) provided?	PoA form	v1	Yes. Brazil.	OK	OK
vi. On the item A.4.1.2. from the CDM-PoA-DD, is the definition of the boundary for the PoA in terms of a geographical area (e.g., municipality, region within a country, country or several countries) within which all CDM programme activities (CPAs) included in the PoA will be implemented, taking into consideration the requirement that all applicable national and/or sectoral policies and regulations of each host country within that chosen boundary included?	PoA form	v1	Yes. The physical / geographical boundary within which all CDM programme activities (CPAs) included in the proposed Programme of Activities will be implemented is Brazil.	OK	OK
vii. On the item A.4.2. from the CDM-PoA-DD is the Description of a typical CDM programme activity (CPA) provided?	PoA form	v1	CAR 17: PoA-DD v01, Section A.4.2, is blank.	CAR17	OK
viii. On the item A.4.2.1. from the CDM-PoA-DD	PoA	v1	Yes.	OK	OK

VALIDATION REPORT



CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
is the Technology or measures to be employed by the CPA provided?	form				

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
ix. On the item A.4.2.2. from the CDM-PoA-DD is a description of criteria for enrolling the CPA described?	PoA form	v1	CAR 18: The eligibility criteria for inclusion of a CPA in the PoA (Section A.4.2.2) should be established in accordance with the EB 65 Annex 03 paragraph 14, 15 and 17.	CAR18	OK
x. On the item A.4.3. from the CDM-PoA-DD are the following informations demonstrated?	PoA form	v1			
x.1 The proposed PoA is a voluntary coordinated action.	PoA form	v1	Yes.	OK	OK
x.2 If the PoA is implementing a voluntary coordinated action, it would not be implemented in the absence of the PoA.	PoA form	v1	Refer to CL 09 related o the footnote 8. CL 11: Please inform the sources of all information presented in CDM-Poa-DD version 01 section A.4.3 (ii).	CL09 CL11	OK
x.3 If the PoA is implementing a mandatory policy/regulation, this would/is not enforced.	PoA form	v1	Yes.	OK	OK
x.4 If mandatory a policy/regulation is enforced, the PoA will lead to a greater level of enforcement of the existing mandatory policy/regulation.	PoA form	v1	N.A.	OK	OK
xi. On the item A.4.4.1. from the CDM-PoA-DD is a description of the operational and management arrangements established by the coordinating/managing entity for the implementation of the PoA, including:	PoA form	v1	CL 12: Please, clarify the statement that the CME of this PoA is Deutsche Bank AG, London Branch, <u>in conjunction with Ecopart Assessoria Ltda.</u>	CL12	OK
xi.1 A record keeping system for each CPA under the PoA.	PoA form	v1	CL 13: Please provide a more detailed description about the record keeping system for each CPA under the PoA. The DOE needs to have access to	CL13	OK



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			the detailed control system that has been established by the CME.		



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
xi.2 A system/procedure to avoid double accounting e.g. to avoid the case of including a new CPA that has been already registered either as a CDM project activity or as a CPA of another PoA.	PoA form	v1	Yes.	OK	OK
xi.3 The provisions to ensure that those operating the CPA are aware of and have agreed that their activity is being subscribed to the PoA.	PoA form	v1	Yes.	OK	OK
xii. On the item A.4.4.2. are the following informations provided.	PoA form	v1			
xii.1 Description of the proposed statistically sound sampling method/procedure to be used by DOEs for verification of the amount of reductions of anthropogenic emissions by sources or removals by sinks of greenhouse gases achieved by CPAs under the PoA.	PoA form	v1	Yes.	OK	OK
xii.2 In case the coordinating/managing entity opts for a verification method that does not use sampling but verifies each CPA (whether in groups or not, with different or identical verification periods) a transparent system is to be defined and described that ensures that no double accounting occurs and that the status of verification can be determined anytime for each CPA.	PoA form	v1	CL 14: Please specify that the verification method describe in Section A.4.2.2 ensures that no double accounting occurs and that the status of verification can be determined anytime for each CPA.	CL14	OK
xiii. On the item A.4.5. from the CDM-PoA-DD are informations about the public funding of	PoA form	v1	Yes.	OK	OK

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
the programme of activities (PoA) provided?					
xiv. On the item B.1. from the CDM-PoA-DD was the starting date of the programme of activities provided?	PoA form	v1	CAR 19: In according with the UNFCCC website (http://cdm.unfccc.int/ProgrammeOfActivities/Validation/DB/UNW/FNFINB2BWZXM746PLOQXMTWA9681/view.html) the proposed PoA was available since 29/10/2011 and not 19/10/2011 as stated on the CDM-PoA-DD .	CAR19	OK
xv. On the item B.2. from the CDM-PoA-DD was the length of the programme of activities provided?	PoA form	v1	Yes. 28 years – 0 months.	OK	OK
xvi. On the item C.1. from the CDM-PoA-DD is indicate the level at which environmental analysis as per requirements of the CDM modalities and procedures is undertaken?	PoA form	v1	Yes. The environmental analysis is done at CPA level.	OK	OK
xvi.1 On the item C.1. from the CDM-PoA-DD is the choice of level at which the environmental analysis is undertaken justified?	PoA form	v1	CL 15: Please explain the choice of level at which the environmental analysis is undertaken. Additionally, please, make it clear what is meant by “local”, in the context of environmental analysis. CL 16: Please, adjust CONAMA’s name in English. “Resolution” shouldn’t be part of it.	CL15 CL16	OK
xvi2. If this environmental analysis is not undertaken for the PoA but is to be done at the CPA level, is this described and reflected in the CDM-PoA-DD and the CDM-CPA-DD?	PoA form	v1	Refer to CL 15	CL15	OK
xvii. On the item C.2. from the CDM-PoA-DD is the documentation on the analysis of the	PoA form	v1	N.A.	OK	OK

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
environmental impacts, including transboundary impacts provided?					
xviii. On the item C.3. from the CDM-PoA-DD is stated wheter in accordance with the host Party laws/regulations, an environmental impact assessment is required for a typical CPA, included in the programme of activities (PoA) provided?	PoA form	v1	Yes.	OK	OK
xix.1 On the item D.1. from the CDM-PoA-DD is indicate the level at which local stakeholder comments are invited?	PoA form	v1	Yes. Local stakeholder consultation is done at PoA level.	OK	OK
xix.2 Is the choice of level at which local stakeholder comments are invited justified?	PoA form	v1	CL 17: Please explain the choice of level at which local stakeholder comments are invited.	CL17	OK
xx. On the item D.2. from the CDM SSC-PoA-DD is a brief description of how comments by local stakeholders have been invited and compiled provided?	PoA form	v1	CAR 20 : PoA-DD v01, Section D.2, does not describe how comments by local stakeholders have been invited.	OK	OK
xxi. On the item D.3. from the CDM-PoA-DD is a sumary of the comments received provided?	PoA form	v1	No comments have been received yet.	OK	OK
xxii. On the item D.4. from the CDM-PoA-DD is a report on how due account was taken of any comments received provided?	PoA form	v1	No comments have been received yet.	OK	OK
xxiii. On the item E.1. from the CDM-PoA-DD is the Title and reference of the approved baseline and monitoring methodology applied to each CPA included in the PoA?	PoA form	v1	CAR 21: The actual version of the methodology ACM0002 is version 12.2.0. The actual version of the tool to calculate the emission factor for an electricity system is version 2.2.1. The actual version to the tool for the demonstration and	CAR21	OK



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			assessment of additionality is version 6.0.0. The actual version of the combined tool to identify the baseline scenario and demonstrate additionality is version 3.0.1.		

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
xxiv. On the item E.2. from the CDM-PoA-DD is the justification of the choice of methodology and why it is applicable to each CPA provided?	PoA form	v1	Yes.	OK	OK
xxv. On the item E.3. from the CDM-PoA-DD is the description of the sources and gases included in the CPA boundary provided?	PoA form	v1	CAR 22 : PoA-DD v01, Section E.3, Figure 5, refers to EG_y , whereas correct parameters are $EG_{facility,y}$ and $EG_{PJ, Add,y}$.	CAR22	OK
xxvi. On the item E.4. from the CDM-PoA-DD is the description of how the baseline scenario is identified and description of the identified baseline scenario provided?	PoA form	v1	Yes.	OK	OK
xxvii. On the item E.5. from the CDM-PoA-DD is the description of how the anthropogenic emissions of GHG by sources are reduced below those that would have occurred in the absence of the CPA being included as registered PoA provided?	PoA form	v1	CAR 23: PoA-DD v01, Section E.5, has been left blank.	CAR23	OK
xxvii.1. On the item E.5.1. from the CDM-PoA-DD did the PPs demonstrate, using the procedure provided in the baseline and monitoring methodology applied, additionality of a typical CPA?	PoA form	v1	Refer to CAR 21	CAR21	OK
xxvii.2. On the item E.5.2. from the CDM-PoA-DD did the PPs provide the key criteria for assessing additionality of a CPA when proposed to be included in the registered PoA?	PoA form	v1	Yes.	OK	OK
xxvii.3. On the item E.5.2. from the CDM-PoA-DD the criteria were based on additionality	PoA form	v1	Yes.	OK	OK

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
assessment undertaken in E.5.1.?					
xxvii.4. On the item E.5.2. from the CDM-PoA-DD the PPs justified the choice of criteria based on analysis provided in E.5.1.?	PoA form	v1	CAR 24: PoA-DD v01, Section E.5.2, does not include a justification of the choice of criteria for assessing additionality of a CPA.	CAR24	OK
xxvii.5. On the item E.5.2. from the CDM-PoA-DD was demonstrated how these criteria would be applied to the additionality of a typical CPA at the time of inclusion?	PoA form	v1	Yes.	OK	OK
xxvii.6. Was the information provided on the item E.5.2. from the CDM-PoA-DD incorporated into the CDM-CPA-DD that has been specified for this PoA?	PoA form	v1	Yes.	OK	OK
xxviii. On the item E.6.1. from the CDM-PoA-DD was the explanation of methodological choices, provided in the approved baseline and monitoring methodology applied, selected for a typical CPA ?	PoA form	v1	CL 18 : Please, update Table 6 with 2011 data (Section E.6.1 from the CDM-PoA-DD v01). CAR 25: PoA-DD v01, Section E.6.1, presents a web link address (< http://www.ons.org.br/historico/geracao_energia.aspx >) which does not lead to the information in Table 6 CAR 26: PoA-DD v01, Section E.6.1, does not make any reference to the choice between options 1 and 2 for the calculation of $EG_{PJ,y}$, in the case of capacity additions.	CAR25 CAR26 CL18	OK
xxix. On the item E.6.2. from the CDM-PoA-DD were the equations, including fixed parametric values, to be used for calculation of emission	PoA form	v1	Yes.	OK	OK

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
reductions of a CPA provided?					
xxx. On the item E.6.3. from the CDM-PoA-DD are the data and parameters reported adequately?	PoA form	v1	CAR 27 : PoA-DD v01, Section E.6.3, does not list DATEBaselineRetrofit. Please, when addressing this CAR, let it clear that DateBaselineRetrofit applies to capacity addition CPAs.	CAR27	OK
xxxi. On the item E.7.1. from the CDM-PoA-DD are the data and parameters reported adequately?	PoA form	v1	CAR 28 : PoA-DD v01, Section E.7.1, does not list $EG_{PJ_Add,y}$, $EG_{facility,y}$ nor $EF_{grid,CM,y}$. Please, when addressing this CAR, let it clear that for each CPA to be added, either $EG_{facility,y}$ or $EG_{PJ_Add,y}$ will apply CAR 29 : PoA-DD v01, Section E.7.1, does not list $EG_{PJ_Add,y}$ nor $EF_{grid,CM,y}$. Please, when addressing this CAR, let it clear that $EG_{facility,y}$ applies to Greenfield CPAs and $EG_{PJ_Add,y}$ to capacity addition CPAs.	CAR28 CAR29	OK
xxxii. On the item E.7.2. from the CDM-PoA-DD was the description of the monitoring plan for a CPA provided?	PoA form	v1	Yes.	OK	OK
xxxiii. On the item E.8. from the CDM-PoA-DD was the date of completion of the applicarrtion of the baseline study and monitoring methodology and the name of the responsible person(s)/entity(ies) provided?	PoA form	v1	Yes.	OK	OK
4. Project description					
a. Does the PDD contain a clear description of the project activity that provides the reader with a	VVM	58	Yes.	OK	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
clear understanding of the precise nature of the project activity and the technical aspects of its implementation?					
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.	OK	OK
ii. accurate?	VVM	59	Yes.	OK	OK
iii. providing the reader with a clear understanding of the nature of the proposed CDM project activity?	VVM	59	Yes.	OK	OK
iv. Are there any changes/modifications compared to the webhosted PDD?	VVM	59	No.	OK	OK
c. Is the proposed CDM project activity in existing facilities or or utilizing existing equipments?	VVM	60	CPAs to be included in the PoA may include capacity additions to existing facilities.	OK	OK
d. Is the CDM project activity one of the following types:	VVM	60			
i. Large scale?	VVM	60	Yes.	OK	OK
ii. Non-bundled small scale projects with emission reductions exceeding 15,000 tonnes per year?	VVM	60	No.	OK	OK
iii. Bundled small scale projects, each with emission reductions not exceeding 15,000 tonnes?	VVM	60	No.	OK	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, because at this point in time (01/12/2011, date of visit to Zeta Energia's office, for doc review), there is no construction work neither equipments at the physical site.	OK	OK



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f. If yes to (d.iii) above, was the number of physical site visits base on sampling?	VVM	60	N.A.	OK	OK
g. If yes is the sampling size appropriately justified through statistical analysis?	VVM	60	N.A.	OK	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	N.A.	OK	OK
i. For all other proposed CDM project activities not referred to in paragraphs 59 – 61, and 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	62	N.A.	OK	OK
j. If no, was it appropriately justified?	VVM	62	N.A.	OK	OK
k. Does the proposed CDM project activity involve the alteration of an existing installation or process?	VVM	63	No.	OK	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	N.A.	OK	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	VVM	65	Refer to CAR 21	CAR21	OK



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Board?					
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	OK
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	Refer to CAR 21	CAR21	OK
h. Had the selected methodology been correctly applied with respect to monitoring methodology?	VVM	67	Please refer to item (7) below: Monitoring Plan	OK	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	VVM	68	Yes, but Refer to CAR 21 .	CAR21	OK



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including that the used version is valid?					
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	OK
b. Has the DOE applied specific guidance provided by the CDM Executive Board in respect to the applicable approved methodology?	VVM	69	N.A.	OK	OK
c. Is the methodology correctly quoted?	VVM	70	Refer to CAR 21	CAR21	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 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	ACM	0002	Yes. The CPAs to be included in the proposed PoA may correspond to either the installation of a new grid-connected wind power plant or to a capacity addition to an operational wind power plant.	OK	OK
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 $EG_{PJ,y}$):	ACM	0002	N.A.	OK	OK



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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.					
iii. In case of hydro power plants, one of the following conditions must apply: <ul style="list-style-type: none"> - 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 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. 	ACM	0002	N.A.	OK	OK
iv. The methodology is not applicable to the following conditions. Please confirm <ul style="list-style-type: none"> - Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity 	ACM	0002	N.A.	OK	OK

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
<ul style="list-style-type: none"> - 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. 					
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	Refer to CAR 18	CAR18	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	OK
f. Is the choice of the methodology justified?	VVM	71	Yes.		
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	OK
i. Is the DOE, based on local and sectoral knowledge, aware that comparable information is	VVM	71	Yes, see below:	OK	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
available from sources other than that used in the PDD?					
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: <ul style="list-style-type: none"> - Data Sheets from the Wind Parks; - Environmental Licenses; 	OK	OK
k. Can a determination regarding the applicability of the selected methodology to the proposed CDM project activity be made?	VVM	72	Yes. The methodology is applicable to this project activity.	OK	OK
l. If no, clarification of the methodology was requested, in accordance with the guidance provided by the CDM Executive Board?	VVM	72	N.A.	OK	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	N.A.	OK	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	N.A.	OK	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	VVM	78	See Section 3 above for a discussion regarding project boundary.	OK	OK



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proposed CDM project activity?					
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	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 per applicable methodology?	ACM	0002	Yes.	OK	OK
b. Is the delineation in the PDD of the project boundary correct?	VVM	79	In case of this project, it is included the Wind farms, the substation, and the National Grid.	OK	OK
c. Does the delineation in the PDD of the project boundary meet the requirements of the selected baseline?	VVM	79	Yes.	OK	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	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 “CO ₂ emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity.”	OK	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	OK
g. If yes, have the project participants justified that	VVM	79	Not applicable.	OK	OK



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choice?					
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	OK
i. Were any emission sources that will be affected by the project activity and are not addressed by the selected approved methodology identified?	VVM	80	No.	OK	OK
j. If yes, was clarification of, revision to or deviation from the methodology requested?	VVM	80	Not applicable.	OK	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 anthropogenic emissions by sources of GHGs that would occur in the absence of the proposed CDM project activity?	VVM	81	Yes.	OK	OK
b. Has any procedure contained in the methodology to identify the most reasonable baseline scenario, been correctly applied?	VVM	82	No	OK	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	OK
ii. If the project activity is a capacity addition to existing grid-connected renewable power plant/unit, is the baseline scenario identified	ACM	0002	Refer to CAR 27	CAR27	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
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?					
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	N.A.	OK	OK
iv. Are the realistic and credible alternative baseline scenarios for power generation appropriately identified following the Step 1 of the “Combined tool to identify the baseline scenario and demonstrate additionality”? (Step 1)	ACM	0002	N.A.	OK	OK
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	N.A.	OK	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	ACM	0002	N.A.	OK	OK

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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)					
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	N.A.	OK	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	N.A.	OK	OK
e. Does the methodology require several alternative scenarios to be considered in the identification of the most reasonable baseline scenario?	VVM	83	N.A.	OK	OK
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	N.A.	OK	OK
g. Has any reasonable alternative scenario been excluded?	VVM	83	N.A.	OK	OK
h. Is the baseline scenario identified reasonably supported by:	VVM	84			
i. Assumptions?	VVM	84	The baseline scenario is provided by the methodology	OK	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
ii. Calculations?	VVM	84	The baseline scenario is provided by the methodology	OK	OK
iii. Rationales?	VVM	84	The baseline scenario is provided by the methodology	OK	OK
i. Are the documents and sources referred to in the PDD correctly quoted and interpreted?	VVM	84	The baseline scenario is provided by the methodology	OK	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	The baseline scenario is provided by the methodology	OK	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 baseline scenario is provided by the methodology	OK	OK
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 baseline scenario is provided by the methodology	OK	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	Yes, two baseline scenarios. One for greenfield CPAs and another for capacity addition CPAs.	OK	OK
e. Algorithms and/or formulae used to determine emission reductions					
a. Do the steps taken and equations applied to	VVM	89	Yes. The steps comply with the requirements of the	OK	OK

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calculate project emissions, baseline emissions, leakage and emission reductions comply with the requirements of the selected baseline and monitoring?			methodology ACM0002. Please refer to Section 3.		
b. Have the equations and parameters in the PDD been correctly applied with respect those in the select approved methodology?	VVM	90	Yes. The equations and parameters were correctly applied, with respect to the methodology ACM0002. Please refer to Section 3.	OK	OK
i. Are the Project emissions appropriately calculated?	ACM	0002	Yes. Please refer to Section 3.	OK	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.	OK	OK
iii. Are the Leakage appropriately calculated?	ACM	0002	No leakage is to be considered according to the methodology ACM0002.	OK	OK
iv. Are the Emission reductions appropriately calculated?	ACM	0002	Yes.	OK	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.	OK	OK

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d. Does the methodology provide for selection between different options for equations or parameters?	VVM	90	Yes.	OK	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	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	Refer to CAR 28	CAR28	OK
h. If no, and these data and parameters will remain fixed throughout the crediting period, are all data sources and assumptions:	VVM	91	N.A.	OK	OK
i. Appropriate and correct?	VVM	91	N.A.	OK	OK
ii. Applicable to the proposed CDM project activity?	VVM	91	N.A.	OK	OK
iii. Resulting in a conservative estimate of the emission reductions?	VVM	91	N.A.	OK	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	OK
j. If yes, are the estimates provided in the PDD for these data and parameters reasonable?	VVM	91	Yes.	OK	OK
6. Additionality of a project activity					



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a. Does the PDD describe how a proposed CDM projet activity is additional?	VVM	94	Yes. The CDM-PoA-DD at Section E.5.1. states that In accordance with the procedures provided in the baseline and monitoring methodology ACM0002, the additionality of a typical CPA must be assessed and demonstrated trough the application of the “ <i>Tool for the demonstration and assessment of additionality</i> ”.	OK	OK
b. Does the CDM-PDD state the latest version of the additionality tool being used?	ACM	0002	Refer to CAR 21	CAR21	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.	OK	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.	OK	OK
iii. Barriers analysis?	EB 39	Ann 10	No.	OK	OK
iv. Common practice analysis?	EB 39	Ann 10	Refer to CAR 21 .	CAR21	OK
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	CAR 30: In accordance with the Tool for the demonstration and assessment of additionality. (Version 06.0.0), the alternative: Other realistic and credible alternative	CAR30	OK



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			scenario(s) to the proposed CDM project activity scenario that deliver outputs services (e.g., cement) or services (e.g. electricity, heat) with comparable quality, properties and application areas, taking into account, where relevant, examples of scenarios identified in the underlying methodology; Must be included.		



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ii. Sub-step 1b: Consistency with mandatory laws and regulations	EB 39	Ann 10	Refer to CAR 30	CAR30	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	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	Refer to CAR 30	CAR30	OK
iii. (c) If applicable, continuation of the current situation (no project activity or other alternatives undertaken).	EB 39	Ann 10	Yes.	OK	OK
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	N.A.	OK	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	EB 39	Ann 10	Refer to CAR 30	CAR30	OK



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outcome.					
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	Refer to CAR 30	CAR30	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 noncompliance with those requirements is widespread in the country?	EB 39	Ann 10	Refer to CAR 30	CAR30	OK
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	Refer to CAR 30	CAR30	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 has selected the Step 2 – Investment analysis.	OK	OK
l. In step 2, have all the sub-steps as below been followed?	EB 39	Ann 10			



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i. Sub-step 2a: Determine appropriate analysis method;	EB 39	Ann 10	Yes.	OK	OK
ii. Sub-step 2b: Option I. Apply simple cost analysis;	EB 39	Ann 10	No.	OK	OK
iii. Sub-step 2b: Option II. Apply investment comparison analysis;	EB 39	Ann 10	No.	OK	OK
iv. Sub-step 2b: Option III. Apply benchmark analysis;	EB 39	Ann 10	Yes.	OK	OK
v. Sub-step 2c: Calculation and comparison of financial indicators (only applicable to Options II and III);	EB 39	Ann 10	Yes.	OK	OK
vi. Sub-step 2d: Sensitivity analysis (only applicable to Options II and III).	EB 39	Ann 10	Yes.	OK	OK
m. In sub-step 2a has the determination of appropriate method of analysis done as per the guidance as below?	EB 39	Ann 10			
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	No.	OK	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	Yes. Please refer to Section Investment Analysis, below.	OK	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	EB 39	Ann 10	N.A.	OK	OK



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and the alternatives identified in Step1 and demonstrate that there is at least one alternative which is less costly than the project activity.					
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	N.A.	OK	OK
p. Has the below guideline followed for Sub-step 2b: Option III. Apply benchmark analysis?	EB 39	Ann 10			
i. Identify the financial/economic indicator, such as IRR, most suitable for the project type and decision context.	EB 39	Ann 10	Yes.	OK	OK
ii. 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.	EB 39	Ann 10	Please refer to Section Investment Analysis, below.	OK	OK
iii. Discount rates and benchmarks shall be	EB	Ann	Please refer to Section Investment Analysis, below.	OK	OK



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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 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.	39	10			
q. Has the below guideline followed for Sub-step 2c: Calculation and comparison of financial indicators	EB 39	Ann 10	Yes.	OK	OK



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(only applicable to Options II and III)?					
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 Investment Analysis, below.	OK	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 Investment Analysis, below.	OK	OK
iii. Justify and/or cite assumptions.	EB 39	Ann 10	Please refer to Section Investment Analysis, below.	OK	OK
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 Investment Analysis, below.	OK	OK
v. Assumptions and input data for the investment analysis shall not differ across the project activity and its alternatives, unless differences	EB 39	Ann 10	Please refer to Section Investment Analysis, below.	OK	OK



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can be well substantiated.					
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	Please refer to Section Investment Analysis, below.	OK	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	Please refer to Section Investment Analysis, below.	OK	OK
s. Has the outcome of Step 2 clearly mentioned with justification?	EB 39	Ann 10	Yes.	OK	OK
t. In step 3: Barrier analysis have all the sub-steps as below been followed?	EB 39	Ann 10	N.A.	OK	OK
i. Sub-step 3a: Identify barriers that would prevent the implementation of the proposed CDM project activity;	EB 39	Ann 10	N.A.	OK	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	N.A.	OK	OK
u. Has the below guideline followed for Sub-step 3a: Identify barriers that would prevent the implementation of the proposed CDM project?	EB 39	Ann 10	N.A.	OK	OK
i. (a) Investment barriers: For alternatives undertaken and operated by private entities: Similar activities have only been implemented	EB 39	Ann 10	N.A.	OK	OK



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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.					
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 manufacturer information, The particular technology used in the proposed project activity is not available in the relevant region.	EB 39	Ann 10	N.A.	OK	OK
iii. (c) Barriers due to prevailing practice: The	EB	Ann	N.A.	OK	OK

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project activity is the “first of its kind”.	39	10			
iv. (d) Other barriers, preferably specified in the underlying methodology as examples.	EB 39	Ann 10	N.A.	OK	OK
v. Has the outcome from Step 3a clearly mentioned in PDD?	EB 39	Ann 10	N.A.	OK	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	N.A.	OK	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	N.A.	OK	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 are prevented by these barriers.	EB 39	Ann 10	N.A.	OK	OK
iii. The type of evidence to be provided should	EB	Ann	N.A.	OK	OK



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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.	39	10			
x. Has the outcome from Step 3 clearly mentioned in PDD?	EB 39	Ann 10	Yes.	OK	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	OK
ii. Sub-step 4b: Discuss any similar Options that are occurring.	EB 39	Ann 10			
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	Refer to CAR 21	CAR21	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	Refer to CAR 21	CAR21	OK
bb. Has the outcome from Step 4 clearly mentioned	EB	Ann	Refer to CAR 21	CAR21	OK



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in PDD?	39	10			
cc. Has it been proved that the project is additional?	EB 39	Ann 10	Refer to CAR 21	CAR21	OK
dd. Has the PP demonstrated additionality by explaining Investment barrier, Access-to-finance barrier, Technological barrier, Barrier due to prevailing practice or other barriers?	EB 35	Ann 34	No.	OK	OK
ee. If Investment barrier has been explained, is it demonstraed that financilly more viable alternative to the project activity would have led to higher emissions? Please explain.	EB 35	Ann 34	N.A.	OK	OK
ff. If Access-to-finance has been explained, is it demonstraed that the project activity could not access appropriate capital without consideration of the CDM revenues? Please explain.	EB 35	Ann 34	N.A.	OK	OK
gg. If Technological barrier has been explained, is it demonstraed that a less technologically advanced alternative to the project activity involves lower risks due to the performance uncertainty or low market share of the new technology adopted for the project activity and so would have led to higher emissions? Please explain.	EB 35	Ann 34	N.A.	OK	OK
hh. If prevailing practise barrier has been explained, is it demonstrated that the prevailing practice or existing regulatory or policy requirements would have led to implementation of a technology with	EB 35	Ann 34	N.A.	OK	OK



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higher emissions? Please explain.					
ii. If other barrier has been explained, is it demonstrated that Other barriers such as institutional barriers or limited information, managerial resources, organizational capacity, or capacity to absorb new technologies would prevent the project activity any way?	EB 35	Ann 34	N.A.	OK	OK
jj. Have the project participants identified the most relevant barrier?	EB 35	Ann 34	N.A.	OK	OK
kk. Have the project participants provided transparent and documented third party evidence such as national/international statistics, national/provincial policy and legislation, studies/surveys by independent agencies etc. to demonstrate the most relevant barrier? Please explain.	EB 35	Ann 34	N.A.	OK	OK

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
<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	N.A.	OK	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	N.A.	OK	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	N.A.	OK	OK
d. Does the project activity require construction, retrofit or other modifications?	VVM	99	N.A.	OK	OK
e. If yes, is it ensured that the date of commissioning cannot be considered as the project activity start date?	VVM	99	N.A.	OK	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	N.A.	OK	OK
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	VVM	101	N.A.	OK	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
date, had the PP informed the Host Party DNA and/or 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/or UNFCCC secretariat).					
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	N.A.	OK	OK
i. 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	N.A.	OK	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	101	N.A.	OK	OK
ii. 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	N.A.	OK	OK
a. contract with consultants for CDM/PDD/methodology services?	VVM	102	N.A.	OK	OK



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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	N.A.	OK	OK
c. evidence of agreements or negotiations with a DOE for validation services?	VVM	102	N.A.	OK	OK
d. submission of a new methodology to the CDM Executive Board?	VVM	102	N.A.	OK	OK
e. publication in newspaper?	VVM	102	N.A.	OK	OK
f. interviews with DNA?	VVM	102	N.A.	OK	OK
g. earlier correspondence on the project with the DNA or the UNFCCC secretariat?	VVM	102	N.A.	OK	OK
h. Has the chronology of events including time lines been appropriately captured and explained/detailed in the PDD?	VVM	102	N.A.	OK	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.	OK	OK
b. If no, does the PDD identify credible alternatives to the project activity in order to determine the most realistic baseline scenario?	VVM	105	N.A.	OK	OK
c. Does the list of alternatives given in the PDD ensure that:	VVM	106	N.A.	OK	OK

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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	N.A.	OK	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	N.A.	OK	OK
iii. the alternatives comply with all applicable and enforced legislation?	VVM	106	N.A.	OK	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	OK
b. If yes, does the PDD provide evidence that the proposed CDM project activity would not be:	VVM	108	See Below.	OK	OK
i. the most economically or financially attractive alternative?	VVM	108	Not Applicable.	OK	OK
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	OK
c. Was this shown by one of the following approaches?	VVM	109	See Below.	OK	OK
i. The proposed CDM project activity would	VVM	109	Not Applicable.	OK	OK



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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.					
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.	OK	OK
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	OK
d. Is the period of assessment limited to the proposed crediting period of the CDM project activity?	EB 51	Ann 58	No.	OK	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 51	Ann 58	Yes.	OK	OK
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	EB 51	Ann 58	Yes. The Spreadsheet contains the costs of major maintenance through the O&M costs.	OK	OK



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assessment?					
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 51	Ann 58	Yes.	OK	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 51	Ann 58	Yes.	OK	OK
i. Has the fair value been calculated in accordance with local accounting regulations where available, or international best practice?	EB 51	Ann 58	Yes.	OK	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 51	Ann 58	Yes.	OK	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 51	Ann 58	Yes.	OK	OK
l. Has taxation been included as an expense in the IRR/NPV calculation in cases where the benchmark or other comparator is intended for post-tax comparisons?	EB 51	Ann 58	Yes.	OK	OK
m. Are the input values used in all investment	EB	Ann	CL BQA 01 – Clarify with evidences the moment of	CL	OK

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analysis valid and applicable at the time of the investment decision taken by the project participant?	51	58	investment decision, in order to guarantee that the input values are the correct ones at this moment in the project chronology.	BQA 01	
n. Is the timing of the investment decision consistent and appropriate with the input values?	EB 51	Ann 58	Refer to the CL BQA 01.	CL BQA 01	OK
o. Are all the listed input values been consistently applied in all calculations?	EB 51	Ann 58	Yes.	OK	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 51	Ann 58	Not Applicable.	OK	OK
q. Have project participants supplied the spreadsheet versions of all investment analysis?	EB 51	Ann 58	Yes.	OK	OK
r. Are all formulas used in this analysis readable and all relevant cells be viewable and unprotected?	EB 51	Ann 58	Yes. All formulas and cells are viewable and could be verified by de DOE.	OK	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 51	Ann 58	Not Applicable.	OK	OK
t. In case the PP wishes to black-out certain elements of the publicly available version, is it justifiable?	EB 51	Ann 58	Not Applicable.	OK	OK
u. Was the cost of financing expenditures (i.e. loan	EB	Ann	No.	OK	OK



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repayments and interest) included in the calculation of project IRR?	51	58			
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 51	Ann 58	Not Applicable.	OK	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 51	Ann 58	Not Applicable.	OK	OK
x. Was a pre-tax benchmark be applied?	EB 51	Ann 58	No.	OK	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 51	Ann 58	Yes.	OK	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 51	Ann 58	Yes.	OK	OK
aa. In cases where a benchmark approach is used is the applied benchmark appropriate to the type of IRR calculated?	EB 51	Ann 58	Yes. According to the "Guidelines of Investment Assessment- Version 5", weighted average costs of capital (WACC) are appropriate benchmarks for a project IRR.	OK	OK
bb. Has local commercial lending rates or weighted average costs of capital (WACC) selected as	EB 51	Ann 58	Yes.	OK	OK



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appropriate benchmarks for a project IRR?					
cc. Has required/expected returns on equity selected as appropriate benchmark for an equity IRR?	EB 51	Ann 58	Not Applicable.	OK	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 51	Ann 58	Not Applicable.	OK	OK
ee. In the cases of projects which could be developed by an entity other than the project participant is the benchmark applied based on publicly available data sources which can be clearly validated?	EB 51	Ann 58	Yes.	OK	OK
ff. 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 51	Ann 58	Not applicable.	OK	OK
gg. 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 51	Ann 58	Not Applicable.	OK	OK
hh. Has a minimum clear evidence of the resolution by the company's Board and/or shareholders been provided to the effect as above?	EB 51	Ann 58	Not Applicable.	OK	OK
ii. Has a thorough assessment of the financial	EB	Ann	Not Applicable.	OK	OK



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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?	51	58			
jj. Does the risk premiums applied in the determination of required returns on equity reflect the risk profile of the project activity being assessed, established according to national/international accounting principles? (It is not considered reasonable to apply the rate general stock market returns as a risk premium for project activities that face a different risk profile than an investment in such indices.)	EB 51	Ann 58	Not Applicable.	OK	OK
kk. 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 51	Ann 58	Not Applicable.	OK	OK
ll. 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 51	Ann 58	Yes.	OK	OK



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mm. Have a corrective action been raised for a variable to be included in the sensitivity analysis which constitute less than 20% and have a material impact on the analysis ?	EB 51	Ann 58	No.	OK	OK
nn. Is the range of variations selected is reasonable in the project context?	EB 51	Ann 58	Yes.	OK	OK
oo. 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 51	Ann 58	Yes.	OK	OK
pp. 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	Yes.	OK	OK
qq. Was the plant load factor defined ex-ante in the CDM-PDD according to one of the following options:	EB 51	Ann 58	See Below.		
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	EB 51	Ann 58	CAR BQA 01 – Explain how was determined the plant load factor.	CAR BQA 01	OK



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activity for implementation approval?					
ii. The plant load factor determined by a third party contracted by the project participants (e.g. an engineering company)?	EB 51	Ann 58	Refer to CAR BQA 01.	CAR BQA 01	OK
rr. Was a thorough assessment of all parameters 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?	VVM	111	Yes. All parameters and assumptions used in calculating the relevant indicator are suitable and accurate.	OK	OK
ss. Were the parameters cross-checked against third-party or publicly available sources, such as invoices or price indices?	VVM	111	<p>CAR BQA 02 – 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 Capacity: 25,20 MW; -Number of Towers: 14; -Plant Load Factor: 36,4%; -Power Output: 80.269 MWh; -AEROGERADORES VESTAS: R\$165.690.000,00 - Gerenciamento de Contrato, Frete, Seguros, Comissionamento: R\$ 3.488.471,82 -SE'S Unitárias 34,5kV: R\$ 9.381.507,78; -Subestação 138kV-Banco de Transformadores -Linha de Transmissão 138kV 	CAR BQA 02	OK



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			<ul style="list-style-type: none"> -Bay 138kV -Civil: R\$ 38.868.389,16; -Meio Ambiente: R\$ 5.000.000,00; -Pessoal: R\$ 8.354.081,21; -Engenharia do Proprietário: R\$ 1.311.875,00; -Projeto Executivo: R\$ 1.450.000,00; -Seguro: R\$ 1.875.000,00; -O&M: R\$ 115.000,00/Tower/Year -Land Lease: 1,80%; -Enviromental/Managerial: R\$ 891.982,00; -Insurance: 0,27%; -TUSD: R\$ 3,13/kW/month; -TUSD: 100%; -ANEEL: 385,7; -Forward PLD (NE region): variable; -Electricity Sales- PPA; -PIS/COFINS: 3,65%; -Assumed Income for Social Tax: 12%; -Social Tax: 9%; -Assumed Income for Income Tax: 8%; -Income Tax: 25%; 		



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tt. Were feasibility reports, public announcements and annual financial reports related to the proposed CDM project activity and the project participants reviewed?	VVM	111	Refer to CAR BQA 02.	CAR BQA 02	OK
uu. Was the correctness of computations carried out and documented by the project participants assessed?	VVM	111	Refer to CAR BQA 02.	CAR BQA 02	OK
vv. 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.	OK	OK
ww. Is the type of benchmark applied is suitable for the type of financial indicator presented?	VVM	112	Yes. According to the "Guidelines of Investment Assessment- Version 5", weighted average costs of capital (WACC) are appropriate benchmarks for a project IRR.	OK	OK
xx. Do any risk premiums applied determining the benchmark reflect the risks associated with the project type or activity?	VVM	112	Yes. The WACC was calculated considering a (β) Sectorial Risk of 1.55%.	OK	OK
yy. 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	OK
i. assessing previous investment decisions by the project participants involved?	VVM	112	Not Applicable.	OK	OK
ii. determining whether the same benchmark has been applied?	VVM	112	Not Applicable.	OK	OK
iii. determining if there are verifiable	VVM	112	Not Applicable.	OK	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
circumstances that have led to a change in the benchmark?					
zz. 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?	CL BQA 02	OK
xx. If yes:	VVM	113	See Below.	OK	OK
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.	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.	CL BQA 02	OK
iii. If not, was the appropriateness of the values validated?	VVM	113	Refer to CL BQA 02.	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.	CL BQA 02	OK

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
d. Barrier analysis					
a. Has barrier analysis been used to demonstrated the additionality of the proposed CDM project activity?	VVM	115	No.	OK	OK
b. If yes, does the PDD demonstrate that the proposed CDM project activity faces barriers that:	VVM	115	N.A.	OK	OK
i. prevent the implementation of this type of proposed CMD project activity?	VVM	115	N.A.	OK	OK
ii. do not prevent the implementation of at least one of the alternatives?	VVM	115	N.A.	OK	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	N.A.	OK	OK
d. Were the barriers determined as real by:	VVM	117	N.A.	OK	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	N.A.	OK	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
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	N.A.	OK	OK
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	N.A.	OK	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	N.A.	OK	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 CDM-PoA-DD.	OK	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.	OK	OK
c. Was it assessed whether the geographical	VVM	120	Yes. The entire host country has appropriately	OK	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
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.			been chosen.		
d. Was a region other than the entire host country chosen?	VVM	120	No.	OK	OK
e. If yes, was the explanation why this region is more appropriate assessed?	VVM	120	N.A.	OK	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	Refer to CAR 21	CAR21	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	Refer to CAR 21	CAR21	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	Refer to CAR 21	CAR21	OK
7. Monitoring plan					
a. Does the PDD include a monitoring plan?	VVM	122	Yes.	OK	OK
b. Is this monitoring plan based on the approved monitoring methodology applied to the proposed	VVM	122	Refer to (3.d.) and (5.e.) above.	OK	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
CDM project activity?					
c. Were the list of parameters required by the the selected methodology identified?	VVM	123	Refer to (3.d.) and (5.e.) above.	OK	OK
d. Does the monitoring plan contains all necessary parameters?	VVM	123	Refer to (3.d.) and (5.e.) above.	OK	OK
e. Are the parameters clearly described?	VVM	123	Refer to (3.d.) and (5.e.) above.	OK	OK
f. Does the means of monitoring described in the plan comply with the requirements of the methodology?	VVM	123	Refer to (3.d.) and (5.e.) above.	OK	OK
g. Are all data and parameters monitored as per monitoring methodology?	ACM	0002	Refer to (3.d.) and (5.e.) above.	OK	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	CAR 31: The CDM-PoA-DD v01 Section E.7.2, does not states that all data collected as part of monitoring archived electronically and kept at least for 2 years after the end of the last crediting period.	CAR31	OK
i. Are 100% of the data monitored, if not indicated otherwise?	ACM	0002	Refer to (3.d.) and (5.e.) above.		
j. Are measurements conducted with calibrated measurement equipment according to relevant industry standards?	ACM	0002	Yes.	OK	OK
k. Are the monitoring provisions in the tools referred to in the methodology correctly applied?	ACM	0002	N.A. since $EF_{GRID, CM, y}$ is determined ex-ante.	OK	OK
l. Are the monitoring arrangements described in the monitoring plan feasible within the project design?	VVM	123	Yes.	OK	OK
m. Does the monitoring plan provide details regarding calibration of monitoring equipments/	EB 24	37	Yes.	OK	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
instruments or does it include zero check as a substitute for calibration? (zero check can not be considered as a substitute for calibration)					
n. Are the following means of implementation of the 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:	VVM	123			
i. data management procedures?	VVM	123	Refer to CAR 31	CAR31	OK
ii. quality assurance procedures?	VVM	123	Yes.	OK	OK
iii. quality control procedures?	VVM	123	Yes.	OK	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	Yes.	OK	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	The final decision from the 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 nº 1 of CIMGC – Comissão Interministerial de Mudança Global do Clima.	OK	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	VVM	128	Yes, however see CAR 20 .	CAR20	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
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?					
b. Have comments by local stakeholders that can reasonably be considered relevant for the proposed CDM project activity been invited?	VVM	129	No comments were received.	OK	OK
c. Is the summary of the comments received as provided in the PDD complete?	VVM	129	No comments were received.	OK	OK
d. Have the project participants taken due account of any comments received and described this process in the PDD?	VVM	129	No comments were received.	OK	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.	OK	OK
b. Have the project participants undertaken an analysis of environmental impacts?	VVM	132	Yes.	OK	OK
c. Does the host Party require an environmental impact assessment?	VVM	132	No.	OK	OK
d. If yes, have the project participants undertaken an environmental impact assessment?	VVM	132	N.A.	OK	OK

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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	Summary of project owner response	Validation team conclusion
CAR BQA 01 – Explain how was determined the plant load factor.	EB 51 Annex 58	<u>Answer 13/02/2012</u> The plant load factor is determined by a third party and is documented in the wind certification. This explanation is provided in sections E.5.1. and E.6.2. of the PoA-DD as well as in sections B.3. and B.5.2. of the CPA-DD. Please refer to the revised wind certification, which is attached to this protocol.	Answer 1 (24/02/2012) Referred evidence has been cross-checked and was considered applicable and in accordance to the CDM rules. CAR BQA 1 is closed.
CAR BQA 02 – 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. (a) Plant Capacity: 25,20 MW; (b) Number of Towers: 14; (c) Plant Load Factor: 36,4%; (d) Power Output: 80.269 MWh; (e) AEROGERADORES VESTAS: R\$165.690.000,00	VVM 111	<u>Answer 13/02/2012</u> As discussed during the audit visit, no activities/measures have been implemented in the project site for the project construction of the wind power plant. Therefore, no actions were taken for the project construction which may constitute the “project starting date”. Therefore, the investment analysis of the project (IRR and WACC calculation) was based on the most recent data/ information available at the time of the	Answer 1 (24/02/2012) All evidences have been cross-checked and were considered applicable and in accordance to the CDM rules. CAR BQA 2 is closed.



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<p>(f) Gerenciamento de Contrato, Frete, Seguros, Comissionamento: R\$ 3.488.471,82</p> <p>(g) SE'S Unitárias 34,5kV: R\$ 9.381.507,78;</p> <p>(h) Subestação 138kV-Banco de Transformadores</p> <p>(i) Linha de Transmissão 138kV</p> <p>(j) Bay 138kV</p> <p>(k) Civil: R\$ 38.868.389,16;</p> <p>(l) Meio Ambiente: R\$ 5.000.000,00;</p> <p>(m) Pessoal: R\$ 8.354.081,21;</p> <p>(n) Engenharia do Proprietário: R\$ 1.311.875,00;</p> <p>(o) Projeto Executivo: R\$ 1.450.000,00;</p> <p>(p) Seguro: R\$ 1.875.000,00;</p> <p>(q) O&M: R\$ 115.000,00/Tower/Year</p> <p>(r) Land Lease: 1,80%;</p> <p>(s) Enviromental/Managerial: R\$ 891.982,00;</p> <p>(t) Insurance: 0,27%;</p> <p>(u) TUSD: R\$ 3,13/kW/month;</p> <p>(v) TUSD: 100%;</p> <p>(w) ANEEL: 385,7;</p> <p>(x) Forward PLD (NE region): variable;</p> <p>(y) Electricity Sales- PPA;</p> <p>(z) PIS/COFINS: 3,65%;</p> <p>(aa) Assumed Income for Social Tax:</p>		<p>submission of the PDD for GSP (Global Stakeholder Process) on 29/10/2011. Please note that in accordance with the explanation provided below in CL 06, the starting date was revised. Due to this revision, the date in which the plant is expected to be operational was also modified to January 2015. In this, sense, the IRR calculation spreadsheet is attached.</p> <p>The evidences requested by the DOE are listed below.</p> <p>(a) The plant installed capacity is based on the wind certification provided by a third party and supplied to the DOE during the site visit. As discussed below in CAR 14, the wind certificate was revised after the commencement of the GSP. Hence, the influence of its update is discussed in the sensitivity analysis. Both documents were supplied to the DOE;</p> <p>(b) The source of the Number of Towers to be implemented is the wind certification conducted by a third party. Please refer to</p>	
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<p>12%;</p> <p>(bb) Social Tax: 9%;</p> <p>(cc) Assumed Income for Income Tax: 8%;</p> <p>(dd) <i>Income Tax: 25%;</i></p>		<p>the explanation provided above, for the plant installed capacity;</p> <p>(c) The source of the Plant Load Factor is the wind certification conducted by a third party. Please refer to the explanation provided above, for the plant installed capacity;</p> <p>(d) The source of the Power Output is the wind certification conducted by a third party. Please refer to the explanation provided above, for the plant installed capacity;</p> <p>(e) AEROGERADORES VESTAS: Please refer to the file named "WTG - Vestas / 25211-PR-OME-V100-2.0-95m REV0 25072011" supplied to the DOE in the meeting held on 13/01/2012;</p> <p>(f) Gerenciamento de Contrato, Frete, Seguros, Comissionamento: Please refer to the file named "Planilha de Preços Complexo Eólico Parnaíba - Rev.2 OPÇÃO VESTAS" supplied to the DOE in the meeting held on 13/01/2012</p> <p>(g) SE'S Unitárias 34,5kV: Please refer to the file named "Planilha de Preços Complexo Eólico</p>	
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		<p><i>Parnaíba - Rev.2 OPÇÃO VESTAS</i>” supplied to the DOE in the meeting held on 13/01/2012;</p> <p>(h) The plant will connect to the existent Lajeado Grande Substation. Therefore, no value was attributed to the construction of the substation with a higher tension.</p> <p>(i) The plant will connect to the existent Lajeado Grande Substation. Therefore, no value was attributed to the construction of the Transmission Line;</p> <p>(j) The plant will connect to the existent Lajeado Grande Substation. Therefore, no value was attributed to the construction of the Bay of a higher tension (138kV) connected with the transmission system;</p> <p>(k) Please refer to the file named “<i>Civil - Cortez / Carta Proposta Delta (sem R Igaracu) Rev03</i>” supplied to the DOE in the meeting held on 13/01/2012;</p> <p>(l) This input value was based on PPs experience;</p> <p>(m) This input value was based on PPs experience;</p>	
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		<p>(n) Please refer to the file named "<i>Engecorps_PP-01-10098-OER-R1</i>" supplied to the DOE in the meeting held on 13/01/2012;</p> <p>(o) Please refer to the file named "<i>Engecorps_PP-01-10098-OER-R1</i>" supplied to the DOE in the meeting held on 13/01/2012;</p> <p>(p) This input value was based on PPs experience;</p> <p>(q) Please refer to page 11 of the file named "<i>WTG - Vestas / 25211-PR-OME-V100-2.0-95m REV0 25072011</i>" supplied to the DOE in the meeting held on 13/01/2012;</p> <p>(r) The land lease agreement is attached to this protocol. Please refer to the file named "<i>CAR BQA 02 - LGI_Contrato arrendamento</i>";</p> <p>(s) This input value was based on PPs experience;</p> <p>(t) Based on PPs experience and consistent with the insurance of other operational small hydro power plants. Please refer to the files named "<i>Apólice - Hidrelétrica Pipoca - RCG</i>" and "<i>Apólice - Hidrelétrica Pipoca - RO</i>". The value used is slightly</p>	
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		<p>higher to account for the risk perception related to the implementation of wind power plants in Brazil;</p> <p>(u) Reference to the TUST fee is provided in the Excel file supplied to the DOE in the meeting held on 13/01/2012;</p> <p>(v) As discussed in Table 5 of the CDM-CPA-DD, the discount in the TUSD fee is not being taken into account since it can be considered a type E- policy;</p> <p>(w) Reference is provided in the IRR calculation spreadsheet. The ANEEL Ordinance is also publicly available at http://www.aneel.gov.br/cedoc/atdsp2011360.pdf (accessed on 08/02/2012);</p> <p>(x) PSR Report supplied to the DOE in the meeting held on 13/01/2012;</p> <p>(y) Electricity Sales- PPA corresponds to the total income expected with the electricity sales after the plant becomes operational. Please note that this parameter is calculated;</p> <p>(z) In accordance with the Federal Law #9.718, dated November 27th, 1998 (http://www.receita.fazenda.gov).</p>	
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		<p>br/legislacao/leis/Ant2001/lei971898.htm);</p> <p>(aa) Please refer to the FAC section of the Secretariat of the Revenue of Brazil for the applicable regulation (http://www.receita.fazenda.gov.br/PessoaJuridica/DIPJ/2011/PergResp/default.htm). Details are also provided in the KPMG document referred to in the PDD;</p> <p>(bb) Please refer to the FAC section of the Secretariat of the Revenue of Brazil for the applicable regulation (http://www.receita.fazenda.gov.br/PessoaJuridica/DIPJ/2011/PergResp/default.htm). Details are also provided in the KPMG document referred to in the PDD;</p> <p>(cc) Please refer to the FAC section of the Secretariat of the Revenue of Brazil for the applicable regulation (http://www.receita.fazenda.gov.br/PessoaJuridica/DIPJ/2011/PergResp/default.htm). Details are also provided in the KPMG document referred to in the PDD;</p> <p>(dd) Please refer to the FAC section</p>	
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		of the Secretariat of the Revenue of Brazil for the applicable regulation (http://www.receita.fazenda.gov.br/PessoaJuridica/DIPJ/2011/PergrResp/default.htm). Details are also provided in the KPMG document referred to in the PDD;	
CAR 01: The CDM-CPA-DD version 01 presents the sections A.4.1 and A.4.1.1 as one. The two sections should be filled.	VVM 56	<u>Answer 13/02/2012</u> The CDM-CPA-DD was amended in order to present sections A.4.1. and A.4.1.1. separately. Nevertheless, it is PPs understanding that section A.4.1. does not need to be filled in since the identification of the CPA is given in sections A.4.1.1. and A.4.1.2.	First Answer (16/02/2012) The CDM-CPA-DD Lajeado and generic were amended. The DOE agrees with the PP explanation. The CAR 01 is closed.
CAR 02: CDM-CPA-DD – Lajeado Grande I version 01, Section A.4.2.2. is blank.	VVM 56	<u>Answer 13/02/2012</u> The requested information was included in the second version of the CPA, dated 13/02/2012. The manufacturer brochure which provides the technical lifetime of the equipment is also attached.	First Answer (16/02/2012) The value to the expected operational lifetime of the CPA was included on the CDM-CPA-DD Lajeado version 02. The document estas_V_100_brochure was cross-checked. The CAR 02 is closed.
CAR 03: The field “Date of	VVM 56	<u>Answer 13/02/2012</u>	First Answer (16/02/2012)



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document” is not to be filled on the CDM-CPA-DD - generic - Section A.1.;		The generic version of the CPA was revised as requested. Please refer to the second version of the document, dated 13/02/2012.	The CDM-CPA-DD generic was amended. The CAR 03 is closed.
CAR 04: CDM-CPA-DD - generic, version 1, Section A.4.1. is blank.	VVM 56	<u>Answer 13/02/2012</u> It is PPs understanding that section A.4.1. does not need to be filled in. Please refer to CAR 01 response above.	First Answer (16/02/2012) The DOE agrees with the PP explanation. The CAR 04 is closed.
CAR 05: CDM-CPA-DD - generic, version 1, Section A.4.1.2 presents the “Plant Name” on the first paragraph, this not happens on the CDM-CPA-DD – Lajeado Grande I version 01. The same situation occurs related to the figure 1 at the same section (See also: Section B.2. – Item 2; Section B.3 – Table 6; Section B.4. – first paragraph; Section B.5.2; B.6.1 – two times; C.2.; C.3.).	VVM 56	<u>Answer 13/02/2012</u> The Lajeado Grande I CDM-CPA-DD was amended in order to be consistent with generic version of the document. Please refer to the second version of the CPA, dated 13/02/2012. <u>Answer 09/03/2012</u> 1. The CDM-PoA-DD was amended to include the statement mentioned by the DOE, which is also in accordance with the CDM-PoA-DD form. Please refer to the third version of the document, dated 09/03/2012. 2. The e-mail address of the individual responsible for the CPA	First Answer (16/02/2012) The CDM-CPA-DD generic was amended, however the DOE verified another inconsistency on Section A.4.1.2: 1. CDM-PoA-DD version 02: There is no statement related to the fact that: “...taking into consideration the requirement that all applicable national and/or sectoral policies and regulations of each host country within that chosen boundary;”; 2. CDM-CPA-DD Lajeado and generic version 02: Include more data related to the “contact details”.



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		was attached in the third version of both CDM-CPA-DD Lajeado Grande I and Generic. Please refer to the documents dated 09/03/2012.	<p>The CAR 05 is still open.</p> <p>Second Answer (11/03/2012)</p> <p>The CDM-PoA-DD and the CDM-CPA-DD Lajeado version 03 were amended.</p> <p>The CAR 05 is closed.</p>
CAR 06: CDM-CPA-DD - generic, version 1, Section A.4.2.1 does not present the phrase "..., estimated date of the major equipment orders (see Table 1) as presented on the CDM-CPA-DD – Lajeado Grande I version 01.	VVM 56	<p><u>Answer 13/02/2012</u></p> <p>The mentioned sentence was removed from the Lajeado Grande I CDM-CPA-DD since this information may vary depending on the project being developed in future CPAs.</p> <p><u>Answer 09/03/2012</u></p> <p>The information quoted by the DOE is specific related to the Lajeado Grande I CPA. PPs cannot ensure that future CPAs starting dates are going to be described as they were in this project.</p> <p>Nevertheless, a generic</p>	<p>First Answer (16/02/2012)</p> <p>The phrase: "The wind power plant considered in this CPA is qualified to participate in the government energy auction that will take place in March 22nd, 2012[*]". In this sense, the main events related to the plants' implementation are connected to the assumption that plant may win the auction, which are forecasted to happen as follows:" from the CDM-CPA-Lajeado version 02 is</p>

* Ministry of Mines and Energy Ordinance #554, dated September 23rd, 2011. The document is available at http://www.ccee.org.br/StaticFile/Arquivo/biblioteca_virtual/Leiloes/3%20Energia%20Nova/prt2011554mme.pdf.



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		orientation was included in the CDM-CPA-DD to ensure that future CPAs include an explanation as to how the dates were determined or in which documents they were based on. Please refer to the revised third version of the document.	not presented on the CDM-CPA-DD generic version 02. The CAR 06 is still open. Second Answer (11/03/2012) The CDM-PoA-DD generic was amended. The CAR 06 is closed.
CAR 07: CDM-CPA-DD – generic, version 01, Section A.4.2.2. is blank.	VVM 56	<u>Answer 13/02/2012</u> The section A.4.2.2. was completed. Please refer to the second version of the document, dated 13/02/2012.	First Answer (16/02/2012) The CDM-CPA-DD generic was amended. The CAR 07 is closed.
CAR 08: All the data referred to the Section A.4.3.1 from the CDM-CPA-DD – generic, version 01, should be filled.	VVM 56	<u>Answer 13/02/2012</u> Section A.4.3.1 of the CDM-CPA-DD – generic was revised to clearly identify which information has to be filled (between square brackets). Please refer to the revised version of the document, as attached.	First Answer (16/02/2012) The CDM-CPA-DD generic was amended. However the year presented on the Section A.4.3.1 from the CDM-CPA-DD Lajeado version 02 appears as “20154”.



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		<u>Answer 09/03/2012</u> The document was amended as requested by the DOE. Please refer to the third version of the CDM-CPA-DD Lajeado Grande I, dated 09/03/2012.	The CAR 08 is still open. Second Answer (11/03/2012) The CDM-CPA-DD Lajeado version 03 was amended. The CAR 08 is closed.
CAR 09: The CDM-CPA-DD – generic, version 01, presents a Table 1 on Section A.4.4, when the same Section at the CDM-CPA-DD – Lajeado Grande I version 01 presents the Table 2.	VVM 56	<u>Answer 13/02/2012</u> The inconsistency between the two documents, as reported by the DOE, was corrected by including a table in section A.4.2.1 of the generic CDM-CPA-DD. Please refer to the second version of these documents, both dated 13/02/2012.	First Answer (16/02/2012) The CDM-CPA-DD generic was amended. The CAR 09 is closed.
CAR 10: The “justification/source of information used” presented on the CDM-CPA-DD – generic, version 01, Section B.3., table 4, is not the same presented on the CDM-CPA-DD – Lajeado Grande I version 01 (Table 5).	VVM 56	<u>Answer 13/02/2012</u> The source of information or its justification may vary between the CPAs. Therefore, the generic version of the CDM-CPA-DD was revised to provide, in Table 5 (Parameters and the justification of data used in the investment analysis) a generic orientation to be considered in future CPAs.	First Answer (16/02/2012) The CDM-CPA-DD generic was amended. The CAR 10 is closed.
CAR 11: Related to the parameter “Industrialized Products Tax” presented on the CDM-CPA-DD –	VVM 56	<u>Answer 13/02/2012</u> In the generic CDM-CPA-DD it is indicated that a percentage for IPI	First Answer (16/02/2012) The DOE agrees with the PP

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generic, version 01, Section B.3., table 4, the field “values” is not filled in accordance with the CDM-CPA-DD – Lajeado Grande I version 01 (Table 5).		shall be considered since wind turbines are exempt from paying this tax. At the CDM-CPA-DD Lajeado Grande I, instead of mentioning the percentage of the IPI tax, it is stated that the exemption was already not taken into account in the quotation. It is PPs understanding that the CDM-CPA-DD Lajeado Grande I is in agreement with the generic CDM-CPA-DD.	<p>explanation.</p> <p>The CAR 11 is closed.</p>
CAR 12: The eligibility criteria presented on the CDM-CPA-DD – Lajeado Grande I version 01, Section A.4.2.2 are not the same presented on the CDM-CPA-DD - generic, version 1, Section B.2. (please also refer to CAR 17).	VVM 56	<p><u>Answer 13/02/2012</u></p> <p>The eligibility criteria were revised in the CDM-PoA-DD, CDM-CPA-DD Lajeado Grande I and CDM-CPA-DD generic, in accordance with the EB 65 Annex 03 paragraph 14, 15 and 17. Please refer to the revised version of the documents, dated 13/02/2012.</p> <p><u>Answer 09/03/2012</u></p> <p>Please refer to CAR17 answer presented below.</p>	<p>First Answer (20/02/2012)</p> <p>Refer to CAR 17.</p> <p>CAR 12 is still open.</p> <p>Second Answer (11/03/2012)</p> <p>The CAR 17 was closed.</p> <p>The CAR 12 is closed.</p>
CAR 13: During the site visit was observed that the document “Certificação de Medições Anemométricas - Certificação de	VVM 56	<p><u>Answer 13/02/2012</u></p> <p>The investment analysis is done considering the most recent information available at the time</p>	<p>First Answer (16/02/2012)</p> <p>The second version of the Wind Certification was cross-checked.</p>



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<p>Produção de energia” (Wind Certification) has a new revision (16/11/11), in this way the values presented on Table 5 from the CDM-CPA-DD – Lajeado Grande I version 01, Section B.3. should be updated and the calculations that use of such data.</p>		<p>the GSP started, on 29/10/2011. The latest version of the wind certification is dated 16/11/2011. In this sense, the IRR of the project was determined considering the first version of the wind certificate, since its revision was issued after the GSP have started. Consequently, the input values presented in Table 5 of the CDM-PoA-DD were not up-dated. The influence of the revision of the wind certification was discussed in the sensitivity analysis. Nevertheless, the technical information was revised considering the latest version of the wind certification in order to reflect the most recent configuration of the wind power plant. Please refer to the second version of the CDM-CPA-DD Lajeado Grande I as well as CERs calculation spreadsheet both dated 13/02/2012 and attached to this protocol.</p>	<p>The CDM-CPa-DD Lajeado was amended.</p> <p>The CAR 13 is closed.</p>
<p>CAR 14: Related to the spreadsheet LGI_CERs2011.10.03._v.1.xls: update the values from the wind</p>	<p>VVM 56</p>	<p><u>Answer 13/02/2012</u> The requested information was revised. Please refer to the second version of the CERs</p>	<p>First Answer (16/02/2012)</p> <p>The spreadsheet LGI_CERs_2012.02.13_v.2.xls</p>



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certification; on table A.4.4, and table 5.3. the final date (July, 31st, 2022) is wrong; the value referred to the sum of "Estimation of overall emission reductions" is wrong.		calculation spreadsheet, dated 13/02/2012.	was cross-checked. The CAR 14 is closed.
CAR 15: PoA-DD v01, Section A.4.1, is blank.	PoA form V1	<u>Answer 13/02/2012</u> It is PPs understanding that section A.4.1. of the CDM-PoA-DD does not need to be filled in since the location of the PoA is better detailed in sections A.4.1.1. and A.4.1.2.	First Answer (16/02/2012) The DOE agrees with the PP explanation. The CAR 15 is closed.
CAR 16: 6oA-DD v01, Section A.4.2, is blank.	PoA form V1	<u>Answer 13/02/2012</u> It is PPs understanding that section A.4.2. of the CDM-PoA-DD does not need to be filled in since the description of a typical CPA to be included in the proposed PoA is better detailed in sections A.4.1.1. and A.4.1.2.	First Answer (16/02/2012) The DOE agrees with the PP explanation. The CAR 16 is closed.
CAR 17: The eligibility criteria for inclusion of a CPA in the PoA (Section A.4.2.2) should be established in accordance with the EB 65 Annex 03 paragraph 14, 15 and 17.	PoA form V1	<u>Answer 13/02/2012</u> The eligibility criteria were revised as requested by the DOE. Please refer to the revised version of the CDM-PoA-DD, CDM-CPA-DD Lajeado Grande I and CDM-CPA-DD generic, dated 13/02/2012. <u>Answer 09/03/2012</u>	First Answer (20/02/2012) The item (h) from the revised eligibility criteria does not meet the criteria related to the paragraph 15 of EB 65 Annex 03: "The eligibility criteria shall be verifiable", also the eligibility criteria established on the



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		<p>It is PPs' understanding that the requirements of paragraph 17 do not correspond to eligibility criteria. On the contrary, these requirements have to be considered in a procedure to be implemented by the CME to ensure the eligibility criteria are met by the CPAs. In this sense, an operational procedure to be conducted by the CME for the inclusion of CPAs was developed. A copy of the document is attached.</p> <p>In addition to this, item (h) of the eligibility criteria mentioned in Section A.4.2.2. refers to a condition established for a project participant to included in the proposed PoA, which is do not result in a diversion from an ODA. Since PPs understand that there is no means demonstrate something that did not happen, the condition was not amended. Please note that in fact, this condition guarantees that only projects that do not receive funding from ODA are eligible.</p>	<p>paragraph 17 of the EB 65 annex 03 were not provided.</p> <p>The CAR 17 is still open.</p> <p>Second Answer (11/03/2012)</p> <p>The DOE verified the operational procedure to be implemented by the CME to ensure the eligibility criteria from the CPA's and agrees with the PP in the case of item (h).</p> <p>The CAR 17 is closed.</p>
CAR 18: In according with the	PoA form	<u>Answer 13/02/2012</u>	First Answer (16/02/2012)

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UNFCCC website (http://cdm.unfccc.int/ProgrammeOfActivities/Validation/DB/UNWFFNFINB2BWZXM746PLOQXMWA968I/view.html) the proposed PoA was available since 29/10/2011 and not 19/10/2011 as stated on the CDM-PoA-DD .	V1	The date previously informed was a foreclosed date for the commencement of the GSP. The information in section B.1. of the CDM-PoA-DD was revised as requested. Please refer to the second version of the document, dated 13/02/2012.	The CDM-PoA-DD version 02 was amended. The CAR 18 is closed.
CAR 19 : PoA-DD v01, Section D.2, does not describe how comments by local stakeholders have been invited.	PoA form V1	<u>Answer 13/02/2012</u> Section D.2. was revised to include the description as to how the local stakeholder were invited for comments. This explanation was first provided in section D.1 of the CDM-PoA-DD, which was revised as a consequence of this request. Please refer to the second version of the document, dated 13/02/2012.	First Answer (16/02/2012) The CDM-PoA-DD version 02 was amended. The CAR 19 is closed.
CAR 20 : The actual version of the methodology ACM0002 is version 12.2.0. The actual version of the tool to calculate the emission factor for an electricity system is version 2.2.1. The actual version to the tool for the demonstration and assessment of additionality is version 6.0.0. The actual version of the combined tool to identify the baseline scenario and	PoA form V1	<u>Answer 13/02/2012</u> The CDM-PoA-DD was updated in order to use the latest version of the mentioned tools. Please refer to the second version of the document, dated 13/02/2012.	First Answer (16/02/2012) The CDM-PoA-DD version 02 was amended. The CAR 20 is closed.

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demonstrate additionality is version 3.0.1.			
CAR 21: PoA-DD v01, Section E.3, Figure 5, refers to EG_y , whereas correct parameters are $EG_{facility,y}$ and $EG_{PJ_Add,y}$.	PoA form V1	<u>Answer 13/02/2012</u> The CME have opted to exclude capacity additions from the list of eligible CPAs. Therefore the figure was only amended to present the parameter $EG_{facility,y}$ instead EG_y . Please refer to the second version of the document, dated 13/02/2012.	First Answer (17/02/2012) The CDM-PoA-DD version 02 was amended. The CAR 21 is closed.
CAR 22: PoA-DD v01, Section E.5, has been left blank.	PoA form V1	<u>Answer 13/02/2012</u> It is PPs understanding that section E.5. of the CDM-PoA-DD does not need to be filled in since the additionality for a typical CPA and the criteria used for inclusion its inclusion are better detailed in sections E.5.1. and E.5.2.	First Answer (17/02/2012) The DOE agrees with the PP explanation. The CAR 22 is closed.
CAR 23: PoA-DD v01, Section E.5.2, does not include a justification of the choice of criteria for assessing additionality of a CPA.	PoA form V1	<u>Answer 13/02/2012</u> The ACM0002 methodology refers to the “ <i>Tool for the demonstration and assessment of additionality</i> ” (Additionality Tool) and the “ <i>Combined tool to identify the baseline scenario and demonstrate additionality</i> ” (Combined Tool). However, the combined tool is not applicable for Greenfield facilities where the	First Answer (20/02/2012) The DOE agrees with the PP explanation. The CAR 23 is closed.



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		<p>output could be provided by other existing facilities or new facilities that could be implemented in parallel with the CDM project activity. Therefore, the additionality assessment was conducted at the CPA level and followed the steps of the methodological tool '<i>demonstration and assessment of additionality</i>' as required by the ACM0002 methodology. The explanations above justify the choice of the criteria for assessing the additionality of the CPA.</p>	
<p>CAR 24:PoA-DD v01, Section E.6.1, presents a web link address (<http://www.ons.org.br/historico/geracao_energia.aspx>) which does not lead to the information in Table 6.</p>	PoA form V1	<p><u>Answer 13/02/2012</u></p> <p>The link presented as the source of information disclosed in Table 6 of the CDM-PoA-DD corresponds to the National System Operator website where the input data related to electricity generation can be obtained. In this webpage, several options are provided, such as: source, year, region and others. The result presented in the table was obtained by assessing information of the most recent years, divided by sources. The spreadsheet containing the</p>	<p>First Answer (17/02/2012)</p> <p>The DOE agrees with the PP explanation.</p> <p>The CAR 24 is closed.</p>



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		calculation is attached for crosschecking of the DOE.	
CAR 25: PoA-DD v01, Section E.6.1, does not make any reference to the choice between options 1 and 2 for the calculation of $EG_{PJ,y}$, in the case of capacity additions.	PoA form V1	<u>Answer 13/02/2012</u> The CME have opted to exclude capacity additions from the list of eligible CPAs. Therefore the requested information was not included in the second version of the CDM-PoA-DD.	First Answer (17/02/2012) The DOE agrees with the PP explanation. The CAR 25 is closed.
CAR 26 : PoA-DD v01, Section E.6.3, does not list DATEBaselineRetrofit. Please, when addressing this CAR, let it clear that DateBaselineRetrofit applies to capacity addition CPAs.	PoA form V1	<u>Answer 13/02/2012</u> The CME have opted to exclude capacity additions from the list of eligible CPAs. Therefore the requested information was not included in the second version of the CDM-PoA-DD.	First Answer (17/02/2012) The DOE agrees with the PP explanation. The CAR 26 is closed.
CAR 27: PoA-DD v01, Section E.7.1, does not list $EG_{PJ_Add,y}$, $EG_{facility,y}$ nor $EF_{grid,CM,y}$. Please, when addressing this CAR, let it clear that for each CPA to be added, either $EG_{facility,y}$ or $EG_{PJ_Add,y}$ will apply	PoA form V1	<u>Answer 13/02/2012</u> The CME have opted to exclude capacity additions from the list of eligible CPAs. Therefore, the inclusion of the parameter $EG_{PJ_Add,y}$ is no longer applicable. Also, the CME have opted for the <i>ex-ante</i> vintage for the calculation of the combined margin CO_2 emission factor of the grid. In this sense, the parameter $EF_{grid,CM,y}$ must not be included in the monitored parameters section.	First Answer (17/02/2012) The DOE agrees with the PP explanation. The CDM-PoA-DD version 02 was amended. The CAR 27 is closed.

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		Finally, for Greenfield power plants $EG_{PJ,y}$ is equal to $EG_{facility,y}$. Nevertheless, instead of mentioning $EG_{PJ,y}$ as a monitored parameter, the CDM-PoA-DD was amended to present $EG_{facility,y}$ as a monitored parameter, as requested by the DOE. Please refer to the second version of the CDM-PoA-DD, dated 13/02/2012.	
CAR 28: In accordance with the Tool for the demonstration and assessment of additionality. (Version 06.0.0), the alternative: Other realistic and credible alternative scenario(s) to the proposed CDM project activity scenario that deliver outputs services (e.g., cement) or services (e.g. electricity, heat) with comparable quality, properties and application areas, taking into account, where relevant, examples of scenarios identified in the underlying methodology; Must be included.	EB 39 Annex 10	<u>Answer 13/02/2012</u> As presented in sub-step 1a, there are two alternatives to the proposed project activity: (i) the electricity generated by the grid-connected power plants (current scenario) and (ii) the proposed project activity without the CDM incentives. Therefore, the options available to the project sponsor are to invest or not invest in the proposed project activity. These options are reflected in the investment analysis of the project; the investment analysis is based on the “benchmark analysis” and not in the “comparison analysis” (alternative scenarios in the case of other types of infrastructural	First Answer (17/02/2012) The DOE agrees with the PP explanation. The CAR 28 is closed.



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		investment). Furthermore, other types of renewable energy generation project – as biomass and/or hydropower –, are no potential alternatives at the site where the project is planned.	
CAR 29: The CDM-PoA-DD v01 Section E.7.2, does not states that 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 002	<u>Answer 13/02/2012</u> The information was included in section E.7.2. of the CDM-PoA-DD as requested. Please refer to the revised version of the document, dated 13/02/2012.	First Answer (17/02/2012) The CDM-PoA-DD version 02 was amended. The CAR 29 is closed.
CAR 30: PoA-DD v01, Section E.5.1, and both CPA-DDs (Lajeado Grande I v1 and Generic), Section B.3, present discrepant formulae for K_d and K_e .		<u>Answer 13/02/2012</u> K_d and K_e formulae presented in the CDM-CPA-DD Lajeado Grande I and CDM-CPA-DD generic were revised to be in agreement with the ones presented in the CDM-PoA-DD. Please refer to the second version of the documents, both dated 13/02/2012. <u>Answer 09/03/2012</u> The requested formula was corrected in the third version of the CDM-CPA-DD Lajeado Grande I., dated 09/03/2012.	First Answer (17/02/2012) The formulae for K_e presented on the CDM-CPA-DD Lajeado version 02 remains with an error $([1 + (R_f + (\beta \times R_m) + R_c)] \times (1 + \pi) / (1 + \pi'))$. The CAR 30 is still open. Second Answer (11/03/2012) The CDM-CPA-DD Lajeado version 03 was amended.

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			The CAR 30 is closed.
CAR 31: The CDM-PoA-DD v.02, at the Section E.6.2., adopted the EF grid, BM, $y = 0.1164 \text{ t CO}_2\text{e/MWh}$, in disagree with the presented in the support spreadsheet.		<u>Answer 09/03/2012</u> The grid emission factor as well as the CERs calculation spreadsheets already adopted a revised result of the combined margin, which considered the stepwise approach presented in Step 5 of the latest version of the "Tool to calculate the emission factor for an electricity system". However, the first and second versions of the CDM-PoA-DD were not revised accordingly. This inconsistency was corrected in the third version of the CDM-PoA-DD, dated 09/03/2012.	First Answer (11/03/2012) The CDM-CPA-DD Lajeado version 03 was amended. The CAR 31 is closed.
CAR 32: Related to the PoA: a. In the entire PoA-DD version 3, reference to the Additionality tool needs to be as following: the methodological tool "Tool for the demonstration and assessment of additionality (version 6.0.0)". And not: "the methodological tool "Demonstration and assessment of additionality" (version 6.0.0)". (This request also applies for the Generic CPA-DD). b. Regarding the PoA-DD version	ITR	<u>Answer 09/04/2012</u> Documents have been revised as requested by the DOE. Please refer to their fourth version, dated 09/04/2012.	First Answer (10/04/2012) The PoA version 04, the CDM-CPA-DD - generic version 04 and the CDM-PoA-DD version 04 were amended. The DOE agrees with the PP explanation. The CAR 32 is closed.



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<p>3, in section D.2, the names (in English) of the local stakeholders prescribed by the Brazilian DNA are not in accordance with the names provided by the English version of Resolution number 9 of the DNA, available on the DNA web site. Also, please provide the English translation of the full name of FBOMS.</p> <p>c. In Section E.5.1 of the PoA-DD version 3, in the first paragraph of Sub-step 2b, the CME states that: "The IRR will be compared to the appropriate benchmark of the electric sector (...), which is the Weighted Average Cost of Capital (WACC)". However, in this same sub-step 2b, the CME states that: "The Project IRR can be compared with the WACC <u>as the Equity IRR with the Return on Equity (Ke).</u>" This request also applies for the Generic CPA-DD).</p> <p>d. In E.5.1 of the PoA-DD version 3, regarding common practice, all descriptions included regarding the 4.a and 4.b common practice analysis needs to be removed. According to the Additionality Tool</p>			
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<p>version 6, the analysis needs to be done only in accordance to paragraph 47 of the Tool. (This request also applies for the Generic CPA-DD).</p> <p>e. Regarding Step 2 of Section E.5.2 of the PoA-DD version 3, please note that there is another possible benchmark besides WACC: the <u>Return on Equity (Ke)</u>, according to Section E.5.1.</p> <p>f. In Sections E.6.1 and E.6.2 of the PoA-DD version 3, the names of the steps 1 and 6 to calculate the emission factor are not in accordance with the names provided by the Tool to calculate the emission factor for an electricity system version 02.2.1. (This request also applies for the Generic CPA-DD).</p> <p>g. In the entire PoA-DD version 3, please change M2 and CO2 to M² and CO₂, respectively.</p> <p>h. In Section E.6.1 of the PoA-DD version 3, the phrase: “as per Option A2 of the tool” should be “as per Option A2 of the of the simple OM method”</p> <p>i. In Section E.6.2 of the PoA-DD</p>			
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<p>version 3, in step 6, the phrase: “Applying the results presented above in STEPS 4 and 6 above” should be: “Applying the results presented above in STEPS 4 and 5 above”. (This request also applies for the Generic CPA-DD).</p> <p>j. In Section E.7.1 of the PoA-DD version 3, regarding $EG_{\text{facility},y}$, the following is missing in accordance with ACM0002:</p> <ul style="list-style-type: none">- Monitoring frequency: Continuous measurement and at least monthly recording- QA/QC procedures: Cross check measurement results with records for sold electricity. <p>(This request also applies for the Generic CPA-DD).</p> <p>k. In Section A.4.3.2 of the Generic CPA-DD, the statement “The end date of the PoA to which this CPA will be added is 18/10/2039.” Cannot be correct, seeing that 29/10/2011 plus 28 years is 28/10/2039.</p> <p>l. In B.2 of the Generic CPA-DD, the phrase: “As described in</p>			
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section B.6.1 of the CDM-PoA-DD, off-grid power plants were not considered.” must be: “As described in section E.6.1 of the CDM-PoA-DD, off-grid power plants were not considered.”.			
CAR 33: Related to the CPA: a. In Section A.4.3.2 of the CPA-DD Lajeado version 3, the statement “The end date of the PoA to which this CPA will be added is 18/10/2039.” Cannot be correct, seeing that 29/10/2011 plus 28 years is 28/10/2039. b. In Section B.3 of the CPA-DD Lajeado version 3, in table 9, “COST (tBRL/MWh)” must be: “INVESTMENT (1,000BRL)” c. In Section E.7.1 of the CPA-DD Lajeado version 3, regarding EG _{facility,y} , the following is missing in accordance with ACM0002: - Monitoring frequency: Continuous measurement and at least monthly recording - QA/QC procedures: Cross check measurement results with records for sold electricity.	ITR	<u>Answer 09/04/2012</u> Documents have been revised as requested by the DOE. Please refer to their fourth version, dated 09/04/2012.	First Answer (10/04/2012) The PoA version 04, the CDM-CPA-DD - generic version 04 and the CDM-PoA-DD version 04 were amended. The DOE agrees with the PP explanation. The CAR 33 is closed.



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d. In the LGI_CERs_2012.02.13_v.2 spreadsheet, in <technical description>, the municipality São Francisco de Itabapoana (RJ) is mentioned. This is not in accordance with information provided in the CPA-DD.			
CL BQA 01 – 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 51 Annex 58	<u>Answer 13/02/2012</u> The input values used in the investment analysis of the project (IRR and WACC calculation) were based on the most recent data/ information available at the time of the submission of the PDD for GSP (Global Stakeholder Process), i.e. the first semester of 2011 year. Please refer to the CAR BQA 2 answer above.	First Answer (24/02/2012): According to CAR BQA 2 above. CL BQA 01 is closed.
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?	VVM 113	<u>Answer 13/02/2012</u> No.	Answer 1 (24/02/2012) The answer has been accepted. CL BQA 02 is closed.
CL01 – Please, inform the present	VVM 44	<u>Answer 13/02/2012</u>	First Answer (17/02/2012)

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situation of the approval by the United Kingdom of Great Britain and Northern Ireland.		The CME understands that the United Kingdom of Great Britain and Northern Ireland Letter of Approval (LoA) can only be requested after the issuance of the Brazilian LoA. Both documents will be forwarded to the DOE as soon as they are issued.	<p>The DOE agrees with the PP explanation.</p> <p>The CL 01 is closed.</p>
CL 02: Please provide the source related to the geographic coordinates presented on the CDM-CPA-DD – Lajeado Grande I version 01, Section A.4.1.2.	VVM 56	<p><u>Answer 13/02/2012</u></p> <p>The geographic coordinates presented in the CPA correspond to the ones of the first generation unit (wind turbine) of the plant. The information provided is in line with the one available in the preliminary license of the wind power plant as well as the one available in the revised wind certification attached to this protocol. Please note that the wind certification provides the geographic coordinates in the UTM format. For the conversion, an online tool available at http://www.rdttec.com.br/rdgeomg/ocalmaster.htm, was used.</p>	<p>First Answer (17/02/2012)</p> <p>The DOE agrees with the PP explanation.</p> <p>The CL 02 is closed.</p>
CL 03: Please clarify the reference related to the action “construction permit issuance”	VVM 56	<p><u>Answer 13/02/2012</u></p> <p>Usually, the time required for the construction of wind power plants</p>	<p>First Answer (17/02/2012)</p> <p>The DOE agrees with the PP</p>



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listed on Table 1 from the CDM-CPA-DD – Lajeado Grande I version 01, Section A.4.2.1..		is 18 months. The construction starts only after the issuance of this permit. Hence, it must be issued up to one month previous to the construction. The plant was qualified to participate in the next auction to be conducted by the government. This auction will buy electricity from plants that became operation by January 2015. The section A.4.2.1. of the CPA was revised considering the plant will win and as a consequence, start to supply electricity to the grid by 01/01/2015.	<p>explanation. The CDM-CPA-DD Lajeado version 02 was amended.</p> <p>The CL 03 is closed.</p>
CL 04: Please clarify the source related to the phrase “According to the Brazilian environmental regulations, an environmental impact assessment is required for every CPA to be included in a Programme of Activities.” listed on the CDM-CPA-DD – Lajeado Grande I version 01, Section C.3..	VVM 56	<p><u>Answer 13/02/2012</u></p> <p>In Brazil, every Greenfield wind power plant or capacity addition might be requested to perform a simplified environmental impact assessment in order to obtain the environmental permits. The mentioned excerpt was rephrased to make this information clear. Please refer to the second versions of the Lajeado Grande I CDM-CPA-DD and the generic version of the CPA, both dated 13/02/2012.</p>	<p>First Answer (17/02/2012)</p> <p>The CDM-CPA-DD Lajeado and generic version 02 was amended.</p> <p>The CL 04 is closed.</p>
CL 05: Please, provide the	VVM 56	<u>Answer 13/02/2012</u>	First Answer (17/02/2012)



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evidence that a relevant energy auction is expected to take place in August 2013 (CPA-DD related).		Actually, the plant considered in the CPA was qualified to participate in the auction to be conducted by the CCEE in March, 2012. In this sense, the CDM-CPA-DD was revised. Please see attached the Ministry of Mines and Energy Resolution #554, dated 23/09/2011 confirming that the auction is planned to occur on 22/03/2012. Also the confirmation that the plant was qualified to participate in this auction (ANEEL Ordinance #4585m dated 30/11/2011 available at http://www.aneel.gov.br/cedoc/dsp20114585.pdf).	The Ministry of Mines and Energy Resolution #554 and the ANEEL Ordinance #4585 were cross-checked. The CDM-CPA-DD Lajeado version 02 was amended. The CL 05 is closed.
CL 06: Please, explain the starting date of the crediting period of the CPA (Section A.4.3)	VVM 56	<u>Answer 13/02/2012</u> The starting date of the crediting period of the CPA is estimated based on the assumption that the project successfully sells its electricity in the auction to be conducted by the CCEE in March, 2012. As it can be confirmed by the Ministry of Mines and Energy Resolution #554, dated 23/09/2011 (attached as evidence to the answer provided to CL 05), this auction will procure energy	First Answer (17/02/2012) The DOE agrees with the PP explanation. The CDM-CPA-DD Lajeado version 02 was amended. The CL 06 is closed.

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		from wind power plants from January 1 st , 2015 on. The starting date of the project activity as well as the starting date of the crediting period was revised accordingly.	
CL 07: Please, inform the sources of data in CERs Calc spreadsheets v1, <Technical Description>.	VVM 56	<u>Answer 13/02/2012</u> All information used to determine the expected CERs generation by the project was taken from the Camargo Schubert Wind Certification. The source of information was mentioned in the second version of the CERs calculation spreadsheet, dated 13/02/2012.	First Answer (17/02/2012) The spreadsheet LGI_CERs_2012.02.13_v.2.xls was amended. The CL 07 is closed.
CL 08: Please, clarify why hasn't CDM project 843 been mentioned I CPA-DD v1, Section A.4.6.	VVM 56	<u>Answer 13/02/2012</u> The mentioned CDM Project Activity was not mentioned since the wind power plants considered in the PDD are not grid-connected – i.e. this project would not be considered eligible to be included in the proposed CDM PoA.	First Answer (20/02/2012) The DOE cross-checked the PDD from the CEM project 843 at http://cdm.unfccc.int/filestorage/B/B/H/BBHY3JFYHSEV0MJ6JPEYAF7E7GHGQW/Petrobras%20PD D.pdf?t=Ykt8bHpyNHJofDCJRnI BqlabRoi7fYUj2XIW . The CL 08 is closed.
CL 09: Please, provide a web link address related to footnotes 1 and	PoA form V1	<u>Answer 13/02/2012</u> The web links related to the	First Answer (17/02/2012)



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2, so that information can be verified.		<p>footnotes 1 and 2 are provided in the second version of the CDM-PoA-DD, dated 13/02/2012.</p> <p><u>Answer 09/03/2012</u> The CDM-PoA-DD that was forwarded to the DOE was with track changes. For the proper presentation of the footnotes, the DOE has to accept the modifications presented in the document. The document was not amended as a consequence of this request.</p>	<p>Footnotes 1 and 2 were changed to 2 and 3 (there is no footnote 1) on the CDM-PoA-DD version 02.</p> <p>The CL 09 is still open.</p> <p>Second Answer (11/03/2012)</p> <p>The DOE agrees with the PP explanation.</p> <p>The CL 09 is closed.</p>
CL 10: Please, make it clear in the Section A.2 from the CDM-PoA-DD that the project activity comprises greenfield and capacity addition CPAs.	PoA form V1	<p><u>Answer 13/02/2012</u> The CME have opted to exclude capacity additions from the list of eligible CPAs. Information regarding Greenfield wind power plants was included in the second version of the CDM-PoA-DD, dated 13/02/2012.</p>	<p>First Answer (17/02/2012)</p> <p>The CDM-PoA-DD version 02 was amended.</p> <p>The CL 10 is closed.</p>
CL 11: Please inform the sources of all information presented in CDM-PoA-DD version 01 section A.4.3 (ii).	PoA form V1	<p><u>Answer 13/02/2012</u> The websites from where all the information mentioned in section A.4.3. of the CDM-PoA-DD was taken, are available at the revised version of the document. In addition, evidence regarding the</p>	<p>First Answer (17/02/2012)</p> <p>The CDM-PoA-DD version 02 was amended. The new sources were cross-checked.</p> <p>The CL 11 is closed.</p>

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		prices obtained by other project developers in the recent auctions, which are available in the websites mentioned in the CDM-PoA-DD, are also attached to this protocol for easy reference.	
CL 12: Please, clarify the statement that the CME of this PoA is Deutsche Bank AG, London Branch, <u>in conjunction with Ecopart Assessoria Ltda.</u>	PoA form V1	<u>Answer 13/02/2012</u> The mentioned excerpt was rephrased. The CME will be the one responsible for the operational and management arrangements for the implementation of the PoA. What was meant is that Ecopart will give full support to the CME to perform this task. Please note that this section was improved. More detailed description of the operational and management plan of the proposed PoA is presented in the second version of the CDM-PoA-DD, dated 10/020/2012.	First Answer (17/02/2012) The CDM-PoA-DD version 02 was amended. The CL 12 is closed.
CL 13: Please provide a more detailed description about the record keeping system for each CPA under the PoA. The DOE needs to have access to the detailed control system that has been established by the CME.	PoA form V1	<u>Answer 13/02/2012</u> Section A.4.4.1. of the CDM-PoA-DD was amended in order to include the information requested by the DOE. Please refer to the second version of the document, dated 13/02/2012.	First Answer (20/02/2012) Section A.4.4.1 of the CDM-PoA-DD version 02 was amended. The CL 13 is closed.



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CL 14: Please specify that the verification method describe in Section A.4.2.2 ensures that no double accounting occurs and that the status of verification can be determined anytime for each CPA.	PoA form V1	<u>Answer 13/02/2012</u> The requested information was included in section A.4.2.2. of the second version of the CDM-PoA-DD, dated 13/02/2012.	First Answer (20/02/2012) The CDM-PoA-DD version 02 was amended. The CL 14 is closed.
CL 15: Please explain the choice of level at which the environmental analysis is undertaken. Additionally, please, make it clear what is meant by “local”, in the context of environmental analysis.	PoA form V1	<u>Answer 13/02/2012</u> As explained in section C.2 of the CDM-PoA-DD, the environmental impact assessment is performed individually for each project. Therefore, the CPA level was chosen as the one in which the environmental analysis will be conducted. In addition, the CDM-PoA-DD was rephrased to make clear that local may mean at the state level, depending on the size of the project.	First Answer (17/02/2012) The CDM-PoA-DD version 02 was amended. The CL 15 is closed.
CL 16: Please, adjust CONAMA's name in English. “Resolution” shouldn't be part of it.	PoA form V1	<u>Answer 13/02/2012</u> The requested information was amended, as per DOE's request. Please refer to the second version of the CDM-PoA-DD, dated 13/02/2012.	First Answer (17/02/2012) The CDM-PoA-DD version 02 was amended. The CL 16 is closed.
CL 17: Please explain the choice of level at which local stakeholder comments are invited.	PoA form V1	<u>Answer 13/02/2012</u> As described in section D.1. of the PoA-DD, the local stakeholder consultation was conducted	First Answer (17/02/2012) The DOE agrees with the PP explanation. The CDM-PoA-DD



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		following the procedures established by the Brazilian DNA, which allows the CME to conduct the consultation at the PoA level.	version 02 was amended. The CL 17 is closed.
CL 18 : Please, update Table 6 with 2011 data (Section E.6.1 from the CDM-PoA-DD v01).	PoA form V1	<u>Answer 13/02/2012</u> The requested information was up-dated, as per DOE's request. Please refer to the second version of the CDM-PoA-DD, dated 13/02/2012. In addition, a spreadsheet containing the mentioned (Share of hydroelectricity generation in the Brazilian interconnected system, 2007 to 2011) is attached.	First Answer (17/02/2012) The CDM-PoA-DD version 02 was amended. The CL 18 is closed.
CL 19: Please explain the change in Section A.3 from the CDM-PoA-DD version 03 related to the "Name of party involved" to the project participant "Deutsche Bank AG, London Branch"		<u>Answer 12/03/2012</u> It is CMEs understanding that only the authorization from Brazil (host Party) regarding the CMEs participation, is required. This rationale is also used in the CDM-PoA-DD of project CDM Ref. #5067, used as an example for this modification. In this sense, the Table 1 of the third version of the CDM-PoA-DD was amended.	First Answer (12/03/2012) The DOE agrees with the PP explanation. The CL 19 is closed.
CL 20: Related to the PoA: a. In the PoA-DD version 3, please change "PDD" to "CPA-DD" or to "PoA-DD", where applicable. (This	ITR	<u>Answer 09/04/2012</u> Documents have been corrected as requested by the DOE. Please refer to their fourth version, dated	First Answer (10/04/2012) The PoA version 04, the CDM-CPA-DD - generic version 04 and



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<p>request also applies for the Generic CPA-DD).</p> <p>b. In Section E.7.2 of the PoA-DD version 3, please provide an English translation for Rede Brasileira de Calibração (RBC).</p> <p>c. Please clarify why in Section B.3 of the generic CPA-DD, the WACC calculation description is not as complete as the description provided in the PoA-DD version 3.</p> <p>d. In Section B.3 of the generic CPA-DD, please provide a statement that the additionality of the CPA will be demonstrated by using the “Tool for the demonstration and assessment of additionality”.</p> <p>e. In the PoA-DD version 3, please use only one abbreviation for the National Interconnected System. Please use “SIN” or “NIPS”. Do not use both.</p>		<p>09/04/2012.</p> <p>Regarding item C of the issues raised by the DOE, it is PPs understanding that the guidance and explanation of the methodological choices to be applied to determine the benchmark are to be presented in the CDM-PoA-DD. While in the CDM-CPA-DDs, only the values used to calculate the benchmark are to be presented.</p>	<p>the CDM-PoA-DD version 04 were amended.</p> <p>The DOE agrees with the PP explanation.</p> <p>The CL 20 is closed.</p>
<p>CL 21: Related to the CPA:</p> <p>a. Regarding Section A.4.2.1 of the CPA-DD Lajeado version 3, please inform in the auction of 22/03/2012 has taken place. If</p>	ITR	<p><u>Answer 09/04/2012</u></p> <p>Documents have been corrected as requested by the DOE. Please refer to their fourth version, dated 09/04/2012.</p>	<p>First Answer (10/04/2012)</p> <p>The PoA version 04, the CDM-CPA-DD - generic version 04 and the CDM-PoA-DD version 04</p>



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<p>not, please adjust this section.</p> <p>b. In Section B.2 of the CPA-DD Lajeado version 3, please inform which version of ACM0002 applies to this CPA.</p> <p>c. In Section B.2 of the CPA-DD Lajeado version 3, please correct: "As described in section B.6.1 of the CDM-PoA-DD" to As described in section E.6.1 of the CDM-PoA-DD".</p> <p>d. In the CPA-DD Lajeado version 3, please correct M2 and CO2 into M² and CO₂, where applicable.</p> <p>e. In Section B.3 of the CPA-DD Lajeado version 3, please provide a statement that the additionality of the CPA will be demonstrated by using the "Tool for the demonstration and assessment of additionality".</p> <p>f. In Section B.3 of the CPA-DD Lajeado version 3, regarding the sensitive analysis, please clarify how the value 80,269 MWh/year was defined, seeing that $25.2 \times 36.4\% \times 8760 = 80,354$ MWh/year.</p> <p>g. In the CPA-DD Lajeado version 3, the entity ANEEL is mentioned.</p>		<p>Regarding item a) of the issues raised by the DOE, PPs would like to clarify that the auction was postponed. Please refer to the decree issued by the Ministry of Mines and energy available at http://www.ccee.org.br/StaticFile/Arquivo/biblioteca_virtual/Leiloes/2Energia_Nova/prt2012102mme.pdf and also mentioned in the document.</p> <p>In connection with the request made by the DOE in item f) PPs clarify that the PLF used by the DOE to calculate the net electricity generation by the plant which is also mentioned in the wind certification is rounded. This is the reason for the different results. In fact, the net electricity generation by the plant as informed in the wind certification available when the GSP started is 80,269 MWh/year. This value was used to determine the Project IRR.</p> <p>Additionally, a brief institutional description of ANEEL was included, as requested by the DOE.</p> <p>Regarding the second clarification</p>	<p>were amended.</p> <p>The DOE agrees with the PP explanation.</p> <p>The CL 21 is closed.</p>
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<p>However, the CPA-DD does not clarify what “ANEEL” means and what these organizations do.</p> <p>h. In B.3 of the CPA-DD Lajeado version 3, regarding common practice, please inform in this item that the presented analysis is in accordance with paragraph 47 of the Additionality Tool version 6.</p> <p>i. In the CPA-DD Lajeado version 3, please change “PDD” to “CPA-DD” or to “PoA-DD”, where applicable.</p> <p>j. In FCF_Lajeado Grande I_EQAO (REV20120210) and FCF_Lajeado Grande I_EQAO (REV20120210) - 30MW spreadsheets:</p> <ul style="list-style-type: none">- please inform the unit in cell B15 of <Lajeado-FCF>- please clarify the different values of X34, X36 and X38 of <Lajeado-FCF>.		<p>asked by the DOE regarding item j) PPs clarify that the formulae of the mentioned cells were wrong. In this sense, the spreadsheets were revised.</p>	
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