VALIDATION REPORT
AUTÓDROMO ENERGÉTICA S/A

VALIDATION OF THE COMPLEXO CARREIRO II CDM PROJECT

REPORT NO. BRAZIL-VAL/03667/2010- SPL

REVISION NO. 02

BUREAU VERITAS CERTIFICATION

Great Guildford House, 30 Great Guildford Street
SE1 0ES - London – United Kingdom

Report No: BRAZIL-VAL/03667/2010- SPL rev. 02

VALIDATION REPORT

Date of first issue:	Organizational unit:
13/05/2011	Bureau Veritas Certification Holding SAS
Client: AUTÓDROMO ENERGÉTICA S/A	Client ref.: Mr. Gian Bratkowski

Summary:
Bureau Veritas Certification has made the validation of the COMPLEXO CARREIRO II CDM PROJECT of AUTÓDROMO ENERGÉTICA S/A located in Municipalities of Guaporé, Serafina Correa, Nova Bassano and Vista Alegre do Prata, Rio Grande do Sul State, Brazil on the basis of UNFCCC criteria for the CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM rules and modalities and the subsequent decisions by the CDM Executive Board, as well as the host country criteria.

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

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

In summary, it is Bureau Veritas Certification's opinion that the project correctly applies the baseline and monitoring methodology ACM0002 version 12.1.0 and meets the relevant UNFCCC requirements for the CDM and the relevant host country criteria.

Report No.:	Subject Group:
BRAZIL-VAL/03667/2010- SPL	CDM

Project title:

COMPLEXO CARREIRO II CDM PROJECT

Work carried out by:
Marco Prauchner (lead verifier)
Guilherme Lefèvre (verifier)
Bernardo Lima (financial specialist)
Roberval Kaminski (technical specialist)

Internal Technical Review carried our by:

Marcelo Antoniazzi Porto

Date of this revision:	Rev. No.:	Number of pages:
01/07/2011	02	243

Indexing terms

Work approved by:

Flavio Gomes – Global Product Manager

☒ No distribution without permission from the Client or responsible organizational unit

☐ Limited distribution

☐ Unrestricted distribution

Table of Contents *Page*

List of Abbreviations:

- A/R: Evidence of receipt of letters sent through the postal service (from the Portuguese: Aviso de Recebimento)
- ANEEL BIG: ANEEL's Databank on Energy Generation (from the Portuguese: Banco de Informações de Geração)
- ANEEL: Brazilian National Agency for Electric Energy (from the Portuguese: Agência Nacional de Energia Elétrica)
- BNDES: Brazilian National Development Bank (from the Portuguese: Banco Nacional de Desenvolvimento Econômico e Social).
- CCEE: Electric Power Commercialization Chamber (from the Portuguese: Câmara de Comercialização de Energia Elétrica.
- LI: Second Environmental License – Installation License (from the Portuguese: Licença de Instalação)
- LO: Third Environmental License – Operation License (from the Portuguese: Licença de Operação)
- LP: First Environmental License – Previous License (from the Portuguese: Licença Prévia)
- MME: Brazilian Ministry of Mines and Energy (from the Portuguese: Ministério de Minas e Energia).
- ONS: National System Operator (from the Portuguese: Operador Nacional do Sistema).
- PROINFA: Federal Government's Program that Incentives Alternative Sources of Energy (from the Portuguese: Programa de Incentivo às Fontes Alternativas de Energia Elétrica)
- SIN – Brazilian National Interconnected Electricity System (from the Portuguese: Sistema Interligado Nacional)

1 INTRODUCTION

AUTÓDROMO ENERGÉTICA S/A has commissioned Bureau Veritas Certification to validate its CDM project COMPLEXO CARREIRO II CDM PROJECT (hereafter called "the project") at Municipalities of Guaporé, Serafina Correa, Nova Bassano and Vista Alegre do Prata, Rio Grande do Sul State, Brazil.

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

1.1 Objective

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

UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM rules and modalities and the subsequent decisions by the CDM Executive Board, as well as the host country criteria.

1.2 Scope

The validation scope is defined as an independent and objective review of the project design document, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations.

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

1.3 Validation team

The validation team consists of the following personnel:

FUNCTION	NAME	CODE HOLDER	TASK PERFORMED*
Lead Verifier	Marco Prauchner	**Yes**	**DR and RI**
Verifier	Guilherme Lefèvre	**Yes**	**DR, SV and RI**
Technical	Roberval Kaminski	**Yes**	**DR and RI**

Specialist			
Financial Specialist	Bernardo Lima	**No**	**DR and RI**
Internal Technical Reviewer (ITR)	Marcelo Antoniazzi Porto	**Yes**	**DR and RI**

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

2 METHODOLOGY

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

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

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

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

2.1 Review of Documents

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

To address Bureau Veritas Certification corrective action and clarification requests, AUTÓDROMO ENERGÉTICA S/A revised the PDD and resubmitted it on 17/06/2011.

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

2.2 Follow-up Interviews

On 20/10/2010 Bureau Veritas Certification performed interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of AUTÓDROMO ENERGÉTICA S/A, BOA FÉ ENERGÉTICA S/A, SÃO PAULO ENERGÉTICA S/A and ENERBIO CONSULTORIA LTDA-ME were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
AUTÓDROMO ENERGÉTICA S/A, BOA FÉ ENERGÉTICA S/A and SÃO PAULO ENERGÉTICA S/A.	➢ Project background information, ➢ Project technology, operation, maintenance and monitoring capability, ➢ Project monitoring and management plan, ➢ Stakeholder consultation process, ➢ Project status, ➢ Environmental aspects / impacts and licenses.
ENERBIO CONSULTORIA LTDA-ME	➢ Project description, ➢ Technology used, ➢ Project category, ➢ Baseline and Additionality, ➢ Monitoring Plan, ➢ Emission Reduction Calculation, ➢ Environmental aspects / impacts and licenses.

2.3 Resolution of Clarification and Corrective Action Requests

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

Corrective Action Requests (CAR) is issued, where:

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

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

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

2.4 Internal Technical Review

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

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

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

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

> The validation activity has been performed by the team by exercising utmost diligence and complete adherence to the CDM rules and requirements.
>
> The review encompasses all aspects related to the project which includes project design, baseline, additionality, monitoring plans and emission reduction calculations, internal quality assurance systems of the project participant as well as the project activity, review of the stakeholder comments and responses, closure of CARs, CLs and FARs during the validation exercise, review of sample documents.

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

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

3 VALIDATION CONCLUSIONS

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

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

The Clarification and Corrective Action Requests are stated, where applicable, in the following sections and are further documented in the Validation Protocol in Appendix A. The validation of the Project resulted in 49 Corrective Action Requests (CARs) and 22 Clarification Requests (CLs).

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

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

3.1 Approval (49-50)

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

3.2 Participation (54)

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

3.3 Project design document (57)

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

- Clean Development Mechanism - Project Design Document Form (CDM-PDD), version 03 /**I**/**.**

- Guidelines for completing the Project Design Document (CDM-PDD) and the Proposed New Baseline and Monitoring Methodologies (CDM-NM), Version 07 /**II**/**.**

3.4 Changes in the Project Activity

As was observed by the validation team through documentation analysis and during site visits held on 20/10/2010 (project participant's head office) and 21/10/2010 – 22/10/2010 (construction site), the project is being implemented in accordance with the descriptions provided in the webhosted PDD. However, the following minor change was identified:

- PP "Enerbio Consultoria Ltda – ME" changed its name on the PDD version 03. In the webhosted PDD, the name was: "Enerbio Consultoria Associados Sociedade Simples".

All the other changes that have been made to the different versions of the PDD during the Validation Process, from the webhosted PDD version 1 to the final PDD version 4, have been supported by CARs and CLs opened by the DOE and have already been discussed in the Validation Protocol.

3.5 Project description (64)

The project consists of the construction and operation of three small hydropower plants (SHPs) in the Rio Grande do Sul State in Brazil. The three hydropower plants are: Boa Fé SHP, São Paulo SHP and Autódromo SHP. Their installed capacity is 24 MW, 16 MW and 24 MW respectively. Below is presented a table containing the main technical characteristics of the three hydropower plants:

Main technical characteristics	Boa Fé SHP	São Paulo SHP	Autódromo SHP
Installed capacity (MW)	24	16	24
Plant load factor (%)	50.96%	53.94%	51.04%
Expected yearly energy generation (MWh/yr)	107,134	75,598	107,310
Reservoir area (m^2)	580,000	370,000	410,000
Number of turbines	3	2	3
Number of generators	3	2	3

The plant load factor has been determined using option a) as defined in the GUIDELINES FOR THE REPORTING AND VALIDATION OF PLANT LOAD FACTORS (Version 01), EB 48 Report, Annex 11 /**VIII**/ (The plant load factor provided to (...) the government while applying the project activity for implementation approval), according to evidence: /**4**/ **and** /**17**/**.**

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

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

Boa Fé SHP: /**5**/**,** /**6**/**,** /**9**/**,** /**10**/ **and** /**11**/**.**

São Paulo SHP: /**38**/, /**39**/, /**15**/ **and** /**16**/.

Autódromo SHP: /**7**/, /**8**/, /**12**/, /**13**/ **and** /**14**/.

- A site visit and interviews with PP and consultant, held on the 20th (PP's head office), 21st – 22nd (construction site) October 2010.

- An analysis of official background documents related to the project activity: /**17**/. This document /**17**/ is ANEEL's authorization of the installed capacity and assured energy (PLF) of all three power plants is also available online at ANEEL's online database: http://www.aneel.gov.br/aplicacoes/capacidadebrasil/energiaassegurada.asp (accessed 15/05/2011).

The DOE hereby confirms that the project description in PDD version 4 is accurate and complete in all respects and that there are no changes to the project activity/design or boundary as compared to the webhosted PDD.

3.6 Baseline and monitoring methodology

3.6.1 General requirement (76-77)

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

The project applies the approved baseline methodology ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources", Version 12.1.0 /**III**/.

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

Applicability conditions ACM0002v12.1.0:

1. 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 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):

Option (a) above applies: the project activity comprises the installation of three new power plants at a site where no renewable power plants were operated prior to the implementation of the project activity (greenfield

plant). The PDD version 4 correctly states: “SHPs Boa Fé, São Paulo and Autódromo are an installation of a new hydro power plant/unit”. The DOE was able to validate this through a site visit to the construction site (21-22 October 2010) and by analyzing project activity related documents: Boa Fé SHP: /**5**/**,** /**9**/ and /**10**/; Autódromo SHP: /**7**/**,** /**12**/ and /**13**/; São Paulo SHP: /**38**/, /**15**/ and /**16**/.

2. 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 PDD version 4 states: “SHPs Boa Fé, São Paulo and Autódromo are an installation of a new hydro power plant/unit”. The DOE was able to validate that the project activity is the installation of three hydro power plants through a site visit to the construction site (21-22 October 2010) and by analyzing project activity related documents: Boa Fé SHP: /**5**/**,** /**9**/ and /**10**/; Autódromo SHP: /**7**/**,** /**12**/ and /**13**/; São Paulo SHP: /**38**/, /**15**/ and /**16**/.

3. 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 11 of the methodology to calculate the parameter $EG_{PJ,y}$): the existing plant started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity expansion or retrofit of the plant has been undertaken between the start of this minimum historical reference period and the implementation of the project activity:

The PDD version 4 states: “SHPs Boa Fé, São Paulo and Autódromo are an installation of a new hydro power plant/unit”. The DOE validated that the project activity is the installation of *new* hydro power plants, by a site visit and by the analysis of project activity related documents: Boa Fé SHP: /**5**/**,** /**9**/ and /**10**/; Autódromo SHP: /**7**/**,** /**12**/ and /**13**/; São Paulo SHP: /**38**/, /**15**/ and /**16**/.

4. In case of hydro power plants, one of the following conditions must apply:

- The project activity is implemented in an existing reservoir, with no change in the volume of reservoir; or

- The project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the Project Emissions section of the methodology ACM0002 version 12.1.0, 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 of the methodology ACM0002 version 12.1.0, is greater than 4 W/m^2.

The third option above applies: The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the Project Emissions section of the methodology ACM0002 version 12.1.0, is greater than 4 W/m^2. The DOE was able to validate that the three hydro power plants result in new reservoir through a site visit to the construction site and by analysis of the equation provided in the PDD version 4 (equation 1) and table 6 of the same PDD, together with project activity related documents: Boa Fé SHP: /**5**/**,** /**9**/ and /**10**/; Autódromo SHP: /**7**/**,** /**12**/ and /**13**/; São Paulo SHP: /**38**/, /**15**/ and /**16**/.

To validate that the power density of the three projects is greater than 4 W/m^2, the DOE analyzed the following documents: /**17**/ (installed capacity) and /**6**/**,** /**8**/ **and** /**39**/ (reservoir area).

The methodology is not applicable to the following:

1. 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:

The PDD version 4 states that the activity does not comprise the switching from fossil fuels to renewable energy sources. The DOE validated that the project activity does not involve switching from fossil fuels to renewable energy sources, by a site visit and by the analysis of project activity related documents: Boa Fé SHP: /**5**/**,** /**9**/ and /**10**/; Autódromo SHP: /**7**/**,** /**12**/ and /**13**/; São Paulo SHP: /**38**/, /**15**/ and /**16**/.

2. Biomass fired power plants;

The PDD version 4 states that no biomass will be fired. The DOE validated that the project activity is not a biomass fired power plant, by a site visit and by the analysis of project activity related documents: Boa Fé

SHP: /**5**/, /**9**/ and /**10**/; Autódromo SHP: /**7**/, /**12**/ and /**13**/; São Paulo SHP: /**38**/, /**15**/ and /**16**/.

3. 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.

The DOE validated that the project activity comprises the installation of three new hydro power plants, where the power density of the power plant is not less than 4 W/m^2, by analysis of the equation provided in the PDD version 4 (equation 1) and table 6 of the same PDD, together with project activity related documents: Boa Fé SHP: /**5**/, /**9**/ and /**10**/; Autódromo SHP: /**7**/, /**12**/ and /**13**/; São Paulo SHP: /**38**/, /**15**/ and /**16**/.

Applicability conditions of the Tool to calculate the emission factor for an electricity system version 02.1.0:

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

The PDD version 4 uses the Tool to calculate the emission factor for an electricity system version 02.1.0.The DOE validated that the project activity will supply electricity to a grid, by analysis of project activity related documents: /**4**/ and /**17**/.

Applicability conditions of the Tool for the demonstration and assessment of additionality" (Version 05.2):

1. The document provides a general framework for demonstrating and assessing additionality and is applicable to a wide range of project types. Some project types may require adjustments to this general framework.

The PDD version 4 uses the Tool for the demonstration and assessment of additionality" (Version 05.2). The DOE validated the applicability of this Tool by analyzing the UNFCCC website at: http://cdm.unfccc.int/methodologies/DB/C505BVV9P8VSNNV3LTK1BP3OR24Y5L (wherein it is stated that the additionality of projects using the ACM0002v12.1.0 methodology shall be demonstrated and assessed using the Tool for the demonstration and assessment of additionality.

The DOE hereby confirms that the selected baseline and monitoring methodology ACM0002 Version 12.1.0 is previously approved by the CDM Executive Board, and is applicable to the project activity, which, complies with all the applicability conditions therein.

The DOE hereby confirms that, as a result of the implementation of the proposed CDM project activity, there are no greenhouse gas emissions occurring within the proposed CDM project activity boundary, 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 emissions reductions, which are not addressed by the applied methodology

3.6.2 Project boundary (80)

According to the applicable methodology, 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.

According to Section B.3 of the PDD version 4, the project boundary comprises the three project power plants and all the power plants physically connected to the CDM project electricity system. This system has been defined in the PDD as the Brazilian National Interconnected Electricity System (SIN).

Also, the PDD version 4 contains a table where the greenhouse gases and emission sources included in or excluded from the project boundary are shown.

The DOE validated the project boundary by:

a) The DOE was able to validate that the definition of the project boundary in the PDD is in accordance with the relevant methodology through: Brazilian DNA resolution nr. 08, which defines the Brazilian National Interconnected Electricity System (SIN) as the electricity system for CDM projects in Brazil (/**18**/). According to step 1 of the latest version of the Tool to calculate the emission factor for an electricity system (/**IV**/), if the DNA of the host country has published a delineation of the project electricity and connected electricity systems, these delineations should be used.

Also, the DOE was able to validate that the three small hydro power plants will be physically connected to the project electricity system (the Brazilian SIN), through document analysis of PDD related documents /**4**/ and /**17**/**.**

In addition, the DOE was able to validate that the greenhouse gases and emission sources included in or excluded from the project boundary through document analysis of PDD related documents: Boa Fé SHP: /**5**/**,** /**9**/ and /**10**/; Autódromo SHP: /**7**/**,** /**12**/ and /**13**/; São Paulo SHP: /**38**/, /**15**/ and /**16**/.

b) Also, through a site visit, that took place on 20/10/2010 (project participant's head office) and 21/10/2010 – 22/10/2010 (construction site), the DOE was able to validate that the project boundary is in accordance with the relevant methodology, with observation of the constructions, a visit to the already existent substation (Substation Guaporé – where the net electricity of the three power plants that will be dispatched to the grid will be measured) and interviews with representatives of the Project Participant and Consultants.

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

3.6.3 Baseline identification (87-88)

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

The project activity comprises the installation of new grid-connected renewable power plants. Consequently, according to the relevant methodology, the baseline scenario is as following:

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

The PDD version 4 correctly identifies the baseline scenarios as presented above. The relevant grid is the Brazilian National Interconnected Electricity System (SIN), as prescribed by the Brazilian DNA in its resolution nr 08: /**18**/.

As methodology ACM0002 (version 12.1.0) prescribes the baseline scenario and no further analysis is required, there is no need to take steps to identify the baseline scenarios.

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

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

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

Project emissions:

Project emissions need to be calculated in accordance with equation (1) of the relevant methodology (ACM0002v12.1.0):

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

Where:

PE_y = Project emissions in year *y* (tCO_2e/yr)

$PE_{FF,y}$ = Project emissions from fossil fuel consumption in year *y* (tCO_2/yr)

$PE_{GP,y}$ = Project emissions from the operation of geothermal power plants due to the release of non-condensable gases in year *y* (tCO_2e/yr)

$PE_{HP,y}$ = Project emissions from water reservoirs of hydro power plants in year *y* (tCO_2e/yr)

According to ACM0002v12.1.0, the only possible source of project emissions for hydro power plants are emissions from reservoir ($PE_{HP,y}$). These emissions from reservoir are calculated in accordance with the following two options:

(a) If the power density of the project activity (PD) is greater than 4 W/m^2 and less than or equal to 10 W/m^2:

$$PE_{HP,y} = \frac{EF_{Res} * TEG_y}{1000}$$

Where:
$PE_{HP,y}$ = Project emissions from water reservoirs (tCO_2e/yr)
EF_{Res} = Default emission factor for emissions from reservoirs of hydro power plants in year y ($kgCO_2e/MWh$)
TEG_y = Total electricity produced by the project activity, including the electricity supplied to the grid and the electricity supplied to internal loads, in year y (MWh)

(b) If the power density of the project activity (PD) is greater than 10 W/m^2:

$PE_{HP,y} = 0$

Power density (PD) needs to be calculated in accordance with equation (5) of ACM0002v12.1.0:

$$PD = \frac{Cap_{PJ} - Cap_{BL}}{A_{PJ} - A_{BL}}$$

Where:
PD = Power density of the project activity (W/m^2)
Cap_{PJ} = Installed capacity of the hydro power plant after the implementation of the project activity (W)
Cap_{BL} = Installed capacity of the hydro power plant before the implementation of the project activity (W). For new hydro power plants, this value is zero
A_{PJ} = Area of the reservoir measured in the surface of the water, after the implementation of the project activity, when the reservoir is full (m^2)
A_{BL} = Area of the reservoir measured in the surface of the water, before the implementation of the project activity, when the reservoir is full (m^2). For new reservoirs, this value is zero

The PDD version 4 calculates project's power density: 41.38 W/m^2 for Boa Fé SHP, 43.24 W/m^2 for São Paulo SHP and 58.54 W/m^2 for Autódromo SHP.

The DOE was able to validate the above mentioned PD values through analyzing the following documents in conjunction with equation (5) of ACM0002v12.1.0: /**17/, /6/, /8/ and /39/.**

Seeing that the DOE was able to validate that the PD of all three SHPs is greater than 10W/m^2, option (b) above applies and, therefore, $PE_{HP,y} = 0$. Consequently, PE_y is also zero and no project emissions need to be accounted for.

Baseline emissions:

Baseline emissions need to be calculated in accordance with equation (6) of the relevant methodology (ACM0002v12.1.0):

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

Where:
BE_y = Baseline emissions in year y (tCO_2/yr)
$EG_{PJ,y}$ = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh/yr)
$EF_{grid,CM,y}$ = Combined margin CO_2 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. (tCO_2/MWh)

If the project activity is the installation of a new grid-connected renewable power plant/unit at a site where no renewable power plant was operated prior to the implementation of the project activity, then:

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

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

In the calculation spreadsheet (/**47**/) and in the PDD version 4, PP calculates $EG_{facility,y}$ as the expected net electricity generation supplied by the project plants to the grid in year y (MWh/yr): 107,134 MWh/yr for Boa Fé SHP, 75,598 MWh/yr for São Paulo SHP and 107,310 MWh/yr for Autódromo SHP. So, the total expected net electricity generation per year is 290,042 MWh/yr.

The PDD version 4 presents the above mentioned values, by multiplying the hours in a year (8,760 hours) with the power plant's "assured energy".

The power plants "assured energy" is defined by the Brazilian Ministry of Mines and Energy (MME) and corresponds to the installed capacity multiplied by the PLF of the Plants. The DOE was able to validate the "assured energy" of the three power plants (12.23 MW for Boa Fé SHP, 8.63 MW for São Paulo SHP and 12.25 MW for Autódromo SHP) with the following documents: /**4**/ and /**17**/.

The $EF_{grid,CM,y}$ value presented in the PDD version 04 is 0.1635 tCO_2/MWh .This number has been calculated in accordance with the latest version of the Tool to calculate the emission factor for an electricity system **(/IV/),** with Operating Margin and Build Margin Emission factors calculated by the Brazilian DNA (0.2476 tCO_2/MWh for OM Emission factor 2009 and 0.0794 tCO_2/MWh for BM Emission factor 2009, according to evidence /**19**/ and /**47**/).

The DOE confirms that all choices made in the PDD version 4 to calculate $EF_{grid,CM,y}$ have been justified adequately and have been presented in accordance with the Tool to calculate the emission factor for an electricity system **(/IV/).**

The latest values made available by the Brazilian DNA are from 2009 and those numbers have been used by PP to calculate the Combined Margin CO_2 emission factor of the relevant grid. The DOE was able to validate this 0.1635 tCO_2/MWh figure with document /**19/.**

Leakage:

According to ACM0002v12.1.0, no leakage emissions need to be considered. The PDD version 4 correctly describes that no leakage needs to be considered.

Emission reductions:

Emission reductions are calculated in accordance with equation (11) of the relevant methodology (ACM0002v12.1.0):

$ER_y = BE_y - PE_y$

Where:
ER_y = Emission reductions in year *y* (t CO_2e/yr)
BE_y = Baseline emissions in year *y* (t CO_2/yr)
PE_y = Project emissions in year *y* (t CO_2e/yr)

Seeing that project emissions is zero, $ER_y = BE_y$. See above how the DOE was able to validate the BE_y values presented in the PDD version 4.

Based on the above assessment, the DOE hereby confirms that:
(a) All assumptions and data used by the project participants are listed in the PDD, including their references and sources;
(b) All documentation used by project participants as the basis for assumptions and source of data is correctly quoted and interpreted in the PDD;
(c) All values used in the PDD are considered reasonable in the context of the proposed CDM project activity;
(d) The baseline methodology has been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions;
(e) All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PDD.

3.7 Additionality of a project activity (97)

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

To demonstrate the additionality of the Project, the PDD has correctly applied the "Tool for the demonstration and assessment of additionality" (Version 05.2) /**V**/**.** PP uses an investment analysis to determine that the project is additional. No Barrier Analysis was presented. The details of the DOE's assessment on the Project additionality are described in the Sections 3.7.2 to 3.7.5 below.

The DOE has analyzed the evidenced provided by PP during the validation process, and the sources of information used by the DOE to cross-check the information contained in the PDD were the Investment and Sensitive Analysis Spreadsheet /**20**/ and other related documents, as can be observed in items 3.7.2 to 3.7.5.

Details on the assessment of the investment and common practice analysis, the authenticity of the documentation and data used are described in Section 3.7.3 and 3.7.5.

3.7.1 Prior consideration of the clean development mechanism (104)

The DOE validated the project activity start date provided in the PDD version 04: 01/11/2009, being the date of signing of contract between PP and the company responsible for the construction of plants Boa Fé and Autodromo. Both contracts were presented to the DOE: /**9**/ and /**12**/**.** The contract for construction of the third remaining SHP, São Paulo /**15**/, was sign on a later date (01/08/2010).

The DOE has validated the starting date of the project activity on 01/11/2009, as being the "earliest date at which either the implementation or construction or real action of a project activity begins", according to the Glossary of CDM terms, version 05 /**VI/.** In this particular case, the first "real action" was the contract signing on 01/11/2009.

Seeing that the starting date of the project activity is after the 2nd of August 08, the assessment of the Prior Consideration of the project activity "COMPLEXO CARREIRO II CDM PROJECT" was conducted in accordance with paragraphs 2-4 of the Guidelines on the demonstration and assessment of prior consideration of the CDM (version 03) /**VII**/:

- PP informed the Host Party by letters on 27th of July 2009 /**25**/**,** /**26**/ **and** /**27**/. The DOE cross-checked this information by analysing copies of letters from DNA acknowledging the receipt of letters on 04 August 2009: /**28**/**,** /**29**/ **and** /**30**/**.**

- Consulting the UNFCCC website, whereby the DOE confirms that the UNFCCC secretariat received the information sent by PP on 25 May 2009 (São Paulo SHP and Autódromo SHP) and 26 May 2009 (Boa Fé SHP).

The DOE hereby clarifies that three individual communications were sent to the Brazilian DNA and to UNFCCC for each of the three SHPs included in this project. According to the PDD version 4, at the time of the communication, PP did not know about the possibility to develop one single CDM Project with the three SHPs together. Also according to the PDD version 4, when the consulting company was hired, project owners and consulting company decided to develop one unique PDD for the three small hydropower plants. This decision was taken to save time and financial resources during the CDM cycle.

The DOE hereby confirms that the Brazilian DNA and the UNFCCC were informed in writing of the commencement of the project activity and of their intention to seek CDM status within six months of the project activity start date. Although this has done for each individual SHP in three different communications, PP has act in accordance to the requirements of the Guidelines on the demonstration and assessment of prior consideration of the CDM (version 03) /**VII**/. Therefore, the DOE was able to validate PP's prior consideration in accordance with VVM paragraph 101.

Based on the above assessment, the DOE hereby confirms that the proposed CDM project activity complies with the requirements of the latest version of the Guidance on prior consideration of CDM.

3.7.1.1 Historical information on project timeline

The main historical information of the project is:

- PDD uploading on the UNFCCC website for global stakeholders comments: from 02 Sep 10 - 01 Oct 10,
- Project Starting Date: 01 of November 2009
- DNA prior consideration communication: 27 of July 2009
- UNFCCC prior consideration communication: 25 and 26 of May 2009

3.7.2 Identification of alternatives (107)

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

3.7.3 Investment analysis (114)

The project proponent decided to use the "Tool for the demonstration and assessment of additionality" version 5.2 /**V**/, which refers to the "Guidelines on the assessment of investment analysis" version 04.0 /**IX**/ and, therefore, these guidelines were used in the following analysis.

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

a) Evaluating the appropriateness of the benchmark applied for the type of financial indicator presented;

b) Conducting an assessment of parameters and assumptions used in calculating the financial indicator and determining the accuracy and suitability of parameters and cross-checking the parameters against third-party or publicly available sources;

c) Assessing the correctness of computations carried out and documented; and

d) Subjecting the critical assumptions of the project activity to reasonable variations to determine under what conditions variations in the result would occur, and the likelihood of these conditions.

a) Suitability of financial indicator and benchmark:

Financial Indicator: The project participant has chosen IRR to demonstrate the additionality of the project. Additionality Tool (Ver. 05.2) /**V**/ permits the use of financial indicator, IRR, for demonstrating the additionality using benchmark analysis. The tool permits the use of either

project IRR or equity IRR. Since the project developer is demonstrating the financial unattractiveness of the project, IRR is appropriate, as it is often used by the project developers to make a decision on investing in the project. As such, the selection of IRR as financial indicator to demonstrate the additionality of the project is appropriate conforms to the Additionality Tool /**V**/.

Benchmark: In order to calculate the project benchmark it was adopted equation 3 of the option 4B of the draft "Draft tool to determine the weighted average cost of capital (WACC)" (/**X**/) which was considered reasonable by the validation team because the Additionality tool (ver.05.2) /**V**/ states that the discount rates and benchmarks shall be derived from "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;", among others. The paragraph 5 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 a government bond increased by a suitable risk premium as a benchmark to assess the financial attractiveness of the project activity to demonstrate additionality.

Rf = 3.36%; Average rate of return of U.S. Treasury bond (T-bond) of 30 years in the past 3 years (2007, 2008 and 2009) prior the preparation of the PDD.
ERP = 7.50%; Risk Premium in Brazil, based on data from Moody`s, as calculated by professor Aswath Damodaran.
PE = 4.1%; Global equity risk premium*
Benchmark (cost of equity) in nominal terms: 3.36% + 7.50% +4.1% =14.96%
As the cash flow was calculated in real terms, inflation† (2.70%) was subtracted.
Benchmark (cost of equity) in real terms: 11.93%
BVC agrees with all the data used in Benchmark calculations and would like to point out that they are clearly presented, available to consult and correct.

* The worldwide equity premium: A smaller puzzle Elroy Dimson, Paul Marsh and Mike Stautun of London Business School, which is indicated in "Draft tool to determine the weighted average cost of capital (WACC)".
† Available at: ftp://ftp.bls.gov/pub/special.requests/cpi/cpiai.txt .

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.

All the sources of input values were described by the PP in PDD pages 15, 16, 17 and 18 which were considered valid and appropriate by the validation team.

Input Value/Assumption	Value	Means of validation
Date of investment decision	01/10/2009	It was cross-checked by using a document provided by the PP. The date of investment decision was defined by the minute of company board meeting from 01/10/2009 which established that the board decided to invest in the project. **(/21/, 22/ and /23/)**
Total Investment	R$ 311,378,736	R$ 89,302,260 - SHP Sao Paulo R$ 108,021,296 - SHP Boa Fe R$ 114,055,180 - SHP Autodromo It was cross-checked by using a third party available source, by checking actual data/parameters for projects that were already implemented and by comparing with others registered projects. The validation team cross-checked the total investment with the third party available document National Energy Plan 2030* from Brazilian Ministry of Mines and Energy (2007) which states that in average the SHP total investment costs per kW is around R$ 4 million/MW. (Page 120). **(/24/).** It is also stated that depending on project characteristics investment values can vary significantly. The project`s total investment per installed capacity is around R$ 4.8 million/MW and it was determined by the company specialists. The company sent a letter to BNDES, 18/09/2009 (National Development Bank) requesting a loan based on these values of investment which was accepted on 29/03/2011. The validation team also cross-checked the total investment comparing three actual registered projects (project 3898:

* Available at: http://www.epe.gov.br/Estudos/Paginas/Plano%20Nacional%20de%20Energia%20%E2%80%93%20PNE/Estudos_12.aspx?CategoriaID=346

		"Guanhães Energia CDM Project, Minas Gerais, Brazil (JUN1123)", project 3316: "Queluz and Lavrinhas Renewable Energy Project" and "project 2994: "Bundled Estelar CDM Project") all registered during 2010/2011. The total investments per installed capacity of these projects are around R$ 5.7 million/MW, R$ 5.2 million/MW and R$ 5.1 million/MW respectively. So as the total investment per installed capacity of this project is around R$ 4.8 million MW and it was accepted by BNDES the validation team agreed with the suitability and appropriateness of the referred input value.
O&M costs	0.9% of the total investment.	It was cross-checked by using a third party available source and by comparing with others similar registered projects. The validation team cross-checked this assumption with the "Manual of guidelines for SHP Eletrobras" which stated that the O&M costs vary up to 5% of the total investment. The validation team also cross-checked the O&M costs comparing three actual registered projects (project 3898: "Guanhães Energia CDM Project, Minas Gerais, Brazil (JUN1123)", project 3316: "Queluz and Lavrinhas Renewable Energy Project" and "project 2994: "Bundled Estelar CDM Project") registered during 2010/2011. The O&M costs of these projects are around 0.7%, 0.8% and 1% respectively. So as the O&M costs of this project is around 0.9% and it is below 5% of the total investment the validation team agreed with the suitability and appropriateness of the referred input value. Hence, O&M costs considered are conservative.
Sales price or energy price	R$ 144	It was cross-checked by using a third party available source. The validation team cross-checked the referred input value with the price Cap of Auction 02/2009 of the 8th ANEEL New Energy Auction (A-3)[*] conducted in 2009.
Period of assessment	30 years	It was cross-checked by using a third party available report. The project IRR calculation reflects the period of expected operation of the underlying project activity (technical lifetime). According with the document National Energy Plan 2030 from Brazilian Ministry of Mines and Energy (2007) a 30 years period is appropriate for a hydropower project (page 126). /**24/.**

[*] Available at: p://www.aneel.gov.br/aplicacoes/editais_geracao/documentos/022009-Edital_A-3%20_27-7-9_APOS%20AP-APORTE%20ON-LINE_V14.pdf and http://www.aneel.gov.br/aplicacoes/editais_geracao/documentos/022009-Edital_A-3%20_27-7-9_APOS%20AP-APORTE%20ON-LINE_V14.pdf.

Assured energy	33.11 MW	8.63 MW- SHP Sao Paulo 12.23 MW - SHP Boa Fe 12.25 MW - SHP Autodromo It was cross-checked by using third party available source. Project assured energy was determined according to the Brazilian Ministry of Mines and Energy documents: Ordinance Ministry of Mines and Energy nº 100, May 31th, 2007*. /**4**/ and /**17**/**.** As the Brazilian Ministry of Mines and Energy is the major entity enforced to establish assured energies the validation team agreed with these input values.

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

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

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

d) Sensitivity analysis: The Guidance on Assessment of Investment Analysis requires the robustness of the conclusion arrived at to be proved through a sensitivity analysis by varying the critical assumptions to a reasonable variation (± 10%). To confirm how solid the investment

* http://www.mme.gov.br/mme/galerias/arquivos/legislacao/portaria/Portaria_n_100-2007.pdf

analysis is, project participants presented a sensitivity analysis varying the most important parameters for the cash flow for each SHP: (i) the electricity price, (ii) the total amount of investment, (iii) Plant Load Factor, (iv) O&M costs and (v) financing costs.
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 tables 13, 14 and 15, at Page 20/21 of PDD.

Also, the DOE agrees with the following statement of PP in the PDD version 4:

"In 03th June 2011, after the validation beginning, UNFCCC published version 04 of the guidance of the investment analysis where an approximate expected return on equity for different project types and host countries is published. These values can also be used as default values. The expected return on equity for electricity projects in Brazil, in real terms, is 11.75% accordingly this guidance. As this is an indication provided by UNFCCC, it was also added to the PDD, despite being published after the PDD publication."

The DOE was able to validate this statement, seeing that both the benchmark calculates by PP in the PDD version 4 (11.93%) and the default benchmark of the Guidelines on the assessment of investment analysis" version 04.0 (11.75%) are higher than the SHPs IRRs as can seen in the Conclusion below and in table 12 of the PDD version 4.

Conclusion:
Project equity IRRs:
SHP Sao Paulo – 6.05%
SHP Boa Fe – 8.44%
SHP Autodromo – 7.52%
PDD's Benchmark – 11.93%
UNFCCC default Benchmark – 11.75%

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

CLs BQA 1 and 2 and CARs BQA 1 to 7 were issued and they have been satisfactorily solved and closed. Refer to Appendix A.

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

3.7.4 Barrier analysis (118)

No Barrier analysis was presented in the PDD version 04.

3.7.5 Common practice analysis (121)

Geographical scope:

The geographical scope of the common practice analysis in the PDD version 4 encompasses the entire country of Brazil. The DOE was able to validate that the geographical scope of the common practice analysis is in line with paragraph 120(a) of the VVM version 01.2, seeing that the main policies and regulations for project activity's technology and industry type (small hydro / energy generating facilities) are delineated by Brazilian national authorities and agencies, such as: the Ministry of Mines and Energy (MME), the National Agency for Electric Energy (ANEEL), the Electric Power Commercialization Chamber (CCEE) and the National Operator of the Electric System (ONS).

Assessment of similar projects:

Other activities that are operational and that are similar to the proposed project activity were analysed in the PDD version 4, in accordance with Sub-step 4.a of the latest version of the Additionality Tool.

The DOE has undertaken an assessment of the existence of similar projects, by crosschecking the information provided in the PDD version 4 with official sources: the ANEEL's official database: "BIG". This is the database regarding energy generation of the National Agency for Electric Energy, available at http://www.aneel.gov.br/15.htm (accessed on 13/05/2011).

PP has presented a spreadsheet **(/42/)** containing a common practice analysis, in which the following approach is chosen:

1. To only contemplate in the common practice analysis (item 4.a of Section B.5 of the PDD version 4) the hydropower plants with an installed capacity of 8 MW – 30 MW.

8 MW: 50% below the installed capacity of the São Paulo (16 MW) which is the smallest of the three SHPPs of the Project. The DOE was able to validate this threshold of "minus 50%" with: http://cdm.unfccc.int/Projects/DB/TUEV-SUED1218108477.61/ReviewInitialComments/8KZ3T8MYPBK2Z2HYZN5CQ4Z5BJ2F9S (/**44**/). In this request for review, the CDM EB defines that considering a range of +/- 50% is appropriate for hydro power plants.

30 MW: This is the limit for small hydro power plants in Brazil (Cross-check: http://www.aneel.gov.br/cedoc/res2003652.pdf) Above 30 MW, the hydro power plants are considered to be "large hydro" and have a distinctive approval process before the government agencies (ANEEL and environmental agencies) and higher cost of energy generation (cross-check: http://www.portalpch.com.br/index.php?option=com_content&task=view&id=702).

From the 388 Small Hydro Power Plants operation in Brazil (according to table 16 of the PDD version 04 and evidence /**41**/), 146 have an installed capacity between 8 MW – 30 MW. The DOE cross-checked and validated this information with: ANEEL's official energy generation database available at http://www.aneel.gov.br/15.htm (accessed on 13/05/2011) and evidence /**41**/.

2. It was considered as similar SHPs with an operation starting date after June 2004, because of the law 10,438 of 26th April 2002, which created PROINFA, which predicted that all plants should celebrate its contracts with Eletrobrás until June 2004.

PROINFA is a governmental program that seeks to motivate through the financial point of view, the development of entrepreneurships that make use of renewable technologies, due to the difficulties in financing, in offering guarantees to the finance suppliers and in the necessity of investments considered reasonable to small organizations. The DOE cross-checked this information on: http://www.eletrobras.com/elb/data/Pages/LUMISABB61D26PTBRIE.htm (accessed on 13/05/2011).

PP states that the end of the PROINFA benefits (in June 2004) changed the "*institutional framework*" for renewable electricity in Brazil. Consequently, an identification of similar activities should contemplate only those SHPPs that became operational after June 2004, because these enterprises were developed under the same institutional framework as the Small Hydropower Plants of this project. That is: without and institutional structure where PROINFA (financial) benefits were possible.

The DOE has found this statement to be in line with sub-step 4.a of the Additionality Tool, which prescribes that other projects are only considered similar if they (among other stipulations) take place in a comparable environment with respect to regulatory framework and investment climate and access to financing.

From the 146 SHPs that have an installed capacity between 8 MW – 30 MW, 121 have a starting date after June 2004. The DOE cross-checked this info with ANEEL's official chronogram for starting date of SHPs /**32**/**.**

3. PP has excluded CDM projects from the analysis in accordance with Sub-step 4.a of the latest version of the Additionality Too. From the 121 remaining projects, only 53 are not CDM project activities. This was cross-checked by the DOE at http://cdm.unfccc.int/Projects/Validation/index.html (accessed on 15/05/2011).

4. From the 53 remaining project, 45 received incentives from PROINFA and were, therefore excluded from the analysis, seeing that that operate under different financial structure and receive incentives from the Federal Government. This projects celebrated PROINFA contracts with Eletrobrás before the end of PROINFA (June 2004). The DOE cross-checked this information with evidence /**31**/**.**

5. From the 8 remaining projects, 5 are self-producers and do not dispatch energy to the national grid. The DOE cross-checked this information with: ANEEL's official energy generation database available at http://www.aneel.gov.br/15.htm (accessed on 13/05/2011) and evidence /**41**/.

In conclusion, only 3 projects were found to be similar to the proposed project activity.

Essential distinctions between the proposed CDM project activity and any similar projects:

The three similar project activities were analyzed in sub-step 4.b of the PDD version 04 and PP was able to describe essential distinctions between his project and the similar activities identified in sub-step 4.a. Evidence analyzed by DOE: /**43**/. PP has clearly demonstrated in the PDD version 04 that the first of the similar activities has eight individual investor and three companies as shareholders. This reduces the financial risks of the activity and makes it easier to obtain credit and investments. The second similar activity is property of a large investment group, which has 28 productive units in several economic sectors. The group is active in farming, food, biodiesel, cosmetic, leather, dog toy, individual protection equipments, industrial hygiene and cleaning, energy, transport, sanitation and construction. This makes it, for this activity, also easier to deal with financial risks and to obtain credit / investments. Regarding the third and last similar activity, PP states in the PDD version 04 that no information is available regarding this activity. The DOE was also not able to find any information regarding this activity, except its installed capacity, location and the name of the owner. Seeing that data/information of this similar project is not accessible for PPs to conduct the analysis, this activity was excluded from the common practice analysis, in accordance with the Tool for demonstration of the additionality.

Seeing the analysis put forward above, the DOE concludes that SHPs that operate without PROINFA or CDM benefits are not common practice in Brazil. Consequently, the DOE hereby confirms that the proposed CDM project activity is not common practice.

3.8 Monitoring plan (124)

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

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

The Project uses the methodology ACM0002 Consolidated baseline methodology for grid-connected electricity generation from renewable sources, version 12.1.0. The project involves the installation of three new grid connected small hydro power plants.

The Combined Margin emission factor will be determined ex-post, based on the most recent information available. This data will be obtained from the Brazilian DNA, which calculates the Operating Margin and Build Margin emission factors in accordance with the latest version of the Tool to calculate the emission factor for an electricity system.

In accordance to the monitoring plan, the main parameter that will be monitored is the quantity of net electricity generation supplied by the project plant to the grid in year y, measured continuously by the power plant's meters installed in the substation "Guaporé". The meters in Substation Guaporé (one main meter and one backup meter) consist of a single measurement point, where the combined total net electricity of the three SHPs is measured. The measurement will be continuously done and recorded monthly.

The information will be crosschecked using records of sold energy, produced by the CCEE - Electric Power Commercialization Chamber. CCEE is the independent agency that manages the commercialization of energy in Brazil and keeps the official records for sold energy.

Operational management for the Project is comprehensively detailed in the PDD. It includes description of the responsibility, meters location, process description, data collection procedures, data storage procedures and emission reduction calculation procedures. These are all elements which ensure that the monitoring plan will be followed during the operation of the Project.

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

3.9 Sustainable development (127)

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

3.10 Local stakeholder consultation (130)

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

PP has invited local stakeholders to comment on the project activity.
Letters were sent to:

- City Hall of the four municipalities involved
- Municipal Assembly of the four municipalities involved
- Municipal secretariats of environment of the four municipalities involved
- Rural workers unions
- State environmental Agency
- Brazilian NGO Forum
- State Department of environment

- State attorney of public interest
- Federal attorney of public interest

Copy of letters and evidence of receipt (A/R) were given to the DOE during site visit.

Also, the PDD was put online at www.enerbio-rs.com.br. Local Stakeholders were also given the opportunity to comment through e-mail and through conventional mail.

Analyzing the letters sent to local stakeholders, the DOE could validate that the project activity is described in a manner, which allows the local stakeholders to understand the project activity.

Also, the DOE was able to validate that PP has invited comments by local stakeholders that can reasonably be considered relevant for the proposed CDM project activity, seeing that the letters asking for comments were sent to all the local stakeholders prescribed by the second paragraph of the Brazilian DNA's Resolution 7: http://www.mct.gov.br/upd_blob/0023/23744.pdf.

Reasonable time was given to local stakeholders to respond to invitations to comment on the project: letters were sent to local stakeholders on the 05/08/2010 and the validation started only on the 02nd of September 2010. So, PP complies with the Brazilian DNA's Resolution 7: http://www.mct.gov.br/upd_blob/0023/23744.pdf (which states that letters to local stakeholders should be send at least 15 days before the start of validation).

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

3.11 Environmental impacts (133)

The project participants have undertaken an analysis of environmental impacts and an environmental impact assessment was prepared in accordance with procedures as required by the host Party.

According to Brazilian Legislation, there are three environmental licenses needed. First the LP (Previous License), then the LI (Installation License), and last the LO (Operating License). The project activity has obtained the first two. The second licenses (LI) are described in the PDD:

- Boa Fé LI: 1376/2009-DL (valid until 01/12/2014) (/**10**/).
- São Paulo LI: 391/2009-DL (valid until 07/04/2013) (/**16**/)
- Autódromo LI: 1381/2009-DL (valid until 15/10/2014). (/**13**/).

The last one (LO) can be requested only after the construction of the SHPPs.

According to the PDD, 29 programs and actions will be carried out to minimize the impact of the SHPPs construction and operation. These actions were needed after the Environmental Impact Analysis (EIA) identified the possible environmental impacts caused by SHPPs. The DOE received a copy of the EIA during site visit /**33**/, /**34**/, /**35**/, /**36**/ **and** /**37**/**.**

Volume I – Characteristics of the enterprise (October 2006)

Volume II.1 - Environmental diagnostic (October 2006)

Volume II.2 - Environmental diagnostic (October 2006)

Volume III – Impact analysis and mitigation actions (October 2006)

Volume IV – Annexes.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

The PDD using methodology ACM0002 ver. 11 was webhosted on the UNFCCC for global stakeholders comments as per CDM requirements. The project was webhosted from 02 Sep 10 - 01 Oct 10.

No comments were received.

5 VALIDATION OPINION

Bureau Veritas Certification has performed a validation of the COMPLEXO CARREIRO II CDM PROJECT in BRAZIL. The validation was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

The validation consisted of the following three phases: i) a desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) the resolution of outstanding issues and the issuance of the final validation report and opinion.

Project participant/s used the latest tool for demonstration of the additionality. In line with this tool, the PDD provides an investment

analysis to determine that the project activity itself is not the baseline scenario.

By the construction of three small hydro power plants totaling 64 MW of installed capacity, renewable energy will be delivered to the Brazilian national electricity grid, and the project is likely to result in reductions of GHG emissions partially. An investment analysis demonstrates that the proposed project activity is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that the project is implemented and maintained as designed, the project is likely to achieve the estimated amount of emission reductions.

The review of the project design documentation (version 4) and the subsequent follow-up interviews have provided Bureau Veritas Certification with sufficient evidence to determine the fulfillment of stated criteria. In our opinion, the project correctly applies and meets the relevant UNFCCC requirements for the CDM and the relevant host country criteria. Bureau Veritas Certification thus requests registration of 'project title' as CDM project activity.

6 REFERENCES

Category 1 Documents:
Documents provided by AUTÓDROMO ENERGÉTICA S/A that relate directly to the GHG components of the project.

/1/ PDD version 01, dated 06/08/2010
/2/ PDD version 02, dated 28/02/2011
/3/ PDD version 03, dated 30/03/2011
/4/ Ordinance Ministry of Mines and Energy (MME) nr. 100 of 31/05/2007.
/5/ Consolidated Basic Engineering Project - Boa Fé SHP (BFE-PBC-R-001-R2) of October 2009 – Prepared by MEK ENGENHARIA E CONSULTORIA LTDA.
/6/ Technical Chart - Boa Fé SHP, Prepared by MEK ENGENHARIA E CONSULTORIA LTDA.
/7/ Consolidated Basic Engineering Project - Autódromo SHP (AUT-PBC-R-001-R2) of March 2010, Prepared by MEK ENGENHARIA E CONSULTORIA LTDA.
/8/ Technical Chart - Autódromo SHP, Prepared by MEK ENGENHARIA E CONSULTORIA LTDA.
/9/ EPC Contract Boa Fé SHP (CTBF 047/2009) of 01/11/2009.
/10/ Environmental license Boa Fé (LI) (1376 / 2009-DL) 02/12/2009
/11/ Power Purchase Agreement (PPA) Boa Fé SHP (CCEAL-LP 242/2010) of 04/10/2010.
/12/ EPC Contract Autódromo SHP (CTAUT 046/2009) of 01/11/2009.
/13/ Environmental license Autódromo (LI) (1381 / 2009-DL) 03/12/2009
/14/ Power Purchase Agreement (PPA) Autódromo SHP (CCEAL-LPC 241/2010) of 04/10/2010.
/15/ EPC Contract São Paulo SHP (SP055/2010) of 01/08/2010.
/16/ Environmental license São Paulo SHP (LI) (SP055/2010) of 01/08/2010.
/17/ ANEEL's Authorization of Installed Capacity and Assured Energy (PLF) of all three SHPs – Accessed at: http://www.aneel.gov.br/aplicacoes/capacidadebrasil/energiaassegurada.asp (on 13.05.2011)
/18/ Brazilian DNA Resolution nr. 08 of 26/05/2008.
/19/ Brazilian DNA website figures for OM and BM emission factors values for 2009 (latest available) accessed at: http://www.mct.gov.br/index.php/content/view/303076.html#ancora (ON 13.05.2011)
/20/ Cash Flow Complexo Carreiro II_V03
/21/ Board Meeting Autódromo (date of investment decision) (01/10/2009)
/22/ Board Meeting Boa Fé (date of investment decision) (01/10/2009)
/23/ Board Meeting São Paulo (date of investment decision) (01/10/2009)
/24/ National Energy Plan 2030 from Brazilian Ministry of Mines and Energy (2007)
/25/ Prior consideration letter to DNA - Autódromo SHP (27/07/2009)
/26/ Prior consideration letter to DNA - Boa Fé SHP (27/07/2009)
/27/ Prior consideration letter to DNA - São Paulo SHP (27/07/2009)
/28/ Response DNA regarding prior consideration Autódromo (04/08/2009)

/29/ Response DNA regarding prior consideration Boa Fé (04/08/2009)
/30/ Response DNA regarding prior consideration São Paulo (04/08/2009)
/31/ PROINFA contracts pdf from Eletrobras website
/32/ SHPs starting date chronogram – ANEEL excel sheet from wesite ANEEL
/33/ EIA - VOLUME I (Oct 2006)
/34/ EIA - VOLUME II.1 (Oct 2006)
/35/ EIA - VOLUME II.2 (Oct 2006)
/36/ EIA - VOLUME III (Oct 2006)
/37/ EIA - VOLUME IV (Oct 2006)
/38/ Basic Engineering Project São Paulo of January 2003 – Prepared by Correcta Engenharia.
/39/ Technical Chart - São Paulo SHP
/40/ Emission Reduction spreadsheet V02
/41/ SHP operating in Brazil –pdf from ANEEL website.
/42/ Common practice spread sheet
/43/ SHP Jorge Dreher evidence
/44/ Request for review (common practice evidence +-50% range) (17/12/2008)
/45/ Emission Reduction spreadsheet V01
/46/ PDD version 04, dated 17/06/2011
/47/ Emission Reduction spreadsheet V03

Category 2 Documents:

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

/I/ Clean Development Mechanism - Project Design Document Form (CDM-PDD), version 03, EB 25, ANNEX 15.
/II/ Guidelines for completing the Project Design Document (CDM-PDD) and the Proposed New Baseline and Monitoring Methodologies (CDM-NM), Version 07, EB 41, ANNEX 12.
/III/ Approved consolidated baseline and monitoring methodology ACM0002: “Consolidated baseline methodology for grid-connected electricity generation from renewable sources”, Version 12.1.0. ”
/IV/ Tool to calculate the emission factor for an electricity system, Version 02.1.0”
/V/ “Tool for the demonstration and assessment of additionality” (Version 05.2)
/VI/ Glossary of CDM Terms, version 05.
/VII/ Guidelines on the demonstration and assessment of prior consideration of the CDM (version 03).
/VIII/ Guidelines for the reporting and validation of plant load factors (Version 01).
/IX/ Guidelines on the assessment of investment analysis (Version 04.0)
/X/ Draft tool to determine the weighted average cost of capital (WACC) (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/ Eduardo Baltar – Enerbio Consultoria Ltda-ME
/2/ Karin Freitas – Autódromo Energética S.A.
/3/ Bruno Moraes – Autódromo Energética S.A.
/4/ Michel Belleboni - Enerbio Consultoria Ltda-ME
/5/ Elisa Kich – Enerbio Consultoria Ltda-ME.

1. o0o -

7 CURRICULA VITAE OF THE DOE'S VALIDATION TEAM MEMBERS

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

Bureau Veritas Certification – Team member, GHG Verifier
Guilherme B. Lefèvre – is graduated in Law with experience in GHG Programs, both compulsory and voluntary. Guilherme has vast experience in the development and analysis of CDM, VCS, Social Carbon and CCBS projects. He is currently enrolled at the post-graduate environmental science program of the São Paulo University. Guilherme trained as a lead auditor in the fields of environment (ISO 14001) and GHG – Green House Gas.

Bureau Veritas Certification – Financial Specialist
Bernardo A. 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 – Technical Specialist
Roberval Kaminski is an electrical engineer with over 20 years of experience working in activities related to generation, transmission and distribution of electricity. Their main specialties are: management and loss control techniques and trade in electrical power systems, establishment of guidelines, criteria and procedures for connection to the transmission system, to be used for cogeneration systems and power distribution analysis; and implementing energy efficiency practices in industrial and commercial tariff analysis, analysis of power quality for customers and suppliers of electric energy; quality management services, including commercial distributors of electricity.

Bureau Veritas Certification – Internal Technical Reviewer
Marcelo A. Porto – is graduated in Electrical Engineering, with a graduate specialization in Quality Engineering and a Master's degree in Industrial Engineering. Quality management expert and auditor – he worked in the electro-electronic, mechanical, medical devices, leather and

shoes industries – trained as a lead auditor in the fields of quality (ISO 9001), environment (ISO 14001), social responsibility (SA 8000), and organizational health and safety (OHSAS 18001).

2. o0o -

APPENDIX A:CDM PROJECT VALIDATION PROTOCOL

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

CHECKLIST QUESTION	Ref.	§	COMMENTS		Draft Concl	Final Concl
1. Approval			*COUNTRY A (Brazil)*	*COUNTRY B (insert the country name)*		
a. Have all Parties involved approved the project activity?	VVM	44	Please refer to item 1.b below	Not applicable	OK	OK
b. Has the DNA of each Party indicated as being involved in the proposed CDM project activity in section A.3 of the PDD provided a writTen letter of approval? (If yes, provide the reference of the letter of approval, any supporting documentation, and specify if the letter was received from the project participatn or directly from the DNA)	VVM	45	The final decision from the Brazilian DNA will be available only after its first ordinary meeting, after the receiving of all the required documents necessary for evaluation, including this validation report, according to Article 6 of the Resolution number 1 of the Brazilian DNA: CIMGC – Comissão Interministerial de Mudança Global do Clima.(http://www.mct.gov.br/upd_blob/0023/23433.pdf (accessed on 10/09/2010).	Not applicable	OK	OK
c. Does the letter of approval from DNA of each	VVM	45			OK	OK

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

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			2. São Paulo Energética S.A. (Private Entity); 3. Autódromo Energética S.A. (Private Entity); 4. Enerbio Consultoria & Associados Sociedade Simples (Private Entity).		

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

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
3. Project design document					
a. Is the PDD used as a basis for validation prepared in accordance with the latest template and guidance from the CDM Executive Board available on the UNFCCC CDM website?	VVM	55	The template used for preparing the PDD is the latest template: Version 03.0, EB 25, and Annex 15. See Section 3 below for discussions regarding the concordance of the PDD with the applicable guidance (GUIDELINES FOR COMPLETING THE PROJECT DESIGN DOCUMENT (CDM-PDD) AND THE PROPOSED NEW BASELINE AND MONITORING METHODOLOGIES (CDM-NM), VERSION 07).	OK	OK
b. Is the PDD in accordance with the applicable CDM requirements for completing the PDD?	VVM	56	Please refer to Section 3 below.	OK	OK
c. In CDM-PDD section A.1 are the following provided?	EB 41	Ann 12		OK	OK
i. Title of project	EB 41	Ann 12	Yes, title of project is: "Complexo Carreiro II CDM Project"	OK	OK
ii. Current version number and date of document	EB 41	Ann 12	Current version: 01 Date of Document: August 6th, 2010	OK	OK
d. In CDM-PDD section A.2 are following provided (max. one page e.)?	EB 41	Ann 12			
i. A brief description ot the project activity covering purpose which includes the scenario existing prior to the start of project, project scenario and baseline scenario	EB 41	Ann 12	The following information is provided in the PDD: Scenario Existing prior to the start of project:	CAR 01	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			"The baseline scenario is the same scenario that existed before the project activity implementation starting because the electricity that will be supplied to the grid would be generated otherwise by the operation of another power plant connected to the grid and by the addition of new generation sources, as expressed in the combined margin described in the "Tool to calculate the emission factor for an electric system"". See CAR below on the baseline scenario. Project scenario: Complexo Carreiro II CDM Project activity consists on the supply of clean hydroelectric energy to the Brazilian National Interconnected System (SIN) through the implantation and operation of three Small Hydro Power Plant (SHP) Boa Fé, São Paulo and Autódromo with small reservoir area and installed capacity of 24 MW, 16MW and 24 MW, respectively. SHPs are located on the margins of Carreiro River, state of Rio Grande do Sul, Southern Region of Brazil. Baseline scenario: "The baseline scenario is the same scenario that existed before the project activity implementation		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			starting because the electricity that will be supplied to the grid would be generated otherwise by the operation of another power plant connected to the grid and by the addition of new generation sources, as expressed in the combined margin described in the "Tool to calculate the emission factor for an electric system"". PP provides a reference to indicate the expected growth in the use of fossil fuel in Brazil`s energy matrix for the coming years: http://www.epe.gov.br/PDEE/Forms/EPEEstudo.aspx (Decennial Plan for Electric Energy Expansion 2010 – 2019, table 54, crosschecked on 10.09.2010). CAR 01: In Section A.2 of the PDD (version 1), the baseline scenario is not described in accordance with the relevant methodology. Moreover, the electricity that will be supplied to the grid by the project would not be generated by the operation of another power plant connected to the grid and the addition of new sources, but by the operation of grid-connected power plants and the addition of new sources. The description of the baseline scenario is, therefore, not in accordance with the ACM0002: "CONSOLIDATED BASELINE METHODOLOGY FOR GRID CONNECTED ELECTRICITY		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			GENERATION FROM RENEWABLE SOURCES" VERSION 12.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
ii. Explanation on how the GHG emission reductions are effected	EB 41	Ann 12	The following information is provided in the PDD: "Complexo Carreiro II project activity will reduce greenhouse gases (GHG) emissions, avoiding generation through sources of fossil fuels. Clean and renewable electricity supply will bring an important contribution to environmental sustainability, reducing the carbon dioxide emissions that would occur in the absence of this project."	OK	OK
iii. The PP's vies on the contribution of project activity to sustainable development	EB 41	Ann 12	According to the PDD, the project will: - Prevent the emission of pollutant gases to the atmosphere. - During the implementation, it will be generated 800 direct jobs and 400 indirect jobs and stimulation for economic activities. The project will also promote the region's economic development. - SHPs presents low environmental impact, with a small reservoir formation, in addition, project participants will realize considerable investments in environmental programs and actions. It will be developed 29 environmental programs of mitigation actions in the physical, biotic, anthropic environment in order to reduce and monitor the possible impacts of the project.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			- The implementation of this kind of enterprise in the region will demand training for collaborators to be hired or sub-hired in the region and for the population in the municipalities involved. - Investments in culture and in social and environmental responsibility programs.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
iv. Are there any changes/modifications compared to the webhosted PDD?	EB 41	Ann 12	No. As was observed by the validation team through documentation analysis and during site visits held on 20.10.2010 (project participant's head office) and 21.10.2010 – 22.10.2010 (construction site), the project is being implemented in accordance with the descriptions provided in the webhosted PDD.	OK	OK
f. In CDM-PDD section A.3 are following provided in the tabular format?	EB 41	Ann 12	Yes, all information is given in a tabular form. See below:	OK	OK
i. List of project participants and parties	EB 41	Ann 12	List of project participants and parties: Yes, project participants are: 1. Boa Fé Energética S.A. (Private Entity); 2. São Paulo Energética S.A. (Private Entity); 3. Autódromo Energética S.A. (Private Entity); 4. Enerbio Consultoria & Associados Sociedade Simples (Private Entity).	OK	OK
ii. Identification of Host Party			Brazil: Party (host)	OK	OK
iii. Indication whethre the Party wishes to be considered as project participant	EB 41	Ann 12	The Party (Brazil) does not wish to be considered as project participant CAR 02: In Section A.3 of the PDD version 1, the third column of table 1 suggests there are four	CAR 02	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			Parties involves. However, only one Party (Brazil) is involved. This is not in accordance with GUIDELINES FOR COMPLETING THE PROJECT DESIGN DOCUMENT (CDM-PDD) AND THE PROPOSED NEW BASELINE AND MONITORING METHODOLOGIES (CDM-NM), VERSION 07.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
g. In CDM-PDD section A.4.1 are following provided?	EB 41	Ann 12			
i. Technical description, location, host party(ies) and address as required	EB 41	Ann 12	Host: Brazil Region: South of Brazil State: Rio Grande do Sul Municipalities: Guaporé, Serafina Correa, Nova Bassano e Vista Alegre do Prata.	OK	OK
ii. Detailed physical location with unique identification of the project activity (eg. Longitude/latitude) – not to exceed one page	EB 41	Ann 12	According to the PDD: "The implementation of SHPs Boa Fé, São Paulo and Autódromo will be held in Carreiro River, a tributary on the right margin of the Antas River, sub-basin 86, in the Atlantic Southeast basin state of Rio Grande do Sul, South region of Brazil." Unique identification: (According to the PDD, the geographical coordinates below refer to the exact location of the power house of the three Small Hydro Power Plants). Boa Fé: Latitude 28° 45' 10'' South and Longitude 51° 50' 37'' West.	CAR 03 CAR 04	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			São Paulo: Latitude 28° 46' 00'' South and Longitude 51° 50' 00'' West. Autódromo: Latitude 28° 49' 33'' South and Longitude 51° 50' 29'' West. CAR 03: In Section A.4.1.4 of the PDD version 1, the unique identification (geographic coordinates) of the SHPs Boa Fé and Autodromo are not in accordance with the document provided by PP and mentioned in the PDD: "the Previous Licenses granted by the State Foundation of Environmental Protection of the State of Rio Grande do Sul (FEPAM)." The unique identification of SHPs was validated by the DOE with the following document provided by PP during the validation process: Boa Fé – See CAR above Autódromo – See CAR above São Paulo's previous environmental license nr. 115/2008-DL, granted by FEPAM – Rio Grande do Sul Environmental Agency. The DOE checked the coordinates on Google Earth (http://earth.google.co.uk/intl/en_uk/) to		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			crosscheck the location of the SHPPs as indicates in the map on page 5 of the PDD (accessed on 07.09.2010). PP provides in Section A.4.1.4 a table (table 2) containing social and economic indicators of the four municipalities where the SHPP are located: Guaporé, Serafina Correa, Nova Bassano e Vista Alegre do Prata. The source for this information given in the PDD (www.fee.rs.gov.br/sitefee/pt/content/resumo/pg_municipios.php) was crosschecked by the DOE on 07.09.2010. CAR 04: In Section A.4.1.4 of the PDD version 1, the information provided exceeds one page. This is not in accordance with GUIDELINES FOR COMPLETING THE PROJECT DESIGN DOCUMENT (CDM-PDD) AND THE PROPOSED NEW BASELINE AND MONITORING METHODOLOGIES (CDM-NM), VERSION 07.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
iii. Are there any changes/modifications compared to the webhosted PDD?	EB 41	Ann 12	No. As was observed by the validation team through documentation analysis and during site visits held on 20.10.2010 (project participant's head office) and 21.10.2010 – 22.10.2010 (construction site), the project is being implemented in accordance with the descriptions provided in the webhosted PDD.	OK	OK
h. In CDM-PDD section A.4.2 is the list of categoreis of project activities provided?	EB 41	Ann 12	Sectorial Scope 1 – Energy Industries (Renewable Source)	OK	OK
i. In CDM-PDD section A.4.3 are following provided?	EB 41	Ann 12			
i. A description of how environmentally safe and sound technology, and know-how, is transferred to the Host Party(ies)	EB 41	Ann 12	Description of how environmentally safe and sound technology, and know-how, is transferred to the Host Party: According to the PDD: Equipment and technologies to be used in the project were developed in Brazil and have already been successfully applied in similar projects in the country and around the world. According to the PDD: "SHPs Boa Fé, São Paulo and Autódromo will use the Carreiro River's hydraulic potential to generate electricity with an installed capacity of 24 MW, 16 MW and 24 MW, respectively."	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			Still according to the PDD: "SHPs Boa Fé, São Paulo and Autódromo are run-of-river hydroelectric power plants (…). As described by the Ministry of Mines and Energy of Brazil, the assured energy of SHPs Boa Fé, São Paulo and Autódromo is 12.23 MW, 8.63 MW and 12.25 MW, respectively."		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
ii. Explanation of purpose of project activity with scenario existing prior to the start of project, scope or present activities and the baseline scenario	EB 41	Ann 12	Scenario existing prior to the start of project: The PDD indicates that the scenarion existing prior to the start of the project is the same as the baseline scenario. See however CAR below. Scope of activities: "SHPs Boa Fé, São Paulo and Autódromo will use the Carreiro River's hydraulic potential to generate electricity with an installed capacity of 24 MW, 16 MW and 24 MW, respectively." "SHPs Boa Fé, São Paulo and Autódromo are run-of-river hydroelectric power plants (…)" "The assured energy of SHPs Boa Fé, São Paulo and Autódromo is 12.23 MW, 8.63 MW and 12.25 MW, respectively." "The SHPs have run-of-river turbines that use natural flow of the river to generate electricity without the need for large reservoirs." CL 01: Regarding the description of the scope of activities that will be implemented, as described in Section A.4.3 of the PDD version 1, please provide information on the amount of electric energy that the power plants are expected to	CL 01 CAR 05 CL 17 CL 18	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			generate (e.g. in MWh/year). Also, please provide technical description of the turbines and generators (capacity, etc). The DOE was able to validate the information provided by PP in Section A.4.3, in particular the data provided in table 4 – technical description of the SHPs, as following: <u>SHP Boa Fé:</u> - Installed capacity: 24 MW - Reservoir area: 0.58 km^2 (see CAR below) - Dam: max height 26 mtrs - Generators: 3 units - Turbines: 3 units - Assured energy: 12.23 MW Documents used to validate the above: - Consolidated Basic Engineering Project BFE-PBC-R-001-R2 of October 2009, produced by Mek Engenharia e Consultoria Ltda (pages 8 – 11, technical sheet). - The assured energy (12.23 MW) was also validated with: PORTARIA No 100, DE 31 DE MAIO DE 2007. – Ministry of Mines and Energy: “Physical guarantees of Small Hydro Power Plants”.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			SHP São Paulo: - Installed capacity: 16 MW - Reservoir area: 0.37 km^2 - Dam: max height 11 mtrs - Generators: 2 units - Turbines: 2 units - Assured energy: 8.63 MW CL 17: Please provide a copy of the Consolidated Basic Engineering Project of the SHP São Paulo. - The assured energy of São Paulo (8.63 MW) was validated with: PORTARIA No 100, DE 31 DE MAIO DE 2007. – Ministry of Mines and Energy: "Physical guarantees of Small Hydro Power Plants". SHP Autodromo: - Installed capacity: 24 MW - Reservoir area: 0.41 km^2 - Dam: max height 18 mtrs - Generators: 3 units - Turbines: 3 units - Assured energy: 12.25 MW		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			Documents used to validate the above: - Consolidated Basic Engineering AUT-PBC-R-001-R2 of March 2010, produced by Mek Engenharia E Consultoria Ltda (pages 8 – 11, technical sheet). - The assured energy (8.63 MW) was also validated with: PORTARIA No 100, DE 31 DE MAIO DE 2007. – Ministry of Mines and Energy: "Physical guarantees of Small Hydro Power Plants". CL 18: Regarding Section A.4.3 of the PDD version 1, PP has provided the DOE with the following evidence: ANEEL's approval of the Basic Engineering Projects of the three SHPs (ANEEL's dispatch 2133, 2134 and 2135 of 2008). However, the DOE has also received from PP the Consolidated Basic Engineering Projects of the SHPs. Please provide information regarding the status of ANEEL approval of these consolidated documents. Baseline scenario: The PDD lists (table 3) all the power plants in operation in the Rio Grande do Sul State. The total of the different types of energy generation facility is 122. The source provided in the PDD (http://www.aneel.gov.br/area.cfm?idArea=15&idP		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			erfil=2.) was crosschecked by the DOE on 07.09.2010) CAR 05: The baseline scenario provided in Section A.4.3 of the PDD (version 1) is not as identified in Section B.4 of the PDD. Moreover, the project boundary is defined in Section B.3 as the SIN (interconnected national energy system). However, the baseline in Section A.4.3 only comprises part of the SIN: the power plants in operation in the Rio Grande do Sul State. This is not in accordance with GUIDELINES FOR COMPLETING THE PROJECT DESIGN DOCUMENT (CDM-PDD) AND THE PROPOSED NEW BASELINE AND MONITORING METHODOLOGIES (CDM-NM), VERSION 07.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
iii. List and arrangement of the main manufacturing/production technologies, systems and equipments involved	EB 41	Ann 12	CAR 06: In Section A.4.3 of the PDD (version 1), information is missing regarding: the age and average lifetime of the equipments based on manufacturer's specifications and industry standards, load factors (according to EB 48 – ANN 11), efficiencies and the monitoring equipments and their location in the systems. This is not in accordance with GUIDELINES FOR COMPLETING THE PROJECT DESIGN DOCUMENT (CDM-PDD) AND THE PROPOSED NEW BASELINE AND MONITORING METHODOLOGIES (CDM-NM), VERSION 07.	CAR 06	OK
iv. The emissions sources and GHGs involved	EB 41	Ann 12	According to the PDD: "CO_2 is a greenhouse gas involved in the project activity. The CO_2 emissions arising from electricity generation in fossil fuel power plants are the emissions sources that will be replaced due to the Project activity."	OK	OK
v. The types and levels of services (normally in terms of mass or energy flows) provided by the systems and equipments that are being modified and/or installed under the project activity and their relation, if any, to other manufacturing/production equipments and	EB 41	Ann 12	Yes, Project activity provide as service electric energy to be send to the grid to be sold on the energy market.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
systems outside the project boundary.					
vi. Are there any changes/modifications compared to the webhosted PDD?	EB 41	Ann 12	No. As was observed by the validation team through documentation analysis and during site visits held on 20.10.2010 (project participant's head office) and 21.10.2010 – 22.10.2010 (construction site), the project is being implemented in accordance with the descriptions provided in the webhosted PDD.	OK	OK
j. In CDM-PDD section A.4.4 is the estimation of emission reductions provided as requested in a tabular format?	EB 41	Ann 12	CAR 07: In Section A.4.4 of the PDD (version 1), table 5 comprises estimates of emission reduction for 6 full years. However, the total number of crediting years is 7, according to Section C.2.1 of the PDD. Also, the total amount of estimated emission reductions is not equal to the sum of all the years. CAR 08: In Section A.4.4 of the PDD (version 1), PP states that the marketable energy (used to calculate emission reductions) is "the assured energy less estimated losses of 3% with transmission, connection and internal consumption". However, according to the Power Purchase Agreements provided by PP, the energy sold is the same as the assured energy without any deduction due to internal consumptions and/or losses. CL 19: Please provide a copy of the power	CAR 07 CAR 08 CL 19 CL 20	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			purchase agreement of the SHP São Paulo. PP states that projections of emission reduction assume a starting date of the first crediting period of: 01.06.2011 (projected start of the first SHP operation, SHP Autódromo). The DOE was able to validate this through the Chronogram presented by PP: Cronograma Físico Geral PCH Autódromo (Rev 01) 14-5-10. Observation: The chronogram of São Paulo indicates a start of operation on 21/09/2011 and of Boa Fé indicates a start of operation of 18/06/2011. CL 20: Please complete in reference 5 of Section A.4.4 of the PDD version 1, the expected operation start of SHPs Boa Fé And São Paulo, so it is clear why the SHP Autódromo's expected start of operation has been chosen as the date in which the project is expected to become operational.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
k. In CDM-PDD section A.4.5 is Information regarding Public funding provided?	EB 41	Ann 12	CAR 09: In Section A.4.5 of the PDD (version 1), PP states that: "no public funding was solicited by parties involved in Annex I. This is not in accordance with GUIDELINES FOR COMPLETING THE PROJECT DESIGN DOCUMENT (CDM-PDD) AND THE PROPOSED NEW BASELINE AND MONITORING METHODOLOGIES (CDM-NM), VERSION 07.	CAR 09	OK
l. In CDM-PDD section B.1 are following provided?	EB 41	Ann 12			
i. The approved methodology and version number	EB 41	Ann 12	Approved methodology: According to PDD: Approved consolidated baseline and monitoring methodology ACM0002, version 11: "Methodology Consolidated for grid-connected electricity generation from renewable sources." CAR 10: In Section B.1 of the PDD (version 1), the name of the applicable methodology is not in accordance with: the ACM0002: "CONSOLIDATED BASELINE METHODOLOGY FOR GRID CONNECTED ELECTRICITY GENERATION FROM RENEWABLE SOURCES" VERSION 12.	CAR 10 CAR 11	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			CAR 11: In the entire PDD version 1, the version number of the applicable methodology (version 11 of ACM0002) is not valid anymore. This is not in accordance with paragraph 68 of the CLEAN DEVELOPMENT MECHANISM VALIDATION AND VERIFICATION MANUAL (Version 01.2).		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
ii. Any methodologies or tools which the above approved methodology draws upon and their version number	EB 41	Ann 12	Tools which the approved methodology draws upon and their version number: - Tool for the Demonstration and Assessment of Additionality, Version 5.2. - Tool to calculate the emission factor for an electricity system, version 2. Source of methodology and tools (http://cdm.unfccc.int/methodologies/PAmethodologies/approved.html) crosscheched by the DOE on 11.09.2010)	OK	OK
m. In CDM-PDD section B.2 are following provided?	EB 41	Ann 12			
i. Justification ot the choice of methodology that the project activity meets each of the applicability conditions	EB 41	Ann 12	Yes, the choice of methodology is justified. Please refer to item (5.b) below.	OK	OK
ii. Documentations with references that had been used. This can be provided in Annex 3 instead	EB 41	Ann 12	CAR 12: In Section B.2 of the PDD version 1, the information regarding reservoir areas of the SHPs provided in table 6 is not in accordance with the	CAR 12	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			information provided in Section A.4.3 of the same PDD. Documentation used by the DOE to validate that the project meets the applicability conditions of the methodology (ACM0002v12): - Visit to construction site held on 21-22 of October 2010. - Boa Fé's Consolidated Basic Engineering Project BFE-PBC-R-001-R2 of October 2009, produced by Mek Engenharia e Consultoria Ltda (pages 8 – 11, technical sheet). - Autodromo's Consolidated Basic Engineering AUT-PBC-R-001-R2 of March 2010, produced by Mek Engenharia E Consultoria Ltda (pages 8 – 11, technical sheet). - Boa Fé installation license (nr. 1376 / 2009-DL). Granted by FEPAN – environmental state agency. - Autodromo installation license (nr. 1381 / 2009-DL). Granted by FEPAN –state environmental agency. - São Paulo installation license (nr. 391 / 2009-DL). Granted by FEPAN –state environmental agency.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			Please refer to CL in section (3.h.ii) regarding the Consolidated Basic Engineering projects.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
n. In CDM-PDD section B.3 are following provided?	EB 41	Ann 12			
i. Description of all sources and gases included in the project boundary in the table	EB 41	Ann 12	CAR 13: In Section B.3 of the PDD version 1, PP describes that the SHPs Boa Fé, São Paulo and Autódromo are connected to National Interconnected System, more specifically, the South Subsystem." However, according to the Resolution 08 of 2008 of the Brazilian DNA (http://www.mct.gov.br/upd_blob/0024/24719.pdf) there is only one project electricity system: the SIN, the National Interconnected System. CAR 14: Table 7 of the PDD version 1 is not in accordance with the ACM0002: "CONSOLIDATED BASELINE METHODOLOGY FOR GRID CONNECTED ELECTRICITY GENERATION FROM RENEWABLE SOURCES" VERSION 12. Moreover, the project emission of CH_4 is not discussed and the baseline emission of CO_2 includes only the emissions of the South Brazilian subsystem.	CAR 13 CAR 14	OK
ii. A flow diagram of the project boundary physically delineating the project activity	EB 41	Ann 12	Yes, a flow diagram is provided in Section B.3 physically delineating the project activity. CAR 15: The flow diagram in Section B.3 of the	CAR 15	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			PDD version 1 states that the parameter TEG_y will be monitored. Also, according to the diagram, the parameter A_{PJ} will not be monitored. This is not in accordance with the monitoring plan of the ACM0002: "CONSOLIDATED BASELINE METHODOLOGY FOR GRID CONNECTED ELECTRICITY GENERATION FROM RENEWABLE SOURCES" VERSION 12.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
iii. The flow diagram with all equipments, systems and flows of mass and energy etc	EB 41	Ann 12	The diagram delineates the project boundary in accordance with ACM0002v12 and includes: - The Brazilian Interconnected system. - The three SHPPs and substations	OK	OK
o. In CDM-PDD section B.4 are following provided?	EB 41	Ann 12			
i. Explanation how the most plausible baseline scenario is identified in accordance with the selected baseline methodology	EB 41	Ann 12	Yes, the baseline scenario is accordingly to the ACM0002.v12 baseline scenario for activities that comprise the installation of new grid-connected renewable power plants/units. However, a minor error was found in the description in the PDD: CAR 16: The definition provided for the baseline of the project in page 11 of Section B.4 of the PDD (version 1) is not in accordance with the definition given by: ACM0002: "CONSOLIDATED BASELINE METHODOLOGY FOR GRID CONNECTED ELECTRICITY GENERATION FROM RENEWABLE SOURCES" VERSION 12. CAR 17: The reference to the document which describes the systematic for the calculation of the combined margin emission factor (http://www.mct.gov.br/upd_blob/0019/19707.pdf) is not correct. Moreover, this document is outdated and	CAR 16 CAR 17 CL 02	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			comprises a description for the calculation of the emission factor of the different subsystems of Brazil. Nowadays, the Brazilian DNA calculates only one emission factor for the entire system (SIN): http://www.mct.gov.br/upd_blob/0024/24719.pdf PP provides in Section B.4 Also information regarding the energy generation projections for 2010-2019 of the Brazilian Ministry of Mines and Energy: Brazilian Decennial Plan for Electric Energy Expansion (http://www.epe.gov.br/PDEE/Forms/EPEEstudo.aspx) crosschecked by the DOE on 07.09.2010). CL 02: Please explain the relevancy of information provided in Section B.4 of the PDD version 1 regarding the Brazilian Decennial Plan for Electric Energy Expansion (2010 – 2019), as well as the information provided in table 8, for the project's baseline identification.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
ii. Justification of key assumptions and rationales	EB 41	Ann 12	For new grid-connected renewable power plants, the baseline scenario is provided by the methodology (ACM0002v.12). The project comprises the installation of three new SHPPs.	OK	OK
iii. Transparent illustration of all data used to determine the baseline scenario (variables, parameters, data sources, etc.)	EB 41	Ann 12	For new grid-connected renewable power plants, the baseline scenario is provided by the methodology (ACM0002v.12). The project comprises the installation of three new SHPPs.	OK	OK
iv. A transparent and detailed description of the identified baseline scenario, including a description of the technology that would be employed and/or the activities that would take place in the absence of the proposed project activity	EB 41	Ann 12	For new grid-connected renewable power plants, the baseline scenario is provided by the methodology (ACM0002v.12). The project comprises the installation of three new SHPPs.	OK	OK
v. Are there any changes/modifications compared to the webhosted PDD?	EB 41	Ann 12	No. As was observed by the validation team through documentation analysis and during site visits held on 20.10.2010 (project participant's head office) and 21.10.2010 – 22.10.2010 (construction site), the project is being implemented in accordance with the descriptions provided in the webhosted PDD.	OK	OK
p. In CDM-PDD section B.5 are following provided?	EB 41	Ann 12			
i. Explanation of how and why this project activity is additional and therefore not the baseline scenario in accordance with the selected	EB 41	Ann 12	Yes, the PDD Section B.5 provides by mean of an investment analysis, in accordance with the Tool for the Demonstration and Assessment of	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
baseline methodology			Additionality, an explanation of how and why the project activity is additional. See for detailed discussion item (6) below.		
ii. Justification of key assumptions and rationales	EB 41	Ann 12	PP uses an investment analysis to determine that the project is additional. A benchmark analysis is provided using the equity internal rate of return (IRR) as financial indicator of the Project. See for detailed discussion item (6) below.	OK	OK
iii. Transparent illustration of all data used to determine the baseline scenario (variables, parameters, data sources etc)	EB 41	Ann 12	PP uses an investment analysis to determine that the project is additional. A benchmark analysis is provided using the equity internal rate of return (IRR) as financial indicator of the Project. See for detailed discussion item (6) below.		
iv. Evidence that the incentive from the CDM was seriously considered in the decision to proceed with the project activity, if the starting date of the project activity is before the date of validation	EB 41	Ann 12	Yes, PP provide the following evidence: Observation: the starting date was defined as: 01.11.2009 – Signing of contract between with the company responsible for the construction of plants Boa Fé and Autodromo, see item (3.w) below. - E-mails sent to the UNFCCC Secretariat about the intention to make SHPs Boa Fé, São Paulo	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			and Autódromo CDM project activities. - Letter sent to the Executive Secretary of the Interministerial Commission Global Climate Change – Brazilian DNA - Time line for the Power Plants' implementation. See for a detailed discussion regarding prior consideration item (6.a) below.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
q. In CDM-PDD section B.6.1 are following provided?	EB 41	Ann 12			
i. Explanation as to how the procedures, in the approved methodology to calculate project emissions, baseline emissions, leakage emissions and emission reductions are applied to the proposed project activity	EB 41	Ann 12	Procedures to calculate project emissions: PP provided in equation 7 of the PDD, the equation used to calculate project emission. This equation is in accordance with the equation of the relevant methodology: equation 1 of ACM0002v.12. However, some minor errors were found: CAR 18: The parameter $PE_{FF,y}$ of equation 1 of ACM0002v12 is not correctly presented in equation 7 of the PDD version 1. Also, the description of the parameters $PE_{GP,y}$ and $PE_{HP,y}$ is not in accordance with ACM0002: "CONSOLIDATED BASELINE METHODOLOGY FOR GRID CONNECTED ELECTRICITY GENERATION FROM RENEWABLE SOURCES" VERSION 12. In equation 8, PP provides the equation to calculate project emission from water reservoir. The equation is in accordance with equation 3 of the relevant methodology: ACM0002v.12. CAR 19: In Section B.6.1 of the PDD (version 1), the explanation of the procedure to calculate the	CAR 18 CAR 19 CAR 20 CAR 21 CAR 22 CAR 23	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			power density of the project activity is missing. This is not in accordance with the GUIDELINES FOR COMPLETING THE PROJECT DESIGN DOCUMENT (CDM-PDD) AND THE PROPOSED NEW BASELINE AND MONITORING METHODOLOGIES (CDM-NM), VERSION 07. Procedures to calculate baseline emissions: CAR 20: Throughout the entire PDD version 1, equations have been included which use dots instead of commas: example $BE_y = EG_{PJ.y} * EF_{grid.CM.y}$. This is not in accordance with APPROVED CONSOLIDATED BASELINE AND MONITORING METHODOLOGY ACM0002 - CONSOLIDATED BASELINE METHODOLOGY FOR GRID-CONNECTED ELECTRICITY GENERATION FROM RENEWABLE SOURCES, VERSION 12. PP provided in equation 4 of the PDD, the equation used to calculate baseline emissions. This equation is in accordance with the equation of the relevant methodology: equation 6 of ACM0002v.12. However, a minor error was found: CAR 21: The descriptions of the parameters BE_y and $EF_{grid,CM,y}$ of equation 4 in Sections B.6.1 and B.6.3 of the PDD version 1 are not in accordance		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			with equation 6 of ACM0002: "CONSOLIDATED BASELINE METHODOLOGY FOR GRID CONNECTED ELECTRICITY GENERATION FROM RENEWABLE SOURCES" VERSION 12. CAR 22: In Section B.6.1, B.6.3 and B.7.1 (regarding parameter $EG_{facility,y}$) of the PDD version 1, PP states that for ex-ante Emission Reduction estimation, it was considered the assured energy of the SHPs less domestic consumption and other losses. However, according to the power purchase agreements provided by PP, the energy sold to the buyers is the same as the assured energy, without any deduction due to losses or internal consumption. PP also provides in Section B.6.1 the procedures and equations used to calculate the combined margin CO_2 emission factor (equation 6). According to the PDD, to calculate $EF_{grid,CM,y}$, data will be used that was produced and supplied by the Brazilian DNA. The Brazilian DNA used the latest version of the Tool to calculate the emission factor for an electricity system to produce this data. This information was crosschecked by the DOE at: http://www.mct.gov.br/index.php/content/view/72764.html (accessed by the DOE on 11.09.2010).		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			Procedures to calculate leakage: According to the PDD, "no leakage emissions are considered. The main emissions potentially giving rise to leakage in the context of electric sector projects are emissions arising due to activities such as power plant construction and upstream emissions from fossil fuel use (extraction. processing. and transport). These emissions sources are neglected." This statement is in line with the leakage calculation procedure of the relevant methodology: ACM0002v.12. Procedures to calculate emission reductions: PP provides equation 3 to use to calculate emission reductions. This equation is in line with equation 11 of the relevant methodology: ACM0002v.12. However, a minor error was found: CAR 23: The description of the parameter BE_y of equation 3 of the PDD version 1 is not in accordance with equation 11 of ACM0002: "CONSOLIDATED BASELINE METHODOLOGY FOR GRID CONNECTED ELECTRICITY GENERATION FROM RENEWABLE SOURCES"		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			VERSION 12.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
ii. Equations used in calculating emission redutions	EB 41	Ann 12	Please refer to item (3.p.i) above		
iii. Explanation and justification for all relevant methodological choices, including different scenarios or cases, options and default values	EB 41	Ann 12	Procedures to calculate project emissions: Yes, PP has explained that for hydro power project activity the only project emission to be considered is the emissions from water reservoir ($PE_{HP,y}$). PP has showed with calculations that power density is above 10 W/m^2 for all three SHPPs. Therefore, choice (b) was chosen: $PE_{HP,y} = 0$ (according to equation 4 of ACM0002v12). See item (3.r.) below for a discussion on how PD calculations were validated by the DOE. Procedures to calculate baseline emissions: CL 03: Please provide a reference for the following statements on section B.6.1 of the PDD (version 1): "The method chosen to calculate the emission factor of the project was the method of Operating Margin by Dispatch Data Analysis. This method was chosen because it is, according to the Brazilian DNA, the most accurate and most recommended if the data is available." "From July 2008, the operating margin emission factor	CL 03 CAR 24 CAR 25 CAR 26	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			started to be calculated for the National Interconnected System, considering the System as unique." CAR 24: In Section B.6.1 of the PDD, version 1, PP does not document the data vintage chosen for the operation margin emission factor. This is not in accordance with the TOOL TO CALCULATE THE EMISSION FACTOR FOR AN ELECTRIC SYSTEM, VERSION 2 (EB 50, ANN 14). CAR 25: In Section B.6.1 of the PDD version 1, the descriptions of parameters $EF_{grid,BM,y}$ and $EF_{grid,OM,y}$ in equation 6 are not in accordance with the descriptions provided in equation 14 of the TOOL TO CALCULATE THE EMISSION FACTOR FOR AN ELECTRICITY SYSTEM, VERSION 2. EB 50 – ANN14. CAR 26: In Section B.6.1 of the PDD version 1, PP does not explain the methodological choices described in Steps 1 to 7 of the latest version of the Tool to Calculate the Emission Factor. This is not in accordance with item (b) of the GUIDELINES FOR COMPLETING THE PROJECT DESIGN DOCUMENT (CDM-PDD) AND THE PROPOSED NEW BASELINE AND MONITORING METHODOLOGIES (CDM-NM), VERSION 07. Procedures to calculate leakage:		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			No leakage is to be considered. See item (3.p.1) above. Procedures to calculate emission reductions: PP provides in Section B.6.1 the correct procedures and equations to calculate ERs. No methodological choices need to be made.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
r. In CDM-PDD section B.6.2 are following provided?	EB 41	Ann 12			
i. A compilation of information on the data and parameters that are not monitored throughout the crediting period but that are determined only once and thus remains fixed throughout the crediting period AND that are available when validation is undertaken	EB 41	Ann 12	Yes, PP provides the following data and parameters: Cap_{BL}: Installed capacity of the hydro power plant before the implementation of the project activity. A_{BL}: Area of the reservoir measured in the surface of the water, before the implementation of the project activity.	OK	OK
ii. The actual value applied	EB 41	Ann 12	Values are defined the methodology ACM0002v12 and are for both parameters: zero.	OK	OK
iii. Explanation and justification for the choice of the source of data	EB 41	Ann 12	Source of data for both parameters: Project site	OK	OK
iv. Clear and transparent references or additional documentation in Annex 3	EB 41	Ann 12	Not applicable.	OK	OK
v. Where values have been measured, a description of the measurement methods and procedures (e.g. which standards have been used), indicated the responsible person/entity having undertaken the measurement, the date	EB 41	Ann 12	No values need to be measured.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
of measurement(s) and the measurement results					
s. In CDM-PDD section B.6.3 are following provided?	EB 41	Ann 12			
i. A transparent *ex ante* calculation of project emissions, baseline emissions (or, where applicable, direct calculation of emission reductions) and leakage emissions expected during the crediting period, applying all relevant equations provided in the approved methodology	EB 41	Ann 12	Project emission and Leakage are zero according to B.6.1. So, baseline emissions = emission reductions. Emission reduction calculations: CAR 27: In table 17, 19 and 20, Section B.6.3 of the PDD (version 1), the totals of each SHPPs are not the same as the sum of the yearly estimates. Also, the estimates have been done for 6 years. However, according to Section C.2.1 of the PDD, the first crediting period comprises 7 years.	CAR 27	OK
ii. Documentation how each equation is applied, in a manner that enables the reader to reproduce the calculation	EB 41	Ann 12	CAR 28: In Section B.6.3 of the PDD version 1, regarding the estimates for energy generation in table 17, PP states that projections were performed assuming the operation of the plants during 8760 hours per year (or 730 hours per month). However, in the spreadsheet that contain the calculation, for the first and last years of the first crediting period (2011 and 2017), PP assumes an operation of 720 hours per month.	CAR 28	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
iii. Additional background information and or data in Annex 3, including relevant electronic files (i.e. spreadsheets)	EB 41	Ann 12	In Section B.6.3 of the PDD (version 1), PP provided table 18 with the $EF_{grid,CM}$ for 2009 calculations. This data (according to Annex 3 of the PDD) comes from the Brazilian DNA. According to Section B.6.1, this is latest data made available by the DNA. The following link was provide to support this: http://www.mct.gov.br/index.php/content/view/74689.html. The DOE crosschecked this link on 07.09.2010). See CAR below: CAR 29: The emission factor data provided by PP in Table 18, Section B.6.3 of the PDD (version 1) is not the same as the data provided in tables 22 and 24 of Annex 3 of the PDD and with the information provided by the Brazilian DNA on: http://www.mct.gov.br/index.php/content/view/74689.html.	CAR 29	OK
t. In CDM-PDD section B.6.4 are the results of the *ex ante* estimation of emission reductions for all years of the crediting period, provided in a tabular format?	EB 41	Ann 12	CAR 30: In table 20, Section B.6.4 of the PDD (version 1), the table used (table 20) is not the same as the table provided by the GUIDELINES FOR COMPLETING THE PROJECT DESIGN DOCUMENT (CDM-PDD) AND THE PROPOSED NEW BASELINE AND MONITORING	CAR 30	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			METHODOLOGIES (CDM-NM), VERSION 07.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
u. In CDM-PDD section B.7.1 are following provided?	EB 41	Ann 12			
i. Specific information on how the data and parameters that need to be monitored would actually be collected during monitoring for the project activity	EB 41	Ann 12	Yes: "All data collected as part of monitoring will be electronically archived and be kept at least for 2 years after the end of the last crediting period. All measurements will be conducted with calibrated measurement equipment according to Brazilian industry standards." CAR 31: In Section B.7.1 of the PDD (version 1), the statement "the parameters to be monitored are just the project's installed capacity, the electricity generation of the project and the project activity's power plants reservoirs area" is not in accordance with the rest of Section B.7.1, nor with ACM0002: "CONSOLIDATED BASELINE METHODOLOGY FOR GRID CONNECTED ELECTRICITY GENERATION FROM RENEWABLE SOURCES" VERSION 12.	CAR 31	OK
ii. For each parameter the following below information, using the table provided:	EB 41	Ann 12			
a. The source(s) of data that will be actually used for the proposed project activity (e.g. which exact national statistics). Where several sources may be used, explain and	EB 41	Ann 12	Regarding data/parameter $EG_{facility,y}$: CAR 32: In Section B.7.1 of the PDD (version 1),	CAR 32 CAR 33 CAR 34 CL 04	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
justify which data sources should be preferred.			regarding the data/parameter $EG_{facility,y}$, the value of the data applied should not be expressed in MW but in MWh/year according to ACM0002: "CONSOLIDATED BASELINE METHODOLOGY FOR GRID CONNECTED ELECTRICITY GENERATION FROM RENEWABLE SOURCES" VERSION 12. CL 04: Regarding the measurement of data/parameter $EG_{facility,y}$, the methodology states that measurement results should be crosschecked with records for sold energy. However, PP states in Section B.7.1 of the PDD (version 1) that the data will be crosschecked with data from CCEE, ONS and, if necessary, the receipt of sales. Please explain more clearly how the crosscheck procedure will be carried out. Please also explain, regarding QA/QC procedures, which external documents will be used for counter-check. Regarding data/parameter $EF_{grid.CM.y}$: CAR 33: In Section B.7.1 of the PDD (version 1), regarding the data/parameter $EF_{grid.CM.y}$, PP states that the value of data applied for the calculation of emission reduction is 0.16 tCO2/MWh. However, based on the Brazilian DNA data, this value can be calculated more precisely, which increases the accuracy of data in concordance with paragraph 7		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			of the CLEAN DEVELOPMENT MECHANISM VALIDATION AND VERIFICATION MANUAL (Version 01.2). Regarding data/parameter A_{PJ}: CAR 34: In Section B.7.1 of the PDD (version 1), regarding the data/parameter A_{PJ}, PP states that: "The flooded areas are respectively 561,500 m^2, 368,700 m^2 and 444,100 m^2." However, this data is not the same as the data provided in Section A.4.3 of the PDD. Also, PP does not define monitoring frequency as yearly. This is not in accordance with "CONSOLIDATED BASELINE METHODOLOGY FOR GRID CONNECTED ELECTRICITY GENERATION FROM RENEWABLE SOURCES" VERSION 12.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
b. Where data or parameters are supposed to be measured, specify the measurement methods and procedures, including a specification which accepted industry standards or national or international standards will be applied, which measurement equipment is used, how the measurement is undertaken, which calibration procedures are applied, what is the accuracy of the measurement method, who is the responsible person/entity that should undertake the measurements and what is the measurement interval; (i) A description of the QA/QC procedures (if any) that should be applied; (ii) Where relevant: any further comment. Provide any relevant further background documentation in Annex 4.	EB 41	Ann 12	CAR 35: In Section B.7.1 of the PDD (version 1), the following information is missing: - Regarding data/parameters $EG_{facility,y}$: (1) a specification which accepted industry standards or national or international standards will be applied, (2) which calibration procedures are applied, (3) what is the accuracy of the measurement method and (4) who is the responsible person/entity that should undertake the measurements. - Regarding data/parameter A_{PJ}: (1) a specification which accepted industry standards or national or international standards will be applied, (2) which measurement equipment is used, (3) how the measurement is undertaken, (4) which calibration procedures are applied (if any), (5) what is the accuracy of the measurement method, and (6) who is the responsible person/entity that should undertake the measurements. This is not in accordance with GUIDELINES FOR COMPLETING THE PROJECT DESIGN DOCUMENT (CDM-PDD) AND THE PROPOSED NEW BASELINE AND MONITORING METHODOLOGIES (CDM-NM), VERSION 07.	CAR 35	Ok

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
v. In CDM-PDD section B.7.2 are following provided?	EB 41	Ann 12			
i. A detailed description of the monitoring plan	EB 41	Ann 12	Yes, see below:	OK	OK
ii. The operational and management structure that the project operator will implement in order to monitor emission reductions and any leakage effects generated by the project activity	EB 41	Ann 12	Yes, Section B.7.2 of the PDD describes for each of the three SHPPs how the structure will be implemented. The following processes are described: I Procedure for electricity generation data collection, II Data storage and III Crosscheck of data.	OK	OK
iii. The responsibilities for and institutional arrangements for data collection and archiving	EB 41	Ann 12	Responsibilities according to the PDD, which are common to all three SHPPs: - Operation and Maintenance Board: Plants operation and maintenance. - Measurement Area: collection data directly from the meters. - (Outsourced Agent Measurement: part of the Measurement Area allocation can eventually be outsourced by hiring a measurement agent.)	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			- Electric Power Commercialization Chamber (CCEE): implantation, operation and maintenance of SCDE. - Enerbio Consultoria: calculation of emission reductions.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
iv. Indication that the monitoring plan reflect good monitoring practice appropriate to the type of project activity	EB 41	Ann 12	CL 05: In Section B.7.2 of the PDD (version 1), PP states that the Electric Power Commercialization Chamber (CCEE) is responsible for implantation, operation and maintenance of SCDE. Please clarify what SCDE means and what is its purpose in the monitoring plan. PP describes in item B.7.2 the peculiarity of the location of the gross electricity meters of each of the three SHPs. However, there is only one substation (substation Guaporé) which measures the net electricity generated by all three SHPs together. This net electricity is fed into the grid. Therefore, the data produced by the meters (main and backup) located in Substation Guaporé is the to be measured parameters $EG_{facility,y,}$ which will be used for Emission Reduction calculation. This is consistent with the information provided in Section B.3, more specifically, the flow diagram of the project boundary. CL 06: Please explain which meters (of which SHPs) are located in SHPP Autódromo, as information provided in this Section of the PDD is not consistent. Section B.7.2 describes that meters calibration will follow what was described on the document elaborated by procedure: "ONS - Sub module 12.3". This was checked by the DOE at:	CL 05 CL 06 CL 07	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			http://www.ons.org.br/download/procedimentos/modulos/Modulo_12/Submodulo%2012.3_Rev_1.0.pdf (accessed on 11.09.2010). PP also describes in Section B.7.2 of the PDD version 1, the monitoring process of each SHP. CL 07: PP describes in Section B.7.2 of the PDD version 1, the procedure for data collection and storage of the electricity generated by each of the three SHPs. Please explain what will be the procedure and responsibilities for data collection and storage of the data produced by the meters located in the Substation Guaporé, as this is the net electricity that is fed into the grid ($EG_{facility,y}$).		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
v. Relevant further background information in Annex 4	EB 41	Ann 12	No further background is provided in Annex 4.	OK	OK
w. In CDM-PDD section B.8 are following provided?	EB 41	Ann 12			
i. Date of completion of the application of the methodology to the project activity study in DD/MM/YYYY	EB 41	Ann 12	05/08/2010	OK	OK
ii. Contact information of the person(s)/entity(ies) responsible for the application of the baseline and monitoring methodology to the project activity	EB 41	Ann 12	Enerbio Consultoria: Eduardo Baltar de Souza Leão Enerbio Consultoria & Associados Sociedade Simples Porto Alegre. Brazil Tel: 55 51 3392-1505 Email: eduardo@enerbio-rs.com.br www.enerbio-rs.com.br	OK	Ok
iii. Indication if the person/entity is also a project participant listed in Annex 1	EB 41	Ann 12	Enerbio Consultoria is also a project participant.	OK	OK
x. In CDM-PDD section C.1.1 are following provided?	EB 41	Ann 12			
i. The starting date of a CDM project activity, which is the earliest of the date(s) on which the implementation or construction or real action of a project activity begins/has begun (EB33, Para 76/CDM Glossary of terms/EB41, Para 67)	EB 41	Ann 12	01/11/2009 - Date of contracting company for construction of SHPs Boa Fé and Autódromo PDD states that: "At the time of PDD elaboration, construction contract for SHP São Paulo had not been sign yet."	CAR 36	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			CAR 36: In Section C.1.1 of the PDD version 1, PP states that "At the time of PDD elaboration, construction contract for SHP São Paulo had not been sign yet". However, during site visit held on the 20th of October, the DOE observed that the construction contract of São Paulo has been sign (a copy of the contract was provided to the DOE: contract SP055/2010, sign on 01.08.2010).		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
ii. A description of how this start date has been determined, and a description of the evidence available to support this start date	EB 41	Ann 12	Evidence: Boa Fé SHP Construction Contract CT BF 047/2009 (Sign on 01.11.2009). Autôdromo SHP Construction Contract CT AUT 046/2009 (Sign on 01.11.2009). São Paulo SHP Construction Contract SP055/2010 (Sign on 01.08.2010). Copies of the contracts were presented by the DOE during site visit held on the 20th of October 2010.	OK	OK
iii. If this starting date is earlier than the date of publication of the CDM-PDD for global stakeholder consultation by a DOE, description in Section B.5 contain a of how the benefits of the CDM were seriously considered prior to the starting date (EB41, Para 68).	EB 41	Ann 12	Yes, in Section B.5, PP provides a table 9, where it describes the following chronological timeline: 12/05/2009: E-mails sent to the UNFCCC Secretariat about the intention to make SHPs Boa Fé, São Paulo and Autódromo CDM project activities. The DOE was able to validate this through: - Copy of letters send to the UNFCCC on the 7th of may 2009 - Copy of e-mails send to UNFCCC on the	CL 08	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			12th of May 2009 - Copy of e-mails send by UNFCCC acknowledging the receipt of the e-mail (13th of May 2009) - Prior consideration database on http://cdm.unfccc.int/Projects/PriorCDM/notifications/index html (accessed by DOE on 01.10.2010). Date of registry: Boa Fé: 26th of May 2009, São Paulo and Autódromo: 25th of May 2009. 04/08/2009: Letter sent to the Executive Secretary of the Interministerial Commission Global Climate Change – Brazilian DNA The DOE was able to validate this through: - Copy of letters send to DNA by PP on the 27th of July 2009 See CAR Section (6.a.g) below regarding the date in which letter to DNA was sent by PP. PDD mentions 04.08.2009. However, letter was sent on the 27th of July 2009. - Acknowledging of receipt (A/R) from postal service, wherein it is evidenced that the DNA received the letters on the 30th of July 2009.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			- Copy of letters from DNA acknowledging the receipt of letters (04 August 2009). 01/11/2009: Date of contracting company for construction of SHPs Boa Fé and Autódromo. The DOE was able to validate this through: - Copy of Boa Fé SHP Construction Contract CT BF 047/2009 (Sign on 01.11.2009). - Copy of Autôdromo SHP Construction Contract CT AUT 046/2009 (Sign on 01.11.2009). - Observation: the contract for the construction of São Paulo SHP was sign later, on 01.08.2010. CL 08: Regarding PP's prior consideration of the CDM incentives, please explain why both UNFCCC and Brazilian DNA Secretariat were provided with 3 different communications regarding PP's intention to develop three different CDM projects (Boa Fé, São Paulo and Autódromo). Also, please explain why communication regarding SHP São Paulo to UNFCCC and MCT has different technical characteristics than the ones described in the PDD.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
y. In CDM-PDD section C.1.2 is the expected operational lifetime of the project activity in years and months provided?	EB 41	Ann 12	Yes, 30 years. CL 09: Please clarify how the operational lifetime, described in Section C.1.2 of the PDD (version 1), of the project activity was defined. Please provide third party evidence so the DOE can validate the project's operational lifetime.	CL 09	OK
z. In CDM-PDD section C.2 is it stated whether the project activity will use a renewable or a fixed crediting period and is C.2.1 or C.2.2 completed accordingly?	EB 41	Ann 12	Yes. PP chooses a renewable crediting period.	OK	OK
aa. In CDM-PDD section C.2.1 is it indicated that each crediting period shall be at most 7 years and may be renewed at most two times, provided that, for each renewal, a designated operational entity determines and informs the Executive Board that the original project baseline is still valid or has been updated taking account of new data where applicable?	EB 41	Ann 12	Yes, in the PDD section C.2.1, it is indicated that each crediting period shall be at most 7 years and may be renewed at most two times	OK	OK
bb. In CDM-PDD section C.2.1.1 are dates in the following format: (DD/MM/YYYY) provided?	EB 41	Ann 12	Yes: 01/06/2011 (Operation beginning expectation of the SHP Autódromo).	OK	OK
cc. In CDM-PDD section C.2.1.2 is the length of the first crediting period in years and months	EB 41	Ann 12	Yes, 7 years.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
provided?					
dd. In CDM-PDD section C.2.2 is the fixed crediting period at most ten (10) years provided?	EB 41	Ann 12	Not applicable	OK	OK
ee. In CDM-PDD section C.2.2.1are the dates provided in the following format: (DD/MM/YYYY)?	EB 41	Ann 12	Not applicable	OK	OK
ff. In CDM-PDD section C.2.2.2 is te length of the crediting period in years and months Provided?	EB 41	Ann 12	Not applicable	OK	OK
gg. In CDM-PDD section D.2 are the conclusions and all references to support documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the Host Party, if environmental impacts are considered significant by the project participants or the Host, provided?	EB 41	Ann 12	According to Brazilian Legislation, there are three environmental licenses needed. First the LP (Previous License), then the LI (Installation License), and last the LO (Operating License). The project activity has obtained the first two: Boa Fé LP: 114/2008-DL Boa Fé LI: 1376/2009-DL (valid until 01/12/2014) São Paulo LP: 115/2008-DL São Paulo LI: 391/2009-DL (valid until 07/04/2013) Autódromo LP: 116/2008-DL Autódromo LI: 1381/2009-DL (valid until 15/10/2014). The last one (LO) can be requested only after the construction of the SHPPs.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			According to the PDD, 29 programs and actions will be carried out to minimize the impact of the SHPPs construction and operation. These actions were needed after the Environmental Impact Analysis (EIA) identified the possible environmental impacts caused by SHPPs. The DOE received a copy of the EIA during site visit: Volume I – Characteristics of the enterprise (October 2006) Volume II.1 - Environmental diagnostic (October 2006) Volume II.2 - Environmental diagnostic (October 2006) Volume III – Impact analysis and mitigation actions (October 2006) Volume IV – Annexes.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
hh. In CDM-PDD section E.1 are the following provided?	EB 41	Ann 12			
i. The process by which comments by local stakeholders have been invited and compiled. An invitation for comments by local stakeholders shall be made in an open and transparent manner, in a way that facilities comments to be received from local stakeholders and allows for a reasonable time for comments to be submitted.	EB 41	Ann 12	Yes, PP has invited local stakeholders to comment on the project activity. Letters were send to: - City Hall of the four municipalities involved - Municipal Assembly of the four municipalities involved - Several Municipal Secretaries of the four municipalities involved - Rural works unions - State environmental Agency - Brazilian NGO Forum - State Department of environment - State federal attorney of public interest - Federal attorney of public interest Copy of letters and evidence of receipt (A/R) were given to the DOE during site visit. The PDD was put online at www.enerbio-rs.com.br. Local Stakeholders were also given the opportunity to comment through e-mail and through conventional mail. CL 10: Please provide a reference for the statement in the first paragraph of Section E.1 of	CL 10	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			the PDD version 1.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
ii. The project activity is described in a manner, which allows the local stakeholders to understand the project activity, taking into account confidentiality provisions of the CDM modalities and procedures.	EB 41	Ann 12	Yes, the PDD was put online in the Portuguese language and the letter described the project in a simple though complete manner.	OK	OK
iii. The local stakeholder process has been completed before submitting the proposed project activity to the DOE for validation.	EB 41	Ann 12	CAR 37: In section E.1 of the PDD version 1, PP states that letters were send to local stakeholders, inviting them to comment on the Project. According to evidence provided by PP, letters were sent on the 5th of August 2010 and received by local stakeholders between 09 and 16 of August 2010. However, the first version of the PDD that was presented to the DOE for validation was finalized on the 6th of August 2010. Local stakeholders had, therefore, no reasonable time for comments was allowed. This is not in accordance with GUIDELINES FOR COMPLETING THE PROJECT DESIGN DOCUMENT (CDM-PDD) AND THE PROPOSED NEW BASELINE AND MONITORING METHODOLOGIES (CDM-NM), VERSION 07.	CAR 37	OK
ii. In CDM-PDD section E.2 are following provided?	EB 41	Ann 12			
i. Identification of local stakeholders that have made comments	EB 41	Ann 12	No comments had been received by PP until the validation procedure.	OK	OK
ii. A summary of this comments.	EB	Ann	No comments had been received by PP until the	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
	41	12	validation procedure.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
jj. In CDM-PDD section E.3 is the explanation of how due account have been taken of comments received from local stakeholders provided?	EB 41	Ann 12	No comments had been received by PP until the validation procedure.	OK	OK
kk. In CDM-PDD Annex 1 are the following provided?	EB 41	Ann 12			
i. Contact information of project participants	EB 41	Ann 12	Yes, contact information is provided of the four - Boa Fé Energética S.A. - São Paulo Energética S.A - Autódromo Energética S.A. - Enerbio Consultoria Associados Sociedade Simples.	OK	OK
ii. For each organisation listed in section A.3 the following mandatory fields: Organization, Name of contact person, Street, City, Postfix/ZIP, Country, Telephone and Fax or e-mail	EB 41	Ann 12	Yes. All mandatory fields are listed.	OK	OK
ll. In CDM-PDD Annex 2 is information from Parties included in Annex I on sources of public funding for the project activity which shall provide an affirmation that such funding does not result in a diversion of official development assistance and is separate from and is not counted towards the financial obligations of those Parties provided?	EB 41	Ann 12	No public funding coming from Annex I countries was used in this project.	OK	OK
mm. In CDM-PDD Annex 3 is the background information used in the application of the baseline methodology provided?	EB 41	Ann 12	Yes, Annex 3 provides additional information regarding the Baseline calculations: CAR 38: The third paragraph of Annex 3 of the PDD	CAR 38	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			(version 1), mentions an older version of a methodological tool. This is not in accordance with the ACM0002: "CONSOLIDATED BASELINE METHODOLOGY FOR GRID CONNECTED ELECTRICITY GENERATION FROM RENEWABLE SOURCES" VERSION 12. PP provide further the baseline emission figures for 2009 as calculated by the Brazilian DNA and crosschecked by the DOE on 07.09.2010 on: http://www.mct.gov.br/index.php/content/view/74689.html		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
nn. In CDM-PDD Annex 4 is the background information used in the application of the monitoring methodology provided?	EB 41	Ann 12	No background information is provided.	OK	OK
4. Project description					
a. Does the PDD contain a clear description of the project activity that provides the reader with a clear understanding of the precise nature of the project activity and the technical aspects of its implementation?	VVM	58	Yes, in Section A.2 and in Section A.4.3, the PDD provides a clear description of the project activity and the technical aspects of its implementation: The installation of three new SHPPs in the South region of Brazil of 24 MW, 16MW and 24 MW, totaling 64 MW of installed capacity. In table 4 of the PDD, PP provides the technical characteristics of the Project. Please refer to items (3.d), (3.f) and (3.h) above for a discussion of this matter.	OK	OK
b. Is the description of the proposed CDM project activity as contained in the PDD:	VVM	59	Please refer to items (3.d), (3.f) and (3.h) above	OK	OK
i. sufficiently covering all relevant elements?	VVM	59	Please refer to items (3.d), (3.f) and (3.h) above	OK	OK
ii. acurate?	VVM	59	Please refer to items (3.d), (3.f) and (3.h) above	OK	OK
iii. providing the reader with a clear understanding	VVM	59	Please refer to items (3.d), (3.f) and (3.h) above	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
of the nature of the proposed CDM project activity?					
iv. Are there any changes/modifications compared to the webhosted PDD?	VVM	59	No. As was observed by the validation team through documentation analysis and during site visits held on 20.10.2010 (project participant's head office) and 21.10.2010 – 22.10.2010 (construction site), the project is being implemented in accordance with the descriptions provided in the webhosted PDD.	OK	OK
c. Is the proposed CDM project activity in existing facilities or or utilizing existing equipments?	VVM	60	No, project will comprise the installation of three new SHPPs in the South region of Brazil of 24 MW, 16MW and 24 MW, totalling 64 MW of installed capacity.	OK	OK
d. Is the CDM project activity one of the following types:	VVM	60			
i. Large scale?	VVM	60	Yes. The following large scale methodology is applicable: ACM0002v12	OK	OK
ii. Non-bundled small scale projects with emission reductions exceeding 15,000 tonnes per year?	VVM	60	The project is a large scale activity.	OK	OK
iii. Bundled small scale projects, each with emission reductions not exceeding 15,000 tonnes?	VVM	60	The project is a large scale activity.	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	The project is a large scale activity.	OK	OK
f. If yes to (d.iii) above, was the number of physical	VVM	60	The project is a large scale activity.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
site visits base on samping?					
g. If yes is the sampling size appropriately justified through statistical analysis?	VVM	60	The project is a large scale activity.	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	The project is a large scale activity.	OK	OK
i. For all other proposed CDM project activities not referred to in paragraphs 59 – 61, was a physical site inspection conducted?	VVM	62	Yes, Site visits were held on 20.10.2010 (project participant's head office) and 21.10.2010 – 22.10.2010 (construction site), the project is being implemented in accordance with the descriptions provided in the webhosted PDD.	OK	OK
j. If no, was it appropriately justified?	VVM	62	Not applicable	OK	OK
k. Does the proposed CDM project activity involve the alteration of an existing installation or process?	VVM	63	No, project will comprise the installation of three new small hydropower plants.	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	No, project will comprise the installation of three new small hydropower plants.	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 Board?	VVM	65	Yes, the selected methodology is: Approved consolidated baseline and monitoring methodology ACM0002: "Consolidated baseline methodology for grid-	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			connected electricity generation from renewable sources" (version 12). Please refer to item (3.k.i) above for a discussion regarding the use of the old version of the methodology.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
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		
i. Has the additionality of the project activity been demonstrated and assessed using the latest version of the "Tool for the demonstration and assessment of additionality" agreed by the Board, which is available on the UNFCCC website?	ACM	0002 v.12	Yes, the latest version of the Tool has been used: "Tool for the demonstration and assessment of additionality" (Version 05.2).	OK	OK
h. Had the selected methodology been correctly applied with respect to monitoring methodology?	VVM	67	Refer to (7.g), (7.h), (7.i), (7.j) and (7.k) below	OK	OK
b. Applicability of the selected methodology to the project activity					
a. Is the selected baseline and monitoring methodology, previously approved by the CDM Executive Board, applicable to the project activity? Is the used version valid?	VVM	68	Please refer to item (3.k.i) above for a discussion regarding the use of the old version of the methodology.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
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 v.12	Yes: 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) The DOE used to following documentation to validate this: - Boa Fé's Consolidated Basic Engineering Project BFE-PBC-R-001-R2 of October 2009, produced by Mek Engenharia e Consultoria Ltda (pages 8 – 11, technical sheet). - Autódromo's Consolidated Basic Engineering AUT-PBC-R-001-R2 of March 2010, produced by Mek Engenharia E Consultoria Ltda (pages 8 – 11, technical sheet). - Boa Fé SHP Construction Contract CT BF 047/2009 (Sign on 01.11.2009). - Autôdromo SHP Construction Contract CT AUT 046/2009 (Sign on 01.11.2009).	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			- São Paulo SHP Construction Contract SP055/2010 (Sign on 01.08.2010). - Boa Fé Installation License (LI): 1376/2009-DL (valid until 01/12/2014) - São Paulo Installation License (LI): 391/2009-DL (valid until 07/04/2013) - Autódromo Installation License (LI): 1381/2009-DL (valid until 15/10/2014). Please refer to CL on item (3.h.2), requesting São Paulo's Consolidated Basic Engineering Project.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
b. Has the DOE applied specific guidance provided by the CDM Executive Board in respect to the applicable approved methodology?	VVM	69	Yes, the following guidance were applied: Methguide04: Clarifications on how, through the methodology, it may be demonstrated that a project is additional and therefore not the baseline scenario. Methguide10: Thresholds and criteria for the eligibility of hydroelectric power plants with reservoirs as CDM project activities. Methguide 31: guidance related to use of additionality tool Methguide 35: Guidelines for the reporting and validation of plant load factors. Regguide03: Guidelines on the assessment of investment analysis. Regguide04: Guidelines on the demonstration and assessment of prior consideration of the CDM.	OK	OK
c. Is the methodology correctly quoted?	VVM	70			

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			See CAR on item (3.k.i) above.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
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 v.12	The project activity is the installation of three hydro power plants (run-of-river). See item (5.b.i) above for a discussion on how the DOE has validated the project's applicability.	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 $EG_{PJ,y}$): the existing plant started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity expansion or retrofit of the plant has been undertaken between the start of this minimum historical reference period and the implementation of the project activity.	ACM	0002 v.12	The project activity is the installation of three hydro power plants (run-of-river).	OK	OK
iii. In case of hydro power plants, one of the following conditions must apply: - The project activity is implemented in an existing reservoir, with no change in the volume of reservoir; or	ACM	0002 v.12	The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the Project Emissions section, is greater than 4 W/m2.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
- The project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the Project Emissions section, is greater than 4 W/m2; 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/m2.			Table 4 of the PDD provides technicall description of the project activity, including the installed capacity and the reservoir area. This information is needed to calculate the project's powedensity according to equation 1 of the PDD. See item (3.h.1) for a discussion on how the DOE has validated the SHPPs installed capacity and reservoir areas, and thus, also its power density.		
iv. The methodology is not applicable to the following conditions. Please confirm - Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity - Biomass fired power plants; - Hydro power plants that result in new reservoirs or in the increase in existing reservoirs where the power density of the power plant is less than 4 W/m2.	ACM	0002 v.12	CAR 39: In Section B.2 of the PDD (version 1), PP does not confirm the the project activity does not involve switching from fossil fuels to renewable energy sources, nor is a biomass fired power plants. This is not in accordance with ACM0002: "CONSOLIDATED BASELINE METHODOLOGY FOR GRID CONNECTED ELECTRICITY GENERATION FROM RENEWABLE SOURCES" VERSION 12.	CAR 39	OK
v. In the case of retrofits, replacements, or capacity additions, this methodology is only applicable if the most plausible baseline scenario, as a result of the identification of baseline scenario, is "the continuation of the	ACM	0002 v.12	The project activity is the installation of three hydro power plants (run-of-river).	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
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".					
e. Is the proeject activity expected to result in emissions other than those allowed by the methodology?	VVM	71	No, project emissions are zero. See items (3.p.i) and (3.p.iii) above regarding project emission.	OK	OK
f. Is the choice of the methodology justified?	VVM	71	Refer to (5.b.d) above	OK	OK
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: See below:	OK	OK
i. Are each of the applicability conditions of the "Tool to calculate the emission factor for an electricity system" met?	EB 50	Ann 40	Yes: "This tool may be applied to estimate the OM, BM and/or CM when calculating baseline emissions for a project activity that substitutes grid electricity, i.e. where a project activity supplies electricity to a grid or a project activity that results in savings of electricity that would have been provided by the grid (e.g. demand-side energy efficiency projects)."	OK	OK
ii. Are each of the applicability conditions of the "Tool for the demonstration and assessment of additionality" met?	EB 39	Ann 10	Yes: "The document [additionality tool] provides a	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			general framework for demonstrating and assessing additionality and is applicable to a wide range of project types.”		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
iii. Are each of the applicability conditions of the "Combined tool to identify the baseline scenario and demonstrate additionality" met?	EB 28	Ann 14	Not applicable as this tool is not used in the project.	OK	OK
iv. Are each of the applicability conditions of the "Tool to calculate project or leakage CO_2 emissions from fossil fuel combustion" met?	EB 41	Ann 11	Not applicable as this tool is not used in the project.	OK	OK
i. Is the DOE, based on local and sectoral knowledge, aware that comparable information is available from sources other than that used in the PDD?	VVM	71	Yes, see below:	OK	OK
j. If yes, was the PDD cross checked agains the other sources to confirm that the project activity meets the applicability conditions of the methodology? (provide the reference to these choices)	VVM	71	Please refer to item (5.b.a.i) above.	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 project is applicable. See item 5.b.d above.	OK	OK
l. If no, clarification of the methodoloy was requested, in accordance with the guidance provided by the CDM Executive Board?	VVM	72	Not applicable.	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	Not applicable.	OK	OK
n. If yes to (5.b.l) and (5.b.m) above, a request for registration was submited before the CDM Executive Board has approved the proposed deviation or revision?	VVM	74	Not applicable.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
c. Project boundary					
a. Does the PDD correctly describe the project boundary, including the physical delineation of the proposed CDM project activity included within the project boundary for the purpose of calculating project and baseline emissions for the proposed CDM project activity?	VVM	78	See items (3.m.i), (3.m.ii) and (3.m.iii) above for a discussion regarding project boundary.	OK	OK
i. Does the extent of the project boundary, as described in the PDD, includes the project power plant and all power plants connected physically to the electricity system that the CDM project power plant is connected to?	ACM	0002 v12	Yes, according to the PDD, section B.3, the extent of the project boundary includes the three SHPPs, the substation that is connected to these SHPPs and the Brazilian interconnected energy grid (SIN). So, the project power plant and all power plants connected physically to the electricity system that the CDM project power plant is connected to (the SIN) are included in the project boundary. See items (3.m.i), (3.m.ii) and (3.m.iii) above for a discussion regarding project boundary.	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 v 12	See item (3.m.i) for a discussion regarding the greenhouse gases and emission sources in or excluded from the project boundary.	OK	OK
b. Is the delineation in the PDD of the project boundary correct and include identification of all locations, processes and equipment including	VVM	79	Yes, the PP section B.3 contains a delineation of the project boundary in accordance with the	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
secondary equipment and associated processes such as logistics etc.?			relevant methodology. It includes identification of all locations, processes and equipment associated with the project activity.		
c. Does the delineation in the PDD of the project boundary meet the requirements of the selected baseline methodogy?	VVM	79	Please refer to items (5.c.a.i), (5.c.a.ii) above.	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. As was observed by the validation team through documentation analysis and during site visits held on 20.10.2010 (project participant's head office) and 21.10.2010 – 22.10.2010 (construction site), the project is being implemented in accordance with the descriptions provided in the webhosted PDD.	OK	OK
e. Have all sources and GHGs required by the methodology been included within the project boundary?	VVM	79	Please refer to item 3.m.i above.		
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 within the project boundary.	OK	OK
g. If yes, have the project participants justified that choice?	VVM	79	Not applicable.	OK	OK
h. If yes, is the justification provided reasonable? (provide reference to the supporting documented evidence provided by the project participants)	VVM	79	Not applicable	OK	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	VVM	81	Yes, the baseline scenario is defined according to the methodology ACM0002 version 12. However, some errors were found. Please refer to item 3.m.i above.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
that would occur in the absence of the proposed CDM project activity?			Please also refer to item (3.k.i) above for a discussion regarding the use of the old version of the methodology.		
b. Has any procedure contained in the methodology to identify the most reasonable baseline scenario, been correctly applied?	VVM	82	No procedure is to be applied for Greenfield plants according to the methodology.	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.12?	ACM	0002 v12	Please refer to item (3.m.i) above for a discussion regarding the identification of the baseline scenario.	OK	OK
ii. If the project activity is a capacity addition to existing grid-connected renewable power plant/unit, is the baseline scenario identified appropriately in accordance with the ACM0002 ver. 12? And is the point of time at which the generation facility would likely be replaced or retrofitted (DATE Baseline Retrofit) reasonably defined?	ACM	0002 v12	Not applicable. The project is a Greenfield plant.	OK	OK
iii. If the project activity is the retrofit or replacement of existing grid-connected renewable power plant/unit, is the baseline scenario identified following the step-wise procedure in accordance with the ACM0002 ver.12?	ACM	0002 v12	Not applicable. The project is a Greenfield plant.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
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 v12	Not applicable. The project is a Greenfield plant.	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 v12	Not applicable. The project is a Greenfield plant.	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 baseline scenario and demonstrate additionality" or a Benchmark Analysis as per step 2b of the "Tool for the demonstration and assessment of additionality")? (Step 3)	ACM	0002 v12	Not applicable. The project is a Greenfield plant.	OK	OK
c. Does the selected methodology require use of tools (such as the "Tool for the demonstration and assessment of additionality" and the "Combined tool to identify the baseline scenario and demonstrate additionality") to establish the baseline scenario?	VVM	82	No, for this type of project (Greenfield plant), the baseline scenario is provided by the methodology ACM0002v12.	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	VVM	82	Not applicable. The project is a Greenfield plant.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
tool.)					
e. Does the methodology require several alternative scenarios to be considered in the identification of the most reasonable baseline scenario?	VVM	83	Not applicable. The project is a Greenfield plant.	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	Not applicable. The project is a Greenfield plant.	OK	OK
g. Has any reasonable alternative scenario been excluded?	VVM	83	Not applicable. The project is a Greenfield plant.	OK	OK
h. Is the baseline scenario identified reasonably supported by:	VVM	84		OK	OK
i. Assumptions?	VVM	84	Project comprises the installation of three new SHPPs. For these types of project, the baseline is provided by the relevant methodology (ACM0002v12). Please refer to item (3.m.i) above for a discussion regarding the identification of the baseline scenario.	OK	OK
ii. Calculations?	VVM	84	Project comprises the installation of three new SHPPs. For these types of project, the baseline is provided by the relevant methodology (ACM0002v12). Please refer to item (3.m.i) above for a discussion regarding the identification of the baseline	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			scenario.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
iii. Rationales?	VVM	84	Project comprises the installation of three new SHPPs. For these types of project, the baseline is provided by the relevant methodology (ACM0002v12). Please refer to item (3.m.i) above for a discussion regarding the identification of the baseline scenario.	OK	OK
i. Are the documents and sources referred to in the PDD correctly quoted and interpreted?	VVM	84	No, please refer to item (3.m.i) above.	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? (idendify the sources)	VVM	84	Project comprises the installation of three new SHPPs. For these types of project, the baseline is provided by the relevant methodology (ACM0002v12). As check that activity is indeed the installation of three new SHPPs, the DOE used the following evidence: Please refer to item (5.b.a.i) above for a list of the evidence used by the DOE.	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	Project comprises the installation of three new SHPPs. For these types of project, the baseline is provided by the relevant methodology (ACM0002v12).	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			Please refer to item (3.m.i) above for a discussion regarding the identification of the baseline scenario.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
l. Have all relevatn policies and circumstances been identified and correctly considered in the PDD, in accordance with the guidance by the CDM Executive Board?	VVM	85	Project comprises the installation of three new SHPPs. For these types of project, the baseline is provided by the relevant methodology (ACM0002v12). Please refer to item (3.m.i) above for a discussion regarding the identification of the baseline scenario.	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	No, please refer to item (3.m.i) above.	OK	OK
e. Algorithms and/or formulae used to determine emission reductions					
a. Do the steps taken and equations applied to calculate project emissions, baseline emissions, leakage and emission reductions comply with the requirements of the selected baseline and monitoring?	VVM	89	Yes. However, some errors were found. Please refer to items (3.p.i), (3.p.iii), (3.r.i), (3.r.ii) and (3.r.iii) above.	OK	OK
b. Have the equations and parameters in the PDD been correctly applied with respect those in the select approved methodology?	VVM	90	Please refer to items (3.p.i), (3.p.iii), (3.r.i), (3.r.ii) and (3.r.iii) above.	OK	OK
i. Are the Project emissions appropriately calculated?.	ACM	0002 v.12	Please refer to items (3.p.i), (3.p.iii), (3.r.i), (3.r.ii) and (3.r.iii) above.	OK	OK
ii. Are the Baseline emissions appropriately calculated specifically for (a)greenfield plants or	ACM	0002 v.12	Please refer to items (3.p.i), (3.p.iii), (3.r.i), (3.r.ii) and (3.r.iii) above.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
(b) retrofit and replacements or (c) capacity additions?					
iii. Are the Leakage appropriately calculated?	ACM	0002 v.12	No leakage needs to be considered according to the relevant methodology (ACM0002v.12).	OK	OK
iv. Are the Emission reductions appropriately calculated?	ACM	0002 v.12	No leakage needs to be considered according to the relevant methodology (ACM0002v.12).	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 v.12	Yes, In Section B.6.4 of the PDD, project participants have prepared an estimate of likely emission reductions for the proposed crediting period. See also item 3.s above.	OK	OK
d. Does the methodology provide for selection between different options for equations or parameters?	VVM	90	Yes, see below:	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	Please refer to item (3.p.iii) above	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	OK	OK
g. Will data and parameters be monitored throughout the crediting period of the proposed CDM project activity?	VVM	91	Yes. However, some data and parameters will not be monitored. See below:	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
h. If no, and these data and parameters will remain fixed throughout the crediting period, are all data sources and assumptions:	VVM	91	Data and parameter not monitored: Cap_{BL}: Installed capacity of the hydro power plant before the implementation of the project activity. A_{BL}: Area of the reservoir measured in the surface of the water, before the implementation of the project activity.	OK	OK
i. Appropriate and correct?	VVM	91	Yes, the data and parameters not monitored as shown in the PDD are in accordance with the relevant methodology (ACM0002.v12).	OK	OK
ii. Applicable to the proposed CDM project activity?	VVM	91	Yes, the data and parameters not monitored as shown in the PDD are in accordance with the relevant methodology (ACM0002.v12).	OK	OK
iii. Resulting in a conservative estimate of the emission reductions?	VVM	91	The values of these data and parameters are, according to the methodology, zero.	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, the following data and parameter will be monitored according to Section B.7.1 of the PDD: - $EG_{facility,y}$: Quantity of net electricity generation	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			supplied by the project plant/unit to the grid in year y - $EF_{grid.CM.y}$: Combined margin CO_2 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". - Cap_{PJ}: Installed capacity of the hydro power plant after the implementation of the project activity. - A_{PJ}: Area of the reservoir measured in the surface of the water, after the implementation of the project activity, when the reservoir is full.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
j. If yes, are the estimates provided in the PDD for these data and parameters reasonable?	VVM	91	Please refer to item (3.t) above.	OK	OK
6. Additionality of a project activity					
a. Does the PDD describe how a proposed CDM projet activity is additional?	VVM	94	Yes, the PDD Section B.5 provides by mean of an investment analysis, in accordance with the Tool for the Demonstration and Assessment of Additionality, an explanation of how and why the project activity is additional.	OK	OK
b. Does the CDM-PDD state the latest version of the additionality tool being used?	ACM	0002 v.12	Yes: Tool for the Demonstration and Assessment of Additionality, Version 5.2.	OK	OK
c. Were the following steps of the tool to assess additionality used:	EB 39	Ann 10			
i. Identification of alternatives to the project activity?	EB 39	Ann 10	Yes, see item (6.d) below.	OK	OK
ii. Investment analysis to determine that the proposed project activity is either: 1) not the most economically or financially attractive, or 2) not economically or financially feasible?	EB 39	Ann 10	Yes, see item (6.l) below.	OK	OK
iii. Barriers analysis?	EB 39	Ann 10	No, only an investment analysis is chosen.	OK	OK
iv. Common practice analysis?	EB 39	Ann 10	Yes, see item (3.y) below	OK	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	Alternatives are defined as following:	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			1. The continuity of the present scenario, with electricity being generated according to the current generation composition of the National Interconnected System; 2. The construction of a new mineral coal thermoelectric power plant, with similar installed capacity to the SHPs Boa Fé, São Paulo and Autódromo; 3. The project activity undertaken without being registered as a CDM Project Activity. See items (6.e), (6.f) and (6.g) below.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
ii. Sub-step 1b: Consistency with mandatory laws and regulations	EB 39	Ann 10	Yes, all alternatives are consistent with mandatory laws and regulations. See items (6.h), (6.i), (6.j) below.	OK	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, this alternative has been included.	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	CL 11: Please clarify why PP, In Section B.5 of the PDD version 1, has chosen to include an alternative scenario of the construction of a new mineral coal thermoelectric power plant. Moreover, please explain why other energy generation sources were not included.	CL 11	OK
iii. (c) If applicable, continuation of the current situation (no project activity or other alternatives undertaken).	EB 39	Ann 10	Yes, this alternative has been included.	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	Yes, PP has included as alternative scenario the construction of a new mineral coal thermoelectric power plant. See, however, the CL in item (6.e.ii) above.		
g. Has the outcome of Step 1a: Identified realistic and credible alternative scenario(s) to the project activity done correctly? Please briefly mention the outcome.	EB 39	Ann 10	Yes, there are three scenarios: 1. The continuity of the present scenario, with	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			electricity being generated according to the current generation composition of the National Interconnected System; 2. The construction of a new mineral coal thermoelectric power plant, with similar installed capacity to the SHPs Boa Fé, São Paulo and Autódromo; 3. The project activity undertaken without being registered as a CDM Project Activity.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
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	According to the PDD, all three identified scenarios are in compliance with the mandatory applicable legal and regulatory requirements due to the following considerations: The DOE was able to validate PP's statement that all three alternatives are in compliance with all mandatory applicable legal and regulatory requirements, due to the fact that in Brazil all these identified alternatives can be found throughout Brazil, as can be seen on the website of Brazilian national energy agency (ANEEL): http://www.aneel.gov.br/15.htm (accessed by the DOE on 11.09.2010).	OK	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	Not applicable. Alternative do comply with all mandatory applicable legal and regulatory requirements.	OK	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	EB 39	Ann 10	Yes, all three identified alternatives are are in compliance with mandatory legislation and regulations.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
enforcement in the region or country and EB decisions on national and/or sectoral policies and regulations done correctly? Please state the outcome.					
k. Has PP selected Step 2 (Investment analysis) or Step 3 (Barrier analysis) or both Steps 2 and 3?	EB 39	Ann 10	PP has selected Step 2 (Investment analysis). See below:	OK	OK
l. In step 2, have all the sub-steps as below been followed?	EB 39	Ann 10	Refer to section 6 item c – Investment analysis.	OK	OK
i. Sub-step 2a: Determine appropriate analysis method;	EB 39	Ann 10	Refer to section 6 item c – Investment analysis.	OK	OK
ii. Sub-step 2b: Option I. Apply simple cost analysis;	EB 39	Ann 10	Refer to section 6 item c – Investment analysis.	OK	OK
iii. Sub-step 2b: Option II. Apply investment comparison analysis;	EB 39	Ann 10	Refer to section 6 item c – Investment analysis.	OK	OK
iv. Sub-step 2b: Option III. Apply benchmark analysis;	EB 39	Ann 10	Refer to section 6 item c – Investment analysis.	OK	OK
v. Sub-step 2c: Calculation and comparison of financial indicators (only applicable to Options II and III);	EB 39	Ann 10	Refer to section 6 item c – Investment analysis.	OK	OK
vi. Sub-step 2d: Sensitivity analysis (only applicable to Options II and III).	EB 39	Ann 10	Refer to section 6 item c – Investment analysis.	OK	OK
m. In sub-step 2a has the determination of appropraite method of analysis done as per the guidance as below?	EB 39	Ann 10	Refer to section 6 item c – Investment analysis.	OK	OK
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	Refer to section 6 item c – Investment analysis.	OK	OK
ii. Otherwise, use the investment comparison	EB	Ann	Refer to section 6 item c – Investment analysis.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
analysis (Option II) or the benchmark analysis (Option III). Specify option used with justification.	39	10			
n. Has the below guideline followed for sub-step 2b Option I. Apply simple cost analysis? Document the costs associated with the CDM project activity and the alternatives identified in Step1 and demonstrate that there is at least one alternative which is less costly than the project activity.	EB 39	Ann 10	Refer to section 6 item c – Investment analysis.	OK	OK
o. Has the below guideline followed for sub-step 2b Option II. Apply investment comparison analysis? Identify the financial indicator, such as IRR, NPV, cost benefit ratio, or unit cost of service most suitable for the project type and decision-making context. Please specify	EB 39	Ann 10	Refer to section 6 item c – Investment analysis.	OK	OK
p. Has the below guideline followed for Sub-step 2b: Option III. Apply benchmark analysis?	EB 39	Ann 10	Refer to section 6 item c – Investment analysis.	OK	OK
i. Identify the financial/economic indicator, such as IRR, most suitable for the project type and decision context.	EB 39	Ann 10	Refer to section 6 item c – Investment analysis.	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	EB 39	Ann 10	Refer to section 6 item c – Investment analysis.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
specific financial/economic situation of the company undertaking the project activity can be considered.					
iii. Discount rates and benchmarks shall be derived from: (a) Government bond rates, increased by a suitable risk premium to reflect private investment and/or the project type, as substantiated by an independent (financial) expert or documented by official publicly available financial data; (b) Estimates of the cost of financing and required return on capital (e.g. commercial lending rates and guarantees required for the country and the type of project activity concerned), based on bankers views and private equity investors/funds' required return on comparable projects; (c) A company internal benchmark (weighted average capital cost of the company), only in the particular case referred to above in 2. The project developers shall demonstrate that this benchmark has been consistently used in the past, i.e. that project activities under similar conditions 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	EB 39	Ann 10	Refer to section 6 item c – Investment analysis.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
justified. Please specify benchmark and justify.					
q. Has the below guideline followed for Sub-step 2c: Calculation and comparison of financial indicators (only applicable to Options II and III)?	EB 39	Ann 10	Refer to section 6 item c – Investment analysis.	OK	OK
i. Calculate the suitable financial indicator for the proposed CDM project activity and, in the case of Option II above, for the other alternatives. Include all relevant costs (including, for example, the investment cost, the operations and maintenance costs), and revenues (excluding CER revenues, but possibly including inter alia subsidies/fiscal incentives, ODA, etc, where applicable), and, as appropriate, non-market cost and benefits in the case of public investors if this is standard practice for the selection of public investments in the host country.	EB 39	Ann 10	Refer to section 6 item c – Investment analysis.	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	Refer to section 6 item c – Investment analysis.	OK	OK
iii. Justify and/or cite assumptions.	EB 39	Ann 10	Refer to section 6 item c – Investment analysis.	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	Refer to section 6 item c – Investment analysis.	OK	OK
v. Assumptions and input data for the investment analysis shall not differ across the project	EB 39	Ann 10	Refer to section 6 item c – Investment analysis.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
activity and its alternatives, unless differences 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	Refer to section 6 item c – Investment analysis.	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	Refer to section 6 item c – Investment analysis.	OK	OK
s. Has the outcome of Step 2 clearly mentioned with justification?	EB 39	Ann 10	Refer to section 6 item c – Investment analysis.	OK	OK
t. In step 3: Barrier analysis have all the sub-steps as below been followed?	EB 39	Ann 10	PP has chosen to apply only an investment analyses. No barrier analysis has been presented in the PDD.	OK	OK
i. Sub-step 3a: Identify barriers that would prevent the implementation of the proposed CDM project activity;	EB 39	Ann 10	Please refer to item (6.t) above.	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	Please refer to item (6.t) above.	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	Please refer to item (6.t) above.	OK	OK
i. (a) Investment barriers: For alternatives undertaken and operated by private entities: Similar activities have only been implemented	EB 39	Ann 10	Please refer to item (6.t) above.	OK	OK

	CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
	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	Please refer to item (6.t) above.	OK	OK
iii.	(c) Barriers due to prevailing practice: The project activity is the “first of its kind”.	EB 39	Ann 10	Please refer to item (6.t) above.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
iv. (d) Other barriers, preferably specified in the underlying methodology as examples.	EB 39	Ann 10	Please refer to item (6.t) above.	OK	OK
v. Has the outcome from Step 3a clearly mentioned in PDD?	EB 39	Ann 10	Please refer to item (6.t) above.	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	Please refer to item (6.t) above.	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	Please refer to item (6.t) above.	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	Please refer to item (6.t) above.	OK	OK
iii. The type of evidence to be provided should include at least one of the following: (a) Relevant legislation, regulatory information or industry norms; (b) Relevant (sectoral) studies	EB 39	Ann 10	Please refer to item (6.t) above.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
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.					
x. Has the outcome from Step 3 clearly mentioned in PDD?	EB 39	Ann 10	Please refer to item (6.t) above.	OK	OK
y. In step 4: Common practise analysis have all the sub-steps as below followed?	EB 39	Ann 10	Yes, see for a discussion below.	OK	OK
i. Sub-step 4a: Analyze other activities similar to the proposed project activity;	EB 39	Ann 10	Yes, see for a discussion below.	OK	OK
ii. Sub-step 4b: Discuss any similar Options that are occurring.	EB 39	Ann 10	Yes, see for a discussion below.	OK	OK
z. Has the below guideline followed for Sub-step 4a: Analyze other activities similar to the proposed project activity? Provide an analysis of any other activities that are operational and that are similar to the proposed project activity. Other CDM project activities are not to be included in this analysis. Provide documented evidence and,	EB 39	Ann 10	PP presents table 16 – Number of electricity generation's entrepreneurships in operation in RS State. (reference: http://www.aneel.gov.br/area.cfm?idArea=15&idPerfil=2 Crossechecked by the DOE on 03.09.2010)	CL 12 CL 13 CAR 40	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
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.			This table shows all the energy generation facilities in the Rio Grande do Sul State of Brazil. On the basis of this analysis, which indicates that 27% of the Rio Grande do Sul electricity generating activities are SHPs, it can be concluded that similar activities are already occuring in the region. See, however, CL below: CL 12: Please clarify why the analysis of similar activities to the proposed activity, in Section B.5 of the PDD version 1, only discusses energy generation facilities in the Rio Gande do Sul State of Brazil and not of the entire country. CL 13: Clarify how the operational activities identified in the region were defined as similar and excluded other types of project activity . CAR 40: In sub-step 4a of Section B.5 of the PDD, version 1, the analyzis of other activities similar to the proposed project activity includes other CDM project activities. This is not in accordance with METHODOLOGICAL TOOL - z"TOOL FOR THE DEMONSTRATION AND ASSESSMENT OF ADDITIONALITY" (VERSION 05.2).		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
aa. Has the below guideline followed for Sub-step 4b: Discuss any similar Options that are occurring? If similar activities are identified, then it is necessary to demonstrate why the existence of these activities does not contradict the claim that the proposed project activity is financially/economically unattractive or subject to barriers. This can be done by comparing the proposed project activity to the other similar activities, and pointing out and explaining essential distinctions between them that explain why the similar activities enjoyed certain benefits that rendered it financially/economically attractive (e.g., subsidies or other financial flows) and which the proposed project activity cannot use or did not face the barriers to which the proposed project activity is subject. In case similar projects are not accessible, the PDD should include justification about non-accessibility of data/information.	EB 39	Ann 10	Yes, sub-step 4b of the PDD discusses similar options that are occurring. PP states that out of the 33 SHPPs present in the State of Rio Grande do Sul, 18 have an installed capacity below 6.8 MW, and that therefore, these 18 SHPPs should not be included in the discussion of sub-step 4b. CL 14: Please clarify why, in sub-step 4b of the PDD (version 1), the threshold of 6.8 MW was chosen to exclude similar activities from the discussion in this sub-step. Moreover, please explain why facilities with an installed capacity below 6.8 MW should be considered as being essentially distinctive than the project activity. PP states that the project activity has essential distinctions when compared to similar activities due to the fact that serious change in circumstances under which the proposed CDM project activity will be implemented when compared to circumstances under which similar projects were carried out. The CDM project activity does not have the same incentive as other similar operational activities did, namely, the PROINFA incentive. "PROINFA is a governmental program that seeks to motivate through the financial point of view, the	CL 14 CL 15	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			development of entrepreneurships that make use of renewable technologies, due to the difficulties in financing, in offering guarantees to the finance suppliers and in the necessity of investments considered reasonable to small organizations."(Federal Government by Law n° 10.438, in April 26th 2002). CL 15: Please provide an evidence to the statement in option 4.b of the PDD version 1: "This company [Rincão do Ivaí Energias S/A] (…) is constituted by eight individual investors and three companies".		
bb. Has the outcome from Step 4 clearly mentioned in PDD?	EB 39	Ann 10	CAR 41: The outcome of Step 4 of Section B.5 of the PDD version 1 has not been clearly mentioned. This is not in accordance with METHODOLOGICAL TOOL - "TOOL FOR THE DEMONSTRATION AND ASSESSMENT OF ADDITIONALITY" (VERSION 05.2).	CAR 41	OK
cc. Has it been proved that the porject is additional?	EB 39	Ann 10		OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
a. Prior consideration of the clean development mechanism					
a. Is the project ativity start date prior to the date of publication of the PDD for stakeholder comments?	VVM	98	Yes, according to Section C.1.1 of the PDD, the starting date is 01/11/2009 - Date of contracting company for construction of SHPs Boa Fé and Autódromo. Please refer to item (3.w.i), (3.w.ii) and (3.w.iii) for a discussion on the prior consideration of the project.	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	Yes, in Section B.5, PP provides a table 9, where it describes the following chronological timeline: 12/05/2009: E-mails sent to the UNFCCC Secretariat about the intention to make SHPs Boa Fé, São Paulo and Autódromo CDM project activities. 04/08/2009: Letter sent to the Executive Secretary of the Interministerial Commission Global Climate Change – Brazilian DNA 01/11/2009: Date of contracting company for construction of SHPs Boa Fé and Autódromo. Please refer to item (3.w.i), (3.w.ii) and (3.w.iii) for a discussion on how the DOE was able to validate the Prior consideration of the clean development mechanism.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
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	01/11/2009 - Date of contracting company for construction of SHPs Boa Fé and Autódromo	OK	OK
d. Does the project activity require construction, retrofit or other modifications?	VVM	99	It requires construction as it is a green field facility.	OK	OK
e. If yes, is it ensured that the date of commissioning cannot be considered as the project activity start date?	VVM	99	Yes, 01/11/2009 - Date of contracting company for construction of SHPs Boa Fé and Autódromo was defined as starting date.	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	It comprises a new project activity.	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 date, had PPs informed the host Party DNA and the UNFCCC secretariat in writing of the commencement of the project activity and of their intention to seek CDM status? (Provide reference to such confirmation from host Party DNA and UNFCCC secretariat).	VVM	101	Yes: 12/05/2009: E-mails sent to the UNFCCC Secretariat about the intention to make SHPs Boa Fé, São Paulo and Autódromo CDM project activities. 27/07/2009: Letter sent to the Executive Secretary of the Interministerial Commission Global Climate Change – Brazilian DNA	CAR 42	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			CAR 42: In section B.5 of the PDD version 1, the date mentioned in which the letters were send to the Brazilian DNA (04.09.2009) is not correct. Copy of the letter show that it was sent on 27.07.2009). Please refer to item (3.w.i), (3.w.ii) and (3.w.iii) for the request of the DOE for evidence regarding the communication exchange between PP, DNA and UNFCCC mentioned above.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
h. For an existing project activity, for which the start date is prior to the date of publication of the PDD for global stakeholder consultation, are the following evidences provided:	VVM	102	Not applicable, It comprises a new project activity.	OK	OK
ii. evidence that must indicate that awareness of the CDM prior to the project activity start date, and that the benefits of the CDM were a decisive factor in the decision to proceed with the project, including, inter alia:	VVM	102	Not applicable, It comprises a new project activity.	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	102	Not applicable, It comprises a new project activity.	OK	OK
iii. reliable evidence from project participants that must indicate that continuing and real actions were taken to secure CDM status for the project in parallel with its implementation, including, inter alia:	VVM	102	Not applicable, It comprises a new project activity.	OK	OK
a. contract with consultants for CDM/PDD/methodology services?	VVM	102	Not applicable, It comprises a new project activity.	OK	OK
b. Emission Reduction Purchase Agreements or other documentation related to the sale of the potential CERs (including correspondence with multilateral financial institutions or carbon funds)?	VVM	102	Not applicable, It comprises a new project activity.	OK	OK
c. evidence of agreements or negotiations with a DOE for validation services?	VVM	102	Not applicable, It comprises a new project activity.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
d. submission of a new methodology to the CDM Executive Board?	VVM	102	Not applicable, It comprises a new project activity.	OK	OK
e. publication in newspaper?	VVM	102	Not applicable, It comprises a new project activity.	OK	OK
f. interviews with DNA?	VVM	102	Not applicable, It comprises a new project activity.	OK	OK
g. earlier correspondence on the project with the DNA or the UNFCCC secretariat?	VVM	102	Not applicable, It comprises a new project activity.	OK	OK
h. Has the chronology of events including time lines been appropriately captured and explained/detailed in the PDD?	VVM	102	Yes, in table 9 of the PDD, PP presents the chronology of events including time lines. See, however, item (3.w.iii) for the request of the DOE for evidence regarding this timeline presented in table 9.	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, the relevant methodology (ACM0002.v12) prescribe the baseline scenario and hence no further analysis is required	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	Not applicable. The relevant methodology (ACM0002.v12) prescribe the baseline scenario and hence no further analysis is required	OK	OK
c. Does the list of alternatives given in the PDD esure that:	VVM	106	Not applicable. The relevant methodology (ACM0002.v12) prescribe the baseline scenario and hence no further analysis is required	OK	OK
i. the list of alternatives includes as one of the options that the project activity is undertaken without being registered as a proposed CDM project activity?	VVM	106	Not applicable. The relevant methodology (ACM0002.v12) prescribe the baseline scenario and hence no further analysis is required	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
ii. the list contains all plausible alternatives that the DOE, on the basis of its local and sectoral knowledge, considers to be viable means of supplying the outputs or services that are to be supplied by the proposed CDM project activity?	VVM	106	Not applicable. The relevant methodology (ACM0002.v12) prescribe the baseline scenario and hence no further analysis is required	OK	OK
iii. the alternatives comply with all applicable and enforced legislation?	VVM	106	Not applicable. The relevant methodology (ACM0002.v12) prescribe the baseline scenario and hence no further analysis is required	OK	OK
c. Investment analysis					
a. Has investment analysis been used to demonstrate the additionality of the proposed CDM project activity?	VVM	108	Yes.	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.	NA	NA
ii. economically or financially feasible, without the revenue from the sale of certified emission reductions (CERs)?	VVM	108	Yes.	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 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	VVM	109	Not applicable.	NA	NA

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
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.	NA	NA
iii. The financial returns of the proposed CDM project activity would be insufficient to justify the required investment.	VVM	109	Yes.	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	**CAR BQA 1** – Provide evidences to support the period of expected operation used in the investment analysis.	CAR BQA 1	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 assessment?	EB 51	Ann 58	Yes.	OK	OK
g. Do the project participants justify the appropriateness of the period of assessment in the context of the underlying project activity, without reference to the proposed CDM crediting period?	EB 51	Ann 58	Refer to CAR BQA 1.	CAR BQA 1	OK
h. Does the cash flow in the final year include a fair value of the project activity assets at the end of the assessment period?	EB 51	Ann 58	Refer to CAR BQA 1.	CAR BQA 1	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
i. Has the fair value been calculated in accordance with local accounting regulations where available, or international best practice?	EB 51	Ann 58	Refer to CAR BQA 1.	CAR BQA 1	OK
j. Does the fair value calculations include both the book value of the asset and the reasonable expectation of the potential profit or loss on the realization of the assets?	EB 51	Ann 58	Refer to CAR BQA 1.	CAR BQA 1	OK
k. Was depreciation, and other non-cash items related to the project activity, which have been deducted in estimating gross profits on which tax is calculated, added back to net profits for the purpose of calculating the financial indicator (e.g. IRR, NPV)?	EB 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 analysis valid and applicable at the time of the investment decision taken by the project participant?	EB 51	Ann 58	**CL BQA 1** – Clarify with evidences the moment of investment decision, in order to guarantee that the input values are the correct ones at this moment in the project chronology.	CL BQA 1	OK
n. Is the timing of the investment decision consistent and appropriate with the input values?	EB 51	Ann 58	Refer to CL BQA 1.	CL BQA 1	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 recomence the project in the case of	EB 51	Ann 58	Not applicable.	NA	NA

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
project activities for which implementation ceases after the commencement and where implementation is recommenced due to consideration of the CDM?					
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	**CAR BQA 2** – It was not possible to reproduce the results of the sensitivity analylsis.	CAR BQA 2	
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.	NA	NA
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.	NA	NA
u. Was the cost of financing expenditures (i.e. loan repayments and interest) included in the calculation of project IRR?	EB 51	Ann 58	Yes.	OK	OK
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	Yes.	OK	OK
w. Has the portion of the investment costs which is financed by debt been considered a cash outflow in the calcualtion of equity IRR? (this is not allowed)	EB 51	Ann 58	No.	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,	EB	Ann	**CAR BQA 3** – The actual interest payable was	CAR	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
is actual interest payable taken into account in the calculation of income tax?	51	58	not taken into account in the calculation of income tax.	BQA 3	
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	Refer to CAR BQA 3.	CAR BQA 3	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.	Ok	OK
bb. Has local commercial lending rates or weighted average costs of capital (WACC) selected as appropriate benchmarks for a project IRR?	EB 51	Ann 58	Not applicable.	NA	NA
cc. Has required/expected returns on equity selected as appropriate benchmark for an equity IRR?	EB 51	Ann 58	Yes.	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	Not applicable.	NA	NA
ff. Have internal company benchmarks/expected returns (including those used as the expected return on equity in the calculation of a weighted	EB 51	Ann 58	Not applicable.	NA	NA

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
average cost of capital - WACC) been applied in cases where there is only one possible project developer?					
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.	NA	NA
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.	NA	NA
ii. Has a thorough assessment of the financial 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 conduted?	EB 51	Ann 58	Not applicable.	NA	NA
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	Yes.	OK	OK
kk. Has an investment comparison analysis and not a benchmark analysis used when the proposed baseline scenario leaves the project participant	EB 51	Ann 58	Not applicable.	NA	NA

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
no other choice than to make an investment to supply the same (or substitute) products or services?					
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
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	Not applicable.	NA	NA
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	EB 51	Ann 58	Not applicable.	NA	NA

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
context of the project activity?					
qq. Was the plant load factor defined ex-ante in the CDM-PDD according to one of the following options:	EB 48	Ann 11	See below.	OK	OK
i. The plant load factor provided to banks and/or equity financiers while applying the project activity for project financing, or to the government while applying the project activity for implementation approval?	EB 48	Ann 11	**CAR BQA 4** – Explain how was determinated the plant load factor.	CAR BQA 4	OK
ii. The plant load factor determined by a third party contracted by the project participants (e.g. an engineering company)?	EB 48	Ann 11	Refer to CAR BQA 4.	CAR BQA 4	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.	OK	OK
ss. Were the parameters cross-checked agains third-party or publicly available sources, such as invoices or price indices?	VVM	111	**CAR BQA 5** – Provide a spreadsheet containing all the assumptions and input values used in the investment analysis with its respective description and provide the evidences to justify the respective evidence, the description of the evidence and evidence's date. 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. (Total investment, energy price, plant load factor, O&M costs and	CAR BQA 5 and CAR BQA 6	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			among others) **CAR BQA 6** – Present all the evidences in a manner that can be clearly validated by the DOE. When answering the protocol refer to the evidences by their numbers and provided all the evidences with the respective number in order to facilitate, organize and present their in a clearly way.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
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 5.	CAR BQA 5	OK
uu. Was the correctnes of computations carried out and documented by the project participants assessed?	VVM	111	Yes.	OK	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	**CAR BQA 7** – The PP should explain how it has determined that the parameters used in the sensitivity analysis are the most critical and that the ranges of variations are appropriate.	CAR BQA 7	OK
ww. Is the type of benchmark applied is suitable for the type of financial indicator presented?	VVM	112	Yes.	OK	OK
xx. Do any risk premiums applied determining the benchmark reflect the risks associated with the project type or activity?	VVM	112	Yes.	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.	NA	NA
ii. determining whether the same benchmark has been applied?	VVM	112	Not applicable.	NA	NA
iii. determining if there are verifiable circumstances that have led to a change in the benchmark?	VVM	112	Not applicable.	NA	NA

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
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 2** – 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 2	OK
xx. If yes:	VVM	113			
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 2.	CL BQA 2	OK
ii. Are the values used in the PDD and associated annexes fully consistent with the FSR?	VVM	113	Refer to CL BQA 2.	CL BQA 2	OK
iii. If not, was the appropriateness of the values validated?	VVM	113	Refer to CL BQA 2.	CL BQA 2	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 2.	CL BQA 2	OK
d. Barrier analysis					
a. Has barrier analysis been used to demonstrated the additionality of the proposed CDM project activity?	VVM	115	No, PP has chosen only to use an investment analysis to demonstrate the additionality of the proposed CDM project activity.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
b. If yes, does the PDD demonstrate that the proposed CDM project activity faces barriers that:	VVM	115	No, PP has chosen only to use an investment analysis to demonstrate the additionality of the proposed CDM project activity.	OK	OK
i. prevent the implementation of this type of proposed CMD project activity?	VVM	115	No, PP has chosen only to use an investment analysis to demonstrate the additionality of the proposed CDM project activity.	OK	OK
ii. do not prevent the implementation of at least one of the alternatives?	VVM	115	No, PP has chosen only to use an investment analysis to demonstrate the additionality of the proposed CDM project activity.	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	No, PP has chosen only to use an investment analysis to demonstrate the additionality of the proposed CDM project activity.	OK	OK
d. Were the barriers determined as real by:	VVM	117			
i. asssing 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	No, PP has chosen only to use an investment analysis to demonstrate the additionality of the proposed CDM project activity.	OK	OK
ii. ensuring that existence of barriers is substantiated by independent sources of data such as relevant national legislation,	VVM	117	No, PP has chosen only to use an investment analysis to demonstrate the additionality of the proposed CDM project activity.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
surveys of local conditions and national or international statistics?					
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	No, PP has chosen only to use an investment analysis to demonstrate the additionality of the proposed CDM project activity.	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 *at least one of* the possible alternatives, in particular the identified baseline scenario?	VVM	117	No, PP has chosen only to use an investment analysis to demonstrate the additionality of the proposed CDM project activity.	OK	OK
e. Common practice analysis					
a. Is this a proposed large-scale, or first-of-its kind small-scale project activity?	VVM	119	Large scale project	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, a common practice analysis was carried out as a credibility check.	OK	OK
c. Was it assessed whether the geograpphical 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 technologis the relevatn region for	VVM	120	See CL in item (6.z) above regarding the geographical scope (e.g. defined region) of the common practice analysis.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
assessment will be local and for others it may be transnational/global.					
d. Was a region other than the entire host country chosen?	VVM	120	Yes.	OK	OK
e. If yes, was the explanation why this region is more appropriate assessed?	VVM	120	No, see CL in item (6.z) above regarding the geographical scope (e.g. defined region) of the common practice analysis.	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	Yes, official sources were used: the " BIG - Banco de Informações de Geração" of the ANEEL. This is the database regarding energy generation of the National Agency for Electric Energy: http://www.aneel.gov.br/15.htm (accessed on 12.09.2010). See items (6.y), (6.z), (6.aa) and (6.bb) for a discussion regarding the determination of 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.	OK	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	Yes. See items (6.y), (6.z), (6.aa) and (6.bb)	OK	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	Yes, however: See items (6.y), (6.z), (6.aa) and (6.bb) for a discussion regarding the assessment regarding whether there are essential distinctions between	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			the proposed CDM project activity and the other similar activities		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
7. Monotoring plan					
a. Does the PDD include a monitoring plan?	VVM	122	Yes, in item B.7.1 and item B.7.2	OK	OK
b. Is this monitoring plan based on the approved monitoring methodology applied to the proposed CDM project activity?	VVM	122	Yes, based on ACM0002v12.	OK	Ok
c. Were the list of parameters required by the the selected methodology identified?	VVM	123	Yes, the following data and parameter will be monitored according to Section B.7.1 of the PDD: - $EG_{facility,y}$: Quantity of net electricity generation supplied by the project plant/unit to the grid in year y - $EF_{grid.CM.y}$: Combined margin CO_2 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". - Cap_{PJ}: Installed capacity of the hydro power plant after the implementation of the project activity. - A_{PJ}: Area of the reservoir measured in the surface of the water, after the implementation of the project activity, when the reservoir is full.	OK	OK
d. Does the monitoring plan contains all necessary parameters?	VVM	123	Yes, all necessary parameters, as stipulated by the relevant methodology (ACM0002v12) are contained in the monitoring plan.	OK	OK
e. Are the parameters clearly described?	VVM	123	No, see item (3.t) and (3.u).	OK	OK
f. Does the means of monitoring described in the	VVM	123	Yes, however, some inconsistencies were found:	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
plan comply with the requirements of the methodology?			See item (3.t) and (3.u).		
g. Are all data and parameters monitored as per monitoring methodology?	ACM	0002 v.12	Yes, all necessary parameters, as stipulated by the relevant methodology (ACM0002v12) are contained in the monitoring plan.	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 v.12	Yes, the PDD indicates 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?	OK	OK
i. Are 100% of the data monitored, if not indicated otherwise?	ACM	0002 v.12	CL 16: Please clarify if 100% of the data described in Section B.7.1 of the PDD (version 1) will be monitored.	CL 16	OK
j. Are measurements conducted with calibrated measurement equipment according to relevant industry standards?	ACM	0002 v.12	Yes, however, some inconsistencies were found: See item (3.t) and (3.u).	OK	OK
k. Are the monitoring provisions in the tools referred to in the methodology correctly applied?	ACM	0002 v.12	Yes, however, some inconsistencies were found: See item (3.t) and (3.u).	OK	OK
l. Are the monitoring arrangements described in the monitoring plan feasibl within the project design?	VVM	123	Yes, however, some inconsistencies were found: See item (3.t) and (3.u).	OK	OK
m. 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		OK	OK
i. data management procedures?	VVM	123	Please refer to item (3.u) above.	OK	OK
ii. quality assurance procedures?	VVM	123	Please refer to item (3.u) above.	OK	OK
iii. quality control procedures?	VVM	123	Please refer to item (3.u) above.	OK	OK
8. Sustainable development					

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
a. Does the CDM project activity assists Parties not included in Annex I to the Convention in achieving sustainable development?	VVM	125	Please refer to item 1.b above.	OK	OK
b. Does the letter of approval by the DNA of the host Party confirm the contribution of the proposed CDM project activity to the sustainable development of the host Party?	VVM	126	Please refer to item 1.b above.	OK	OK
9. Local stakeholder consultation					
a. Were local stakeholders (public, including individuals, groups or communities affected, of likely to be affected, by the proposed CDM project activity or actions leading to the implementation of such an activity) invited by the PPs to comment on the proposed CDM project activity prior to the publication of the PDD on the UNFCCC website?	VVM	128	Yes, please refer to item (3.gg.i) above	OK	OK
b. Have comments by local stakeholders that can reasonably be considered relevant for the proposed CDM project activity been invited?	VVM	129	Yes, please refer to item (3.gg.i) above	OK	OK
c. Is the summary of the comments received as provided in the PDD complete?	VVM	129	No comments have been received until project's validation procedure.	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 have been received until project's validation procedure.	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, please refer to item (3.ff) above.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
b. Have the project participants undertaken an analysis of environmental impacts?	VVM	132	Yes, please refer to item (3.ff) above	OK	OK
c. Does the host Party require an environmental impact assessment?	VVM	132	Yes, please refer to item (3.ff) above	OK	OK
d. If yes, have the project participants undertaken an environmental impact assessment?	VVM	132	Yes, please refer to item (3.ff) above	OK	OK

Table 2 Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1 and 2	Summary of project owner response	Validation team conclusion
CAR 01: In Section A.2 of the PDD (version 1), the baseline scenario is not described in accordance with the relevant methodology. Moreover, the electricity that will be supplied to the grid by the project would not be generated by the operation of another power plant connected to the grid and the addition of new sources, but by the operation of grid-connected power plants and the addition of new sources. The description of the baseline scenario is, therefore, not in accordance with the ACM0002: "CONSOLIDATED BASELINE METHODOLOGY FOR GRID CONNECTED ELECTRICITY GENERATION FROM RENEWABLE SOURCES" VERSION 12.	EB 41 Ann 12	The description has been corrected, now is in accordance with the methodology.	PP has corrected the description of the baseline scenario in Section A.2 of the PDD version 2. It now states: "The baseline scenario is the same scenario that existed before the project activity implementation starting because the electricity that will be supplied to the grid would be generated otherwise by the operation of grid-connected power plants and by the addition of new generation sources, as expressed in the combined margin calculations described in the "Tool to calculate the emission factor for an electric system"." Seeing that the description is now in line with ACM0002v.12, this CAR was closed.

CAR 02: In Section A.3 of the PDD version 1, the third column of table 1 suggests there are four Parties involves. However, only one Party (Brazil) is involved. This is not in accordance with GUIDELINES FOR COMPLETING THE PROJECT DESIGN DOCUMENT (CDM-PDD) AND THE PROPOSED NEW BASELINE AND MONITORING METHODOLOGIES (CDM-NM), VERSION 07.	EB 41 Ann 12	The changes in the table have been done.	The changes in the table 1 of the Section A.3 of the PDD version 2 have been done. It now clearly states that only one Party is involved: Brazil. This CAR was closed, seeing that the table is now in accordance with the Guidelines for completing the project design document (CDM-PDD) and the proposed new baseline and monitoring methodologies (CDM-NM), version 07.

CAR 03: In Section A.4.1.4 of the PDD version 1, the unique identification (geographic coordinates) of the SHPs Boa Fé and Autodromo are not in accordance with the document provided by PP and mentioned in the PDD: "the Previous Licenses granted by the State Foundation of Environmental Protection of the State of Rio Grande do Sul (FEPAM)."	EB 41 Ann 12	The geographic coordinates has been changed according to the Previous License issued by FEPAM.	Coordinates shown in the PDD version 2 (Section A.4.1.4) are now in accordance with the Previous Licenses issued by FEPAM: 116/2008-DL 114/2008-DL 115/2008-DL Copy of these licensed were provided to the DOE. Seeing the above. This CAR was closed.
CAR 04: In Section A.4.1.4 of the PDD version 1, the information provided exceeds one page. This is not in accordance with GUIDELINES FOR COMPLETING THE PROJECT DESIGN DOCUMENT (CDM-PDD) AND THE PROPOSED NEW BASELINE AND MONITORING METHODOLOGIES (CDM-NM), VERSION 07.	EB 41 Ann 12	The map has been reduced, now it all fits in one Page.	The Map in Section A.4.1.4 has been reduced. The information in section A.4.1.4 of the PDD version 2 fits into one page. Seeing the above, this CAR was closed.

CAR 05: The baseline scenario provided in Section A.4.3 of the PDD (version 1) is not as identified in Section B.4 of the PDD. Moreover, the project boundary is defined in Section B.3 as the SIN (interconnected national energy system). However, the baseline in Section A.4.3 only comprises part of the SIN: the power plants in operation in the Rio Grande do Sul State. This is not in accordance with GUIDELINES FOR COMPLETING THE PROJECT DESIGN DOCUMENT (CDM-PDD) AND THE PROPOSED NEW BASELINE AND MONITORING METHODOLOGIES (CDM-NM), VERSION 07	EB 41 Ann 12	The definition of baseline scenario is now the same in sections A.4.3 and B.4. And the table now comprises all SIN.	The definition of the baseline scenario in Section A.4.3 of the PDD version 2 is in accordance with B.4 and B.3. Moreover, the baseline in A.4.3 comprises now the whole national energy grid, the “SIN”. Also, the numbers in table 3 have been changed so to include the energy generating mix of the entire country (crosschecked by the DOE on 04.03.2011: http://www.aneel.gov.br/aplicacoes/capacidadebrasil/capacidadebrasil.asp). Seeing the above, this CAR was closed.

CAR 06: In Section A.4.3 of the PDD (version 1), information is missing regarding: the age and average lifetime of the equipments based on manufacturer's specifications and industry standards, load factors (according to EB 48 – ANN 11), efficiencies and the monitoring equipments and their location in the systems. This is not in accordance with GUIDELINES FOR COMPLETING THE PROJECT DESIGN DOCUMENT (CDM-PDD) AND THE PROPOSED NEW BASELINE AND MONITORING METHODOLOGIES (CDM-NM), VERSION 07	EB 41 Ann 12	First PP response: The information requested in CAR 06 has been included in Section A.4.3 of the PDD version 2. Second PP response: Specification for SHP São Paulo is provided to DOE with PDD Version 03. (2) Information regarding the plant load factor has been included in PDD version 03 by PP. (3) About the meters, the correct information is "In the SHP Autodromo, there are 2 groups of 2 meters". It was a typing error that could cause doubts. The information was corrected by PP.	First DOE analysis: (1) the age and average lifetime of the equipments based on manufacturer's specifications and industry standards: This info was added by PP in version 2 of the PDD: "The Turbine/Generator average lifetime is about 30 years, according to manufacturer's specification." Evidence was provided to the DOE of the manufactures specification: WEG (generators manufacture) – sign specification. HISA S/A (turbines manufacture) sign specification. However, the above mentioned specifications are only for the Boa Fé and Autodromo SHPPs. No information is provided regarding the São Paulo average lifetime. (2) load factors:

			No information regarding the plant load factor in Section A.4.3. of the PDD version 2 has been provided. (3). Efficiencies: PP has provided on table 4 of Section A.4.3 of the PDD v. 2, the efficiencies of the equipment used. (4) The monitoring equipments and their location in the systems: PP has provided information in Section A.4.3 of the PDD (version 2) and it is in accordance with Section B.7.2 and with observations made by DOE during visit to construction sites. However, the following information in Section A.4.3 of the PDD version 2 is not correct: "In the SHP Autodromo, there are 2 meters:" Seeing the above, this CAR is still open. Second DOE analysis: (1) Evidence was provided to the DOE of the manufactures

			specification of The São Paulo SHPP: WEG (generators manufacture) – sign specification. HISA S/A (turbines manufacture) sign specification. (2) Information regarding the plant load factor was provided in the PDD version 3. The DOE could validate this information seeing that the assured energy of the SHPPs was approved by the Ministry of Mines and Energy (Ordinance Ministry of Mines and Energy, number 100, May, 31th 2007. Page. 4. Annex III.) Obs.: assured energy = installed capacity x plant load factor. (3) The text was changed in the PDD version 3. It now indicates that there are there are two groups of 2 meters: 2 meters (each group have one principal meter and one rear). Seeing the above, this CAR was closed.

CAR 07: In Section A.4.4 of the PDD (version 1), table 5 comprises estimates of emission reduction for 6 full years. However, the total number of crediting years is 7, according to Section C.2.1 of the PDD. Also, the total amount of estimated emission reductions is not equal to the sum of all the years.	EB 41 Ann 12	The calculation has been corrected. PDD version 02 provides estimation with seven years.	The calculations were corrected in Section A.4.4 of the PDD version 2. The estimations have now a total of 7 years crediting period. Seeing the above, this CAR was closed.

CAR 08: In Section A.4.4 of the PDD (version 1), PP states that the marketable energy (used to calculate emission reductions) is "the assured energy less estimated losses of 3% with transmission, connection and internal consumption". However, according to the Power Purchase Agreements provided by PP, the energy sold is the same as the assured energy without any deduction due to internal consumptions and/or losses.	EB 41 Ann 12	Calculations were corrected. Projection considers assured energy without the 3% of losses.	ERs calculations in the PDD version 2 were done using the assured energy of the Plants, which is equal to the amount of energy sold according to the Power Purchase Agreements (copies of PPA's were provided as evidence by PP to the DOE). PPA Autodromo: 12.25 MW year = 107,310 MWh/year. PPA Boa Fé: 12.23 MW = 107,134 MWh/year. PPA São Paulo: please refer to CL 19. Seeing the above, this CAR was closed.

CAR 09: In Section A.4.5 of the PDD (version 1), PP states that: "no public funding was solicited by parties involved in Annex I. This is not in accordance with GUIDELINES FOR COMPLETING THE PROJECT DESIGN DOCUMENT (CDM-PDD) AND THE PROPOSED NEW BASELINE AND MONITORING METHODOLOGIES (CDM-NM), VERSION 07.	EB 41 Ann 12	The change has been made in accordance with the Guidelines.	The changes were made: the text on Section A.4.5 of the PDD version 2 now is: "No public funding for the CDM's project activities was solicited from parties involved in Annex I." Seeing the above, and seeing that the text is in accordance with the guideline FOR COMPLETING THE PROJECT DESIGN DOCUMENT (CDM-PDD), this CAR was closed.
CAR 10: In Section B.1 of the PDD (version 1), the name of the applicable methodology is not in accordance with: the ACM0002: "CONSOLIDATED BASELINE METHODOLOGY FOR GRID CONNECTED ELECTRICITY GENERATION FROM RENEWABLE SOURCES" VERSION 12.	EB 41 Ann 12	The name has been corrected, now it is in accordance with the methodology.	The name of the applicable methodology was corrected to: "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" It is now in accordance with ACM0002 version 12. Seeing the above, this CAR was closed.

CAR 11: In the entire PDD version 1, the version number of the applicable methodology (version 11 of ACM0002) is not valid anymore. This is not in accordance with paragraph 68 of the CLEAN DEVELOPMENT MECHANISM VALIDATION AND VERIFICATION MANUAL (Version 01.2).	EB 41 Ann 12	At the time of completion of the PDD (06/08/2010), the version 11 was the valid version, once the version 12 was published in 17/09/2010. The version has been modified for version 12.1, which is the current version.	PP has changed the PDD. Its version 2 now states the valid version of ACM0002: version 12.1. This is in accordance with: http://cdm.unfccc.int/methodologies/DB/C505BVV9P8VSNNV3LTK1BP3OR24Y5L (accessed on 04.03.2011). Seeing the above, this CAR was closed.

CAR 12: In Section B.2 of the PDD version 1, the information regarding reservoir areas of the SHPs provided in table 6 is not in accordance with the information provided in Section A.4.3 of the same PDD.	EB 41 Ann 12	The reservoir areas in Section B.2 and in the table 6 were changed accordingly the Technical Information number 3680/2009 of FEPAM. PDD version 02 provides the same reservoir areas in the unit recommended by ACM 0002 v12.1.	Information regarding the reservoir areas of the three SHPPs was added to B.2 and it is now in accordance with A.4.3 of the PDD. The DOE could validate the info regarding the reservoir areas with the technical charts of the SHPPs (part of the consolidated basic engineering projects) and also the following document from the environmental government agency FEPAM: Technical Information number 3680/2009 of FEPAM. Seeing the above, this CAR was closed.

CAR 13: In Section B.3 of the PDD version 1, PP describes that the SHPs Boa Fé, São Paulo and Autódromo are connected to National Interconnected System, more specifically, the South Subsystem." However, according to the Resolution 08 of 2008 of the Brazilian DNA (http://www.mct.gov.br/upd_blob/0024/24719.pdf) there is only one project electricity system: the SIN, the National Interconnected System.	EB 41 Ann 12	Now the paragraph is in accordance with the relevant resolution of the Brazilian DNA.	PP has changed the text and it is now in accordance with the Resolution 08 of 2008 of the Brazilian DNA. The PDD version 2 does not mentions the south subsystem as the system connected to the Project but mentions the entire SIN (national interconnected subsystem). Seeing the above, this CAR was closed.

CAR 14: Table 7 of the PDD version 1 is not in accordance with the ACM0002: "CONSOLIDATED BASELINE METHODOLOGY FOR GRID CONNECTED ELECTRICITY GENERATION FROM RENEWABLE SOURCES" VERSION 12. Moreover, the project emission of CH_4 is not discussed and the baseline emission of CO_2 includes only the emissions of the South Brazilian subsystem.	EB 41 Ann 12	The National Interconnected System is now considered. And the table is now in accordance with the methodology.	Table 7 of the PDD version 2 is in accordance with table 1 of ACM0002 version 12.1. Seeing the above, this CAR was closed.
CAR 15: The flow diagram in Section B.3 of the PDD version 1 states that the parameter TEG_y will be monitored. Also, according to the diagram, the parameter A_{PJ} will not be monitored. This is not in accordance with the monitoring plan of the ACM0002: "CONSOLIDATED BASELINE METHODOLOGY FOR GRID CONNECTED ELECTRICITY GENERATION FROM RENEWABLE SOURCES" VERSION 12.	EB 41 Ann 12	The parameter TEG_y has been excluded from the diagram. The parameter A_{pi} has been inserted.	In the diagram on Section B.3 of the PDD version 2, the parameter TEG_y has been excluded and the parameter A_{pi} has been inserted. The diagram is now in accordance with ACM0002v12.1. Seeing the above, this CAR was closed.
CAR 16: The definition provided for the baseline of the project in page 11 of Section B.4 of the PDD (version 1) is not in accordance with the definition given by: ACM0002: "CONSOLIDATED BASELINE METHODOLOGY FOR GRID CONNECTED ELECTRICITY GENERATION FROM RENEWABLE SOURCES" VERSION 12.	EB 41 Ann 12	The definition of baseline has been corrected.	The definition of the baseline in Section B.4 of the PDD version 2 is in accordance with ACM0002v12.1. Seeing the above, this CAR was closed.

CAR 17: The reference to the document which describes the systematic for the calculation of the combined margin emission factor (http://www.mct.gov.br/upd_blob/0019/19707.pdf) is not correct. Moreover, this document is outdated and comprises a description for the calculation of the emission factor of the different subsystems of Brazil. Nowadays, the Brazilian DNA calculates only one emission factor for the entire system (SIN): http://www.mct.gov.br/upd_blob/0024/24719.pdf	EB 41 Ann 12	The link has been excluded and the sentence was reformulated.	In Section B.4 of the PDD version 2, the outdated reference has been excluded. Seeing that this reference is not strictly necessary in Section B.4, this was accepted by the DOE. Also, the correct reference is provided is Section B.6.1. Seeing the above, this CAR was closed.
CAR 18: The parameter $PE_{FF,y}$ of equation 1 of ACM0002v12 is not correctly presented in equation 7 of the PDD version 1. Also, the description of the parameters $PE_{GP,y}$ and $PE_{HP,y}$ is not in accordance with ACM0002: "CONSOLIDATED BASELINE METHODOLOGY FOR GRID CONNECTED ELECTRICITY GENERATION FROM RENEWABLE SOURCES" VERSION 12.	EB 41 Ann 12	The descriptions are now in accordance with the relevant methodology.	The equation 07 of the PDD is now in accordance with equation 01 of ACM0002v12.1. Seeing the above, this CAR was closed.
CAR 19: In Section B.6.1 of the PDD (version 1), the explanation of the procedure to calculate the power density of the project activity is missing. This is not in accordance with the GUIDELINES FOR COMPLETING THE PROJECT DESIGN DOCUMENT (CDM-PDD) AND THE PROPOSED NEW BASELINE AND MONITORING METHODOLOGIES (CDM-NM), VERSION 07.	EB 41 Ann 12	The section B.6.1 of PDD version 01 made reference to section B.2 where the Power density was calculated and the procedure to calculate the power density was presented. However, to attend CAR 19, the procedure to calculate the power density was presented again in the section B.6.1.	The procedures to calculate power density were added to B.6.1. These procedures are in accordance with ACM0002v12.1. Seeing the above, this CAR was closed.

CAR 20: Throughout the entire PDD version 1, equations have been included which use dots instead of commas: example $BE_y = EG_{PJ.y} * EF_{grid.CM.y}$. This is not in accordance with APPROVED CONSOLIDATED BASELINE AND MONITORING METHODOLOGY ACM0002 - CONSOLIDATED BASELINE METHODOLOGY FOR GRID-CONNECTED ELECTRICITY GENERATION FROM RENEWABLE SOURCES, VERSION 12.	EB 41 Ann 12	First PP response: The equations were corrected. PDD version 02 is in accordance with the ACM0002 methodology. Second PP response: The equations 4, 5, 7 and 8 have been corrected in PDD version 03.	First DOE analysis: The equations 4, 5, 7 and 8 are still not correct. This CAR is still open. Second DOE analysis: The equations 4, 5, 7 and 8 have been corrected in PDD version 03. Seeing this, the CAR was closed.
CAR 21: The descriptions of the parameters BE_y and $EF_{grid,CM,y}$ of equation 4 in Sections B.6.1 and B.6.3 of the PDD version 1 are not in accordance with equation 6 of ACM0002: "CONSOLIDATED BASELINE METHODOLOGY FOR GRID CONNECTED ELECTRICITY GENERATION FROM RENEWABLE SOURCES" VERSION 12.	EB 41 Ann 12	PDD was changed and the descriptions are now in accordance with the methodology.	In the PDD version 2, the equation 4 is in accordance with ACM0002v.12.1. Seeing the above, this CAR was closed.

CAR 22: In Section B.6.1, B.6.3 and B.7.1 (regarding parameter $EG_{facility,y}$) of the PDD version 1, PP states that for ex-ante Emission Reduction estimation, it was considered the assured energy of the SHPs less domestic consumption and other losses. However, according to the power purchase agreements provided by PP, the energy sold to the buyers is the same as the assured energy, without any deduction due to losses or internal consumption.	EB 41 Ann 12	First PP response: The calculations have been made again without the losses. The sentences about the losses were excluded from PDD. Values considered for emission reduction estimation are assured energies of the plants. Second PP response: In PDD V03, the statement of section B.5 was excluded and the financial spreadsheet was corrected as indicated in the answer of CAR BQA5.	First DOE analysis: In the PDD version 2, PP states in Section B.5 that the financial analysis was done considering 3% losses due to domestic consumption and other losses. Also, according to the financial analysis spreadsheet, there is a 3% deduction of the energy generated by the power plants in the financial analysis. This CAR is still open. Second DOE analysis: PP has corrected the statement in B.5 and changed the financial spreadsheet as requested by CARBQA5. Seeing this, the CAR was closed.

CAR 23: The description of the parameter BE_y of equation 3 of the PDD version 1 is not in accordance with equation 11 of ACM0002: "CONSOLIDATED BASELINE METHODOLOGY FOR GRID CONNECTED ELECTRICITY GENERATION FROM RENEWABLE SOURCES" VERSION 12.	EB 41 Ann 12	PDD was changed and the description is now in accordance with the equation 11 of ACM0002.	Equation 3 of the PDD version 2 is in accordance with ACM0002.v12.1. Seeing the above, this CAR was closed.
CAR 24: In Section B.6.1 of the PDD, version 1, PP does not document the data vintage chosen for the operation margin emission factor. This is not in accordance with the TOOL TO CALCULATE THE EMISSION FACTOR FOR AN ELECTRIC SYSTEM, VERSION 2 (EB 50, ANN 14).	EB 41 Ann 12	PP expressed in PDD version 01 that Operating Margin Dispatch Analysis was the method chosen. This method is naturally ex-post. Therefore, there is no necessity to document data vintage in PP's view. However, section B.6.1 was changed to attend CAR 24.	PP has documented in Section B.6.1 of the PDD version 2 the data vintage that will be used to calculate the operation margin emission factor during the project activity. This data vintage (ex-post) is in accordance with the Tool to calculate the emission factor version 2. Seeing the above, this CAR was closed.
CAR 25: In Section B.6.1 of the PDD version 1, the descriptions of parameters $EF_{grid,BM,y}$ and $EF_{grid,OM,y}$ in equation 6 are not in accordance with the descriptions provided in equation 14 of the TOOL TO CALCULATE THE EMISSION FACTOR FOR AN ELECTRICITY SYSTEM, VERSION 2. EB 50 – ANN14.	EB 41 Ann 12	Descriptions of the parameters were corrected and they are now in accordance with the tool.	In Section B.6.1 of the PDD version 2, equation 06 is in accordance with ACM0002v12.1 Seeing the above, this CAR was closed.

CAR 26: In Section B.6.1 of the PDD version 1, PP does not explain the methodological choices described in Steps 1 to 7 of the latest version of the Tool to Calculate the Emission Factor. This is not in accordance with item (b) of the GUIDELINES FOR COMPLETING THE PROJECT DESIGN DOCUMENT (CDM-PDD) AND THE PROPOSED NEW BASELINE AND MONITORING METHODOLOGIES (CDM-NM), VERSION 07.	EB 41 Ann 12	PDD version 02 provides the methodological choices described in steps 1 to 7.	The seven steps of the Tool to calculate the emission factor were included in the PDD version 2. The PDD now describes the choices selected to calculate the emission factor OM, BM and CM. Seeing the above, this CAR was closed.

CAR 27: In table 17, 19 and 20, Section B.6.3 of the PDD (version 1), the totals of each SHPPs are not the same as the sum of the yearly estimates. Also, the estimates have been done for 6 years. However, according to Section C.2.1 of the PDD, the first crediting period comprises 7 years.	EB 41 Ann 12	First PP response: PDD version 02 provides emission reductions estimation for 7 years. Total of each SHP are the same as the sum of the yearly estimation. It is important to remember that the projection considers different operational starting date and the crediting period is just one for the whole project. Second PP response: PDD version 02 provides correct calculations. Spreadsheets are also correct. The numbers of PDD were just rounded of as indicated by DOE in this CAR. The sums reflect the results of the calculation of spreadsheet. However, to attend CAR 27, PDD version 03 provides tables modified.	First DOE analysis: The tables 5, 17, 19 and 20 in the PDD version 2 do not display correct calculations. Moreover, when adding up the individual values, the sums are not correct. The DOE understand that the values have been calculated with a calculation excel sheet without rounding off the numbers. However, in the PDD, the number are rounded off and, consequently, calculations are not correct. The numbers do not need to be presented in the PDD without being rounded off. They can be presented rounded off, but the sums need to be correct. This CAR is still open. Second DOE analysis: The tables 5, 17, 19 and 20 in the PDD version 3 display correct calculations. Seeing this, this car was closed.

CAR 28: In Section B.6.3 of the PDD version 1, regarding the estimates for energy generation in table 17, PP states that projections were performed assuming the operation of the plants during 8760 hours per year (or 730 hours per month). However, in the spreadsheet that contain the calculation, for the first and last years of the first crediting period (2011 and 2017), PP assumes an operation of 720 hours per month.	EB 41 Ann 12	The calculations were corrected considering 730 hours/month.	The calculations were corrected considering 730 hours/month. Seeing the above, this CAR was closed.
CAR 29: The emission factor data provided by PP in Table 18, Section B.6.3 of the PDD (version 1) is not the same as the data provided in tables 22 and 24 of Annex 3 of the PDD and with the information provided by the Brazilian DNA on: http://www.mct.gov.br/index.php/content/view/74689.html.	EB 41 Ann 12	The data are the same. Just a decimal were inserted.	The emission factor data provided by PP in Table 18, Section B.6.3 of the PDD version 2 is now in accordance with data from the Brazilian DNA: http://www.mct.gov.br/index.php/content/view/74689.html. Seeing the above, this CAR was closed.
CAR 30: In table 20, Section B.6.4 of the PDD (version 1), the table used (table 20) is not the same as the table provided by the GUIDELINES FOR COMPLETING THE PROJECT DESIGN DOCUMENT (CDM-PDD) AND THE PROPOSED NEW BASELINE AND MONITORING METHODOLOGIES (CDM-NM), VERSION 07.	EB 41 Ann 12	The table 20 was changed. PDD version 02 reflects GUIDELINES FOR COMPLETING THE PROJECT DESIGN DOCUMENT (CDM-PDD) AND THE PROPOSED NEW BASELINE AND MONITORING METHODOLOGIES (CDM-NM), VERSION 07.	The table 20 of the PDD version 2 is in accordance with table in Section B.6. 4 of the guidelines. Moreover, the word in Portuguese “periodo” was changed to “years”. Seeing the above, this CAR was closed.

CAR 31: In Section B.7.1 of the PDD (version 1), the statement "the parameters to be monitored are just the project's installed capacity, the electricity generation of the project and the project activity's power plants reservoirs area" is not in accordance with the rest of Section B.7.1, nor with ACM0002: "CONSOLIDATED BASELINE METHODOLOGY FOR GRID CONNECTED ELECTRICITY GENERATION FROM RENEWABLE SOURCES" VERSION 12.	EB 41 Ann 12	The statement was changed to be in accordance with the rest of Section B.7.1 and with ACM0002: "CONSOLIDATED BASELINE METHODOLOGY FOR GRID CONNECTED ELECTRICITY GENERATION FROM RENEWABLE SOURCES" VERSION 12.	The statement in Section B.7.1 of the PP now contemplates all the parameters monitored in this Project: - Net energy generation by the project supplied to the grid, - Installed capacities, - Combined Margin emission factor, - Reservoir areas. Seeing that the statement is in line with ACM0002v12.1, this CAR was closed.
CAR 32: In Section B.7.1 of the PDD (version 1), regarding the data/parameter $EG_{facility,y}$, the value of the data applied should not be expressed in MW but in MWh/year according to ACM0002: "CONSOLIDATED BASELINE METHODOLOGY FOR GRID CONNECTED ELECTRICITY GENERATION FROM RENEWABLE SOURCES" VERSION 12.	EB 41 Ann 12	PDD version 02 presents the value in MWh/year.	In Section B.7.1 of the PDD (version 2), regarding the data/parameter $EG_{facility,y}$, the value of the data applied are now expressed in MWh/year according to ACM0002v12.1. Seeing the above, this CAR was closed.

CAR 33: In Section B.7.1 of the PDD (version 1), regarding the data/parameter $EF_{grid.CM.y}$, PP states that the value of data applied for the calculation of emission reduction is 0.16 tCO2/MWh. However, based on the Brazilian DNA data, this value can be calculated more precisely, which increases the accuracy of data in concordance with paragraph 7 of the CLEAN DEVELOPMENT MECHANISM VALIDATION AND VERIFICATION MANUAL (Version 01.2).	EB 41 Ann 12	Section B.7.1 of the PDD version 02 presents the data applied for emission reduction calculation more precisely.	In Section B.7.1 of the PDD version 02, PP has presented the data applied for emission reduction calculation more precisely. The data, 0.1635 tCO_2/MWh is in accordance with data provided by the Brazilian DNA: http://www.mct.gov.br/index.php/content/view/303076.html#ancora Seeing the above this CAR was closed.

CAR 34: In Section B.7.1 of the PDD (version 1), regarding the data/parameter A_{PJ}, PP states that: "The flooded areas are respectively 561,500 m^2, 368,700 m^2 and 444,100 m^2." However, this data is not the same as the data provided in Section A.4.3 of the PDD. Also, PP does not define monitoring frequency as yearly. This is not in accordance with "CONSOLIDATED BASELINE METHODOLOGY FOR GRID CONNECTED ELECTRICITY GENERATION FROM RENEWABLE SOURCES" VERSION 12.	EB 41 Ann 12	The reservoir areas has been changed, the values are now according The Technical Information number 3680/2009 of FEPAM in Section B.7.1 and A.4.3.	The reservoir area in Section B.7.1 of the PDD version 2, regarding data/ parameter $A_{PJ,}$ have been changed. The DOE could validate the info regarding the reservoir areas with the technical charts of the SHPPs (part of the consolidated basic engineering projects) and also the following document from the environmental government agency FEPAM: Technical Information number 3680/2009 of FEPAM. Also, PP has defined the monitoring frequency as "yearly". Seeing the above, this CAR was closed.

CAR 35: In Section B.7.1 of the PDD (version 1), the following information is missing: - Regarding data/parameters $EG_{facility,y}$: (1) a specification which accepted industry standards or national or international standards will be applied, (2) which calibration procedures are applied, (3) what is the accuracy of the measurement method and (4) who is the responsible person/entity that should undertake the measurements. - Regarding data/parameter A_{PJ}: (1) a specification which accepted industry standards or national or international standards will be applied, (2) which measurement equipment is used, (3) how the measurement is undertaken, (4) which calibration procedures are applied (if any), (5) what is the accuracy of the measurement method, and (6) who is the responsible person/entity that should undertake the measurements. This is not in accordance with GUIDELINES FOR COMPLETING THE PROJECT DESIGN DOCUMENT (CDM-PDD) AND THE PROPOSED NEW BASELINE AND MONITORING METHODOLOGIES (CDM-NM), VERSION 07.	EB 41 Ann 12	Missing Information regarding data/parameters $EG_{facility,y}$ and A_{PJ} has been added in Section B.7.1 of PDD according GUIDELINES FOR COMPLETING THE PROJECT DESIGN DOCUMENT (CDM-PDD) AND THE PROPOSED NEW BASELINE AND MONITORING METHODOLOGIES (CDM-NM), VERSION 07.	PP has provided the missing information in the PDD version 2. The DOE has analyzed the information and has found it to be sufficient to provide a detailed description of the methods used for monitoring of both parameters. Seeing this, the DOE was able to close this CAR.

CAR 36: In Section C.1.1 of the PDD version 1, PP states that "At the time of PDD elaboration, construction contract for SHP São Paulo had not been sign yet". However, during site visit held on the 20th of October, the DOE observed that the construction contract of São Paulo has been sign (a copy of the contract was provided to the DOE: contract SP055/2010, sign on 01.08.2010).	EB 41 Ann 12	Information regarding the construction contract of SHP São Paulo was added to the PDD.	In Section C.1.1 of the PDD version 2, PP has provided information regarding the contract signing of the construction of the São Paulo SHP: "Company responsible for SHP São Paulo construction was hired in 01/08/2010 (contract SP055/2010)." Seeing the above, this CAR was closed.

CAR 37: In section E.1 of the PDD version 1, PP states that letters were send to local stakeholders, inviting them to comment on the Project. According to evidence provided by PP, letters were sent on the 5th of August 2010 and received by local stakeholders between 09 and 16 of August 2010. However, the first version of the PDD that was presented to the DOE for validation was finalized on the 6th of August 2010. Local stakeholders had, therefore, no reasonable time for comments was allowed. This is not in accordance with GUIDELINES FOR COMPLETING THE PROJECT DESIGN DOCUMENT (CDM-PDD) AND THE PROPOSED NEW BASELINE AND MONITORING METHODOLOGIES (CDM-NM), VERSION 07.	EB 41 Ann 12	Reasonable time was allowed for comments of the local stakeholders. This can be proved considering that letters were sent to local stakeholders on 5th of August 2010 and the project just started its period of public comments in UNFCCC in 02th September 2010 (http://cdm.unfccc.int/Projects/Validation/DB/QMZO0IHFF222F7GC2BQTAEAV60QZQZ/view.html). As none local stakeholders made comment, the date of the PDD submitted for DOE was the same. With the new date of PDD version 02, this misunderstanding will be clear.	PP has clarified that reasonable time were given to local stakeholders to respond to invitations to comment on the project: letters were send to local stakeholders on the 05.08.2010 and the validation started only on 02th September 2010. So, PP complies with the Brazilian DNA's Resolution 7: http://www.mct.gov.br/upd_blob/0023/23744.pdf (which states that letters to local stakeholders should be send at least 15 days before the start of validation). Observation: The first version of the PDD was finalized on the 05th of August 2010. This was the version that was send to local stakeholders.
			Seeing the above, this CAR was closed.

CAR 38: The third paragraph of Annex 3 of the PDD (version 1), mentions an older version of a methodological tool. This is not in accordance with the ACM0002: "CONSOLIDATED BASELINE METHODOLOGY FOR GRID CONNECTED ELECTRICITY GENERATION FROM RENEWABLE SOURCES" VERSION 12. PP provide further the baseline emission figures for 2009 as calculated by the Brazilian DNA and crosschecked by the DOE on 07.09.2010 on: http://www.mct.gov.br/index.php/content/view/74689.html	EB 41 Ann 12	The version of the methodological tool was updated.	The version of the tool to calculate the emission factor was updated in Annex 3. (EB 50 Annex 14). Seeing the above, this CAR was closed.
CAR 39: In Section B.2 of the PDD (version 1), PP does not confirm the the project activity does not involve switching from fossil fuels to renewable energy sources, nor is a biomass fired power plants. This is not in accordance with ACM0002: "CONSOLIDATED BASELINE METHODOLOGY FOR GRID CONNECTED ELECTRICITY GENERATION FROM RENEWABLE SOURCES" VERSION 12.	ACM 0002 v.12	The confirmation that the project activity does not involve switching from fossil fuels to renewable energy sources, nor is a biomass fired power plants was added.	In Section B.2 of the PDD version 2, the following information was added: - Complexo Carreiro II Project does not involve switching from fossil fuel to renewable energy sources; - Complexo Carreiro II Project does not involve biomass fired power plants; Seeing the above, this CAR was closed.

CAR 40: In sub-step 4a of Section B.5 of the PDD, version 1, the analyzis of other activities similar to the proposed project activity includes other CDM project activities. This is not in accordance with METHODOLOGICAL TOOL - z"TOOL FOR THE DEMONSTRATION AND ASSESSMENT OF ADDITIONALITY" (VERSION 05.2).	EB 39 ANN 10	Sub-step 4.a and 4.b of section B.5 were reformulated. CDM project activities were excluded from the analysis of other similar activities.	PP has excluded from his analysis in sub-step 4a of Section B.5 of the PDD, version 2, all CDM project activities: "Among these 121 SHPs, 68 SHPs with installed capacity between 8MW and 30 MW shall be excluded from the analysis because they are CDM project activities" PP has provided evidence in the form of the web links to the unfccc website of the projects involved. Seeing the above, this CAR was closed.

CAR 41: The outcome of Step 4 of Section B.5 of the PDD version 1 has not been clearly mentioned. This is not in accordance with METHODOLOGICAL TOOL - "TOOL FOR THE DEMONSTRATION AND ASSESSMENT OF ADDITIONALITY" (VERSION 05.2).	EB 39 ANN 10	The outcome of Step 4 of Section B.5 is clearly mentioned in PDD version 02.	The outcome of Step 4 in Section B.5 of the PDD version 2 has been clearly mentioned: "The analysis showed that similar activities are not widely observed and commonly carried out without incentives as CDM or PROINFA." "According the "Tool for demonstration and assessment of additionality", "if Sub-steps 4a and 4b are satisfied, i.e. (i) similar activities cannot be observed or (ii) similar activities are observed, but essential distinctions between the project activity and similar activities can reasonably be explained, then the proposed project activity is additional." SATISFIED/APPROVED – Project is ADDITIONAL" Seeing the above, this CAR was closed.

CAR 42: In section B.5 of the PDD version 1, the date mentioned in which the letters were send to the Brazilian DNA (04.09.2009) is not correct. Copy of the letter show that it was sent on 27.07.2009).	VVM 101	The right date (27.07.09) was added.	In Section B.5 of the PDD version 2, the correct date (27.07.09) was added, regarding when the letters were send to the Brazilian DNA by PP informing regarding the project activity. Seeing the above, this CAR was closed.

CL 01: Regarding the description of the scope of activities that will be implemented, as described in Section A.4.3 of the PDD version 1, please provide information on the amount of electric energy that the power plants are expected to generate (e.g. in MWh/year). Also, please provide technical description of the turbines and generators (capacity, etc).	EB 41 Ann 12	The amount of electric energy that the power plants are expected to generate was added (in MWh/yr) in Section A.4.3 as requested. Technical description of the turbines and generators was added.	In Section A.4.3 of the PDD version 2, PP has added information regarding the MWh/yr that the power plants are expected to generate: Autodromo: 107,310 MWh/year Boa Fé: 107,135 MWh/year São Paulo: 75,599 MWh/year These values are based on the assured energy of the power plants times 8760 hours a year: The assured energy was defined by the Ministry of Mines and Energy: Ordinance Ministry of Mines and Energy, number 100, May, 31th 2007. Page. 4. Annex III. (this evidence was analyzed by the DOE). The assured energy was also crosschecked at ANEEL: http://www.aneel.gov.br/aplicacoes/capacidadebrasil/energiaassegurada.asp (accessed on 04.03.2011).

			Also, a technical description of the turbines and generators was Provided in table 04 of the PDD version 2. Seeing the above, this CL was closed.
CL 02: Please explain the relevancy of information provided in Section B.4 of the PDD version 1 regarding the Brazilian Decennial Plan for Electric Energy Expansion (2010 – 2019), as well as the information provided in table 8, for the project's baseline identification.	EB 41 Ann 12	This information is relevant because it shows the projections of the Ministry of Mines and Energy for electricity sources that provides higher GHG emissions than the project activity. Table 8 shows that the presence of coal plants of the country are highly concentrated in the south region. These are additional information that project participants would like to keep in the PDD.	PP wishes to keep this information in Section B.4 of the PDD version 2. This information is not directly necessary for the project's description of the baseline scenario, seeing that the baseline scenario for this type of project is provided by the relevant methodology. However, it can be considered complementary for a better understanding of the Brazilian energy mix. Seeing this, the DOE was able to close this CL

CL 03: Please provide a reference for the following statements on section B.6.1 of the PDD (version 1): "The method chosen to calculate the emission factor of the project was the method of Operating Margin by Dispatch Data Analysis. This method was chosen because it is, according to the Brazilian DNA, the most accurate and most recommended if the data is available." "From July 2008, the operating margin emission factor started to be calculated for the National Interconnected System, considering the System as unique."	EB 41 Ann 12	Part of the statement about the method chosen to calculate the emission factor for the project was excluded from PDD. The reference for this statement is outdated. New text explaining why this method was chosen is provided with references in PDD version 02.	In Section B.6.1 of the PDD version 1, PP has excluded the phrase: "This method was chosen because it is, according to the Brazilian DNA, the most accurate and most recommended if the data is available." Now, PP explains that the Dispatch Data Analysis was chosen because: "The method chosen to calculate the emission factor of this Project was the operation margin by dispatch data analysis (c). This method was chosen following the recommendation of the resolution number 8 of the Brazilian DNA (Designated National Authority)." Also, a reference was provided for the statement: "From July 2008, the operating margin emission factor started to be calculated for the National Interconnected System, considering the System as unique." Reference: http://www.mct.gov.br/upd_blob/0024/24719.pdf (crosschecked by the DOE on 03.03.2011).

			Seeing this, the CL was closed.

CL 04: Regarding the measurement of data/parameter $EG_{facility,y}$, the methodology states that measurement results should be crosschecked with records for sold energy. However, PP states in Section B.7.1 of the PDD (version 1) that the data will be crosschecked with data from CCEE, ONS and, if necessary, the receipt of sales. Please explain more clearly how the crosscheck procedure will be carried out. Please also explain, regarding QA/QC procedures, which external documents will be used for counter-check.	EB 41 Ann 12	First PP response: The crosscheck procedure and QA/QC procedure were modified. The external documents that will be used for counter-check are reports supplied by CCEE which shows net electricity supplied by the project to the grid. Second PP response: PP expressed that crosscheck can be done also (besides with CCEE reports) "with records of sold energy, if it is necessary to do so" because PPs have seen in the CDM different procedures carried out by DOEs during verification. Some DOE understand better the context of Electric Sector in Brazil, some not. Therefore, one other possibility was open in case of that situation. To provide two possibilities is not wrong and both can show the same results. However, CCEE reports are sufficient to crosscheck generation data. Section B.7.1 and B.7.2 were modified to express that crosscheck will be done with the reports supplied by CCEE.	First DOE analysis: In Section B.7.1 of the PDD version 2, PP now states that the crosscheck will be the reports supplied by CCEE. This crosscheck procedure is in line with ACM0002v12.1 (which states that measurement results should be crosschecked with records for sold energy). Due to the fact that it is the CCEE that is the independent agency that manages the commercialization of energy in Brazil and keeps the official records for sold energy. However, in section B.7.1 of the PDD version 2, PP states that crosscheck can be done also (besides with CCEE reports) "with records of sold energy, if it is necessary to do so." Also PP states in B.7.2 that:

			"Monthly, information will be confronted with external entities (CCEE – Electric Energy Commercialization Chamber, Electricity Trader Company or National System Operator, ONS). Besides, information of generation can be checked by records of sold energy, if it is necessary to do so." Please explain what will happen in case there is divergence between CCEE data other sources. And please also explain why the official CCEE reports are not sufficient as crosscheck material. This CL is still open. Second DOE analysis: PP has changed the information in section B.7.2, It now states that the CCEE reports (which are also "records of sold energy") will be the source used for crosscheck. Seeing this, this CL was closed.

CL 05: In Section B.7.2 of the PDD (version 1), PP states that the Electric Power Commercialization Chamber (CCEE) is responsible for implantation, operation and maintenance of SCDE. Please clarify what SCDE means and what is its purpose in the monitoring plan.	EB 41 Ann 12	A clarification note about SCDE was added to the PDD in the section B.7.2 SCDE is a system implanted by CCEE that collects electricity generation data of electricity agents in Brazil.	PP has added information regarding SCDE into Section B.7.2 of the PDD version 2. (Crosschecked at: http://www.ccee.org.br/cceeinterdsm/v/index.jsp?vgnextoid=101da5c1de88a010VgnVCM100000aa01a8c0RCRD) Seeing this, the CL was closed.

CL 06: Please explain which meters (of which SHPs) are located in SHPP Autódromo, as information provided in this Section of the PDD is not consistent.	EB 41 Ann 12	The diagram of Page 42 shows the quantity of meters located in each SHP and the functions of each meter, including SHP Autodromo. In SHP Autódromo, there are four meters, two groups of two meters (main and rear). One group measures the gross electricity generated by SHP Autódromo and another group measures the total electricity generated by SHPs Boa Fé and São Paulo. The information is clear.	In Section B.7.2 of the PDD version 2, PP has changed the description of the meters installation in SHPP Autódromo: "In SHP Autódromo, there are two groups of two meters (main and rear). One group measures the gross electricity generated by SHP Autódromo and another group measures the total electricity generated by SHPs Boa Fé and São Paulo." This information is now in line with the diagram in Page 35, the rest of the PDD and in accordance with what was observed by the DOE during site visit. Seeing the above, this CL was closed.

CL 07: PP describes in Section B.7.2 of the PDD version 1, the procedure for data collection and storage of the electricity generated by each of the three SHPs. Please explain what will be the procedure and responsibilities for data collection and storage of the data produced by the meters located in the Substation Guaporé, as this is the net electricity that is fed into the grid ($EG_{facility,y}$).	EB 41 Ann 12	The data collection and storage of the data produced by the meters located in the Substation Guaporé is, actually made by the holding Hidrotérmica through the software ZFA. This collection is made by the O&M team. This software has a database, which archives all information's. A backup of this file is generated every month. This collection is automatic, and the data´s sent through SDCE to CCEE. The check of this information is made through files of CCEE, like consolidated measures, accounting report of MRE.	In Section B.7.2 of the PDD version 2, PP has provided information regarding the procedure and responsibility of data collection and storage of the Guaporé Substation. Hidrotérmica's O&M team will be responsible and the ZFA software will be used. Data collection is automatic, and data is automatically sent to CCEE. Seeing the above, this CL was closed.

CL 08: Regarding PP's prior consideration of the CDM incentives, please explain why both UNFCCC and Brazilian DNA Secretariat were provided with 3 different communications regarding PP's intention to develop three different CDM projects (Boa Fé, São Paulo and Autódromo). Also, please explain why communication regarding SHP São Paulo to UNFCCC and MCT has different technical characteristics than the ones described in the PDD.	EB 41 Ann 12	One letter was sent to each enterprise, because initially project owner did not know the possibility of develop a single PDD for three SHPs, and not planning to do so. Later it was decided to develop a single PDD, because the enterprises have similar construction timelines and also to reduce costs of the CDM process. About the communication regarding SHP São Paulo to UNFCCC and MCT, letters were sent by Hidrotérmica with the wrong information. Valid and correct data is contained in PDD as evidences provided to DOE.	PP explains that one letter was sent from each enterprise, due to the fact that project owner did not know it was possible to develop one single project with more than one SHPP. The DOE was able to accept this due to the fact that the letters were sent to UNFCCC and Brazilian DNA to demonstrate project's owner's prior consideration of the CDM. This is demonstrated regardless of the fact that each SHPP has its own letter. Also, PP explain that the about the communication regarding SHP São Paulo to UNFCCC and MCT, letters were sent by Hidrotérmica with the wrong information (24 MW instead of 16 MW). The DOE was able to accept this due to the fact that the letter in Portuguese that was send to the DNA has the correct info and also the São Paulo SHPP has its installed capacity determined at ANEEL at: http://www.aneel.gov.br/aplicacoes/capacidadebrasil/energiaassegurada.asp

			Also, prior consideration was demonstrated due to the fact that the letters were send before the starting date of the project activity (01.11.2009) and therefore in line with EB 49 ANN 22. Seeing the above, this CL was closed.
CL 09: Please clarify how the operational lifetime, described in Section C.1.2 of the PDD (version 1), of the project activity was defined. Please provide third party evidence so the DOE can validate the project's operational lifetime.	EB 41 Ann 12	PP's firs response: Operational lifetime of 30 years was defined accordingly third party evidence provided by suppliers of generators and turbines for small hydropower plants Boa Fé and Autodromo. PP's second response: At the time of first response, Project Owners had not received evidence regarding São Paulo SHP. Evidence regarding São Paulo SHP is supplied with PDD version 03.	DOE first analysis: No evidence was provided regarding São Paulo SHPP. See also CAR 06. This CL is still open. DOE second analysis: Evidence regarding São Paulo SHP is supplied with PDD version 03. See CAR 06 for evidence. Seeing this, this CL was closed.

CL 10: Please provide a reference for the statement in the first paragraph of Section E.1 of the PDD version 1.	EB 41 Ann 12	The reference has been provided.	The reference was provided: http://www.mct.gov.br/upd_blob/0023/23744.pdf (crosschecked by DOE on 04.03.2011) Seeing the above, this CL was closed.

CL 11: Please clarify why PP, In Section B.5 of the PDD version 1, has chosen to include an alternative scenario of the construction of a new mineral coal thermoelectric power plant. Moreover, please explain why other energy generation sources were not included.	EB 39 ANN 10	PP had chosen as an alternative scenario the construction of new mineral coal thermoelectric power plant because high percentage of coal thermoelectric power plants is concentrated in the south region, where the project is located. Besides, the Decennial Plan 2010 – 2019 projects a high increase of the offer of this kind of electricity in Brazil. However, PP changed this alternative scenario for "The construction of new electricity enterprises, with similar installed capacity to the SHPs Boa Fé, São Paulo and Autódromo".	PP has changed the second alternative scenario in Sub-step 1a of Section B.5 of the PDD version 2. It now includes all types of energy generation facilities, with different energy sources. The identified alternative now is in line with alternative (b) of Sub-step 1a. Seeing the above, this CL was closed.

CL 12: Please clarify why the analysis of similar activities to the proposed activities, in Section B.5 of the PDD version 1, only discusses energy generation facilities in the Rio Gande do Sul State of Brazil and not of the entire country.	EB 39 ANN 10	This method was used before in other projects that were registered without problems. However, to avoid any doubt, PDD version 02 provides common practice considering the whole country.	PP has changed the analysis of similar activities in Section B.5 of the PDD version 2 to an analysis of the entire country of Brazil. This is in line with VVM version 01.2 paragraph 120 (a). Moreover, since the project boundary (PDD Section B.3) comprises the entire national interconnected system of Brazil, the DOE is able to validate a geographical scope of the common practice analysis that comprises the entire country of Brazil. Seeing the above, this CL was closed.

CL 13: Clarify how the operational activities identified in the region were defined as similar and excluded other types of project activity.	EB 39 ANN 10	As cited above, the common practice was extended to entire country. At first, it was considered that similar activities were small hydropower plants with installed capacity between 8 MW and 30 MW with operational starting date after June 2004. This interval (8 MW-30 MW) was chosen because comprises small hydropower plants with installed capacity 50% below of the minor installed capacity of the SHPs of the project (SHP São Paulo – 16 MW) and SHPs with installed capacity above 8 MW until 30 MW which is the limit for small hydropower plants technology in Brazil. It was considered as similar SHPs with an operation starting date after June 2004, because of the law 10,438 of 26th April 2002*, that created PROINFA, which predicted that all plants should celebrate its contracts with Eletrobrás until June 2004. The end of this program changed the institutional framework for renewable electricity in Brazil. The CDM created in 1997 got into operation in 2005 and it brought financial revenues that can replace part of the benefits created by PROINFA that ceased to exist. The common practice analysis will consider just Small Hydropower Plants that gets into operation after June 2004, because these enterprises were developed under the same institutional framework of the Small Hydropower Plants of this project.	PP has chosen the following approach: *1. To only contemplate in the common practice analysis (item 4.a of Section B.5 of the PDD version 2) the hydropower plants with an installed capacity of 8 MW – 30 MW.* 8 MW: 50% below the installed capacity of the São Paulo (16 MW) which is the smallest of the three SHPPs of the Project. The DOE was able to validate this threshold of – 50% with: http://cdm.unfccc.int/Projects/DB/TUEV-SUED1218108477.61/ReviewInitialComments/8KZ3T8MYPBK2Z2HYZN5CQ4Z5BJ2F9S. In this request for review, the CDM EB defines that considering a range of +/- 50% Is appropriate for hydro power plants. 30 MW: This is the limit for small hydro power plants in Brazil http://www.aneel.gov.br/cedoc/res2003652.pdf) Above 30 MW, the hydro power plants are considered to be “large hydro” and have a distinctive approval process before the government agencies (ANEEL and environmental agencies) and higher cost of energy generation: http://www.portalpch.com.br/index.php?option=com_content&task=view&id=702

* http://www.planalto.gov.br/ccivil_03/Leis/2002/L10438.htm

		Accordingly the Tool for the demonstration and assessment of additionality, sub-step 4.a, PPs must analyze other activities similar to the proposed project activity. This tool says that projects are considered similar if they are in the same country/region and rely on a broadly similar technology and take place **in a comparable environment, with respect to regulatory framework, investment climate, access to technology, access to financing.** Until June 2004, Project Owners that plan (at that moment) to construct Small Hydro Power Plants could get into Proinfa Governmental Program. Due to that, projects that become operational after this date until December 2010[*] could count on with incentives expressed in the PDD (access to financing, technology and governmental buyers). In 2005, the CDM became operational and an international financial mechanism was created. Within this institutional framework, plants that become operational after June 2004 were implemented in the same investment climate with similar possibilities of financing and technology through Proinfa or CDM. The majority of the plants required one of these benefits to exist (Proinfa or CDM). These conditions create an institutional framework that benefits renewable energy. Therefore, PPs believe that small hydropower plants of Complexo Carreiro II should be compared with plants that become operational in a framework where these benefits exist. After that comparison between power plants that become operational without these incentives can be described. PP's believe that the description of the common practice analysis shows that at this moment (from the limit date of Proinfa to now) very few small hydropower plants are built without this kind of incentives. Plants that became operational before April 2002 were implemented in a different institutional framework, investment climate and financing environment. Plants of Complexo Carreiro II project were planned in an institutional framework where incentives as PROINFA and CDM existed; therefore, they can just be compared with plants that were created **U**nder the same framework. The differences between similar plants were exposed in the PDD**.**	Seeing the above, the DOE has accepted the 08 MW – 30 MW range. *2. It was considered as similar SHPs with an operation starting date after June 2004, because of the law 10,438 of 26th April 2002, that created PROINFA, which predicted that all plants should celebrate its contracts with Eletrobrás until June 2004.* PP states that the end of the PROINFA benefits (in June 2004) changed the institutional framework for renewable electricity in Brazil. Consequently, an identification of similar activities should contemplate only those SHPPs that became operational after June 2004. The DOE agrees that PROINFA projects are not to be considered similar projects within the sub-step 4.a analysis. Seeing the above, this CL was closed.

[*] First paragraph of the text of the website: http://www.mme.gov.br/programas/proinfa/

CL 14: Please clarify why, in sub-step 4b of the PDD (version 1), the threshold of 6.8 MW was chosen to exclude similar activities from the discussion in this sub-step. Moreover, please explain why facilities with an installed capacity below 6.8 MW should be considered as being essentially distinctive than the project activity.	EB 39 ANN 10	As the common practice has been changed, the range of installed capacity used to exclude similar activities in sub-step 4b is now 8 MW and 30 MW (limit of installed capacity of SHPs), therefore (+/- 50%), according information of UNFCCC for other projects (Request 2 / http://cdm.unfccc.int/Projects/DB/TUEV-SUED1218108477.61/ReviewInitialComments/8KZ3T8MYPBK2Z2HYZN5CQ4Z5BJ2F9S). The facilities with installed capacity below 8 MW should be considered distinctive of the project activity due to its installed capacity (significant minor), characteristics and technical complexity that requires different amount of investments and brings more risks.	The DOE has accepted the 08-30 MW range for the common practice analysis. Please refer to CL 13 above for the DOE's explanations. This CL was closed.
CL 15: Please provide an evidence to the statement in option 4.b of the PDD version 1: "This company [Rincão do Ivaí Energias S/A] (…) is constituted by eight individual investors and three companies".	EB 39 ANN 10	The evidence for the statement cited in CL 15 will be provided with this protocol.	Evidence was provided by PP: Evidência PCH Jorge Dreher.pdf Seeing that the evidence was provided to the DOE and validated, this CL was closed.

CL 16: Please clarify if 100% of the data described in Section B.7.1 of the PDD (version 1) will be monitored.	ACM 0002 v.12	The clarification has been done. 100% of the data described in Section B.7.1 will be monitored.	In Section B.7.1 of the PDD version 2, PP has inserted a clarification that 100% of the data will be monitored. Seeing the above, this CL was closed.
CL 17: Please provide a copy of the Consolidated Basic Engineering Project of the SHP São Paulo.	EB 41 Ann 12	Consolidated Basic Engineering Project of the SHP São Paulo is provided to DOE.	A copy was provided to the DOE. The DOE has analysed this document and concluded that it is in accordance with the info in the PDD. Seeing this, the CL was closed.
CL 18: Regarding Section A.4.3 of the PDD version 1, PP has provided the DOE with the following evidence: ANEEL's approval of the Basic Engineering Projects of the three SHPs (ANEEL's dispatch 2133, 2134 and 2135 of 2008). However, the DOE has also received from PP the Consolidated Basic Engineering Projects of the SHPs. Please provide information regarding the status of ANEEL approval of these consolidated documents.	EB 41 Ann 12	The dispatches of Consolidated Basic Engineering Projects were not received yet. PP will send with this validation protocol a copy of the protocol submitted to ANEEL by project owners.	A copy was provided to the DOE. The DOE has analysed this document and concluded that it is in accordance with the info in the PDD. Seeing this, the CL was closed.

CL 19: Please provide a copy of the power purchase agreement of the SHP São Paulo.	EB 41 Ann 12	The Power Purchase Agreement of SHP São Paulo has not been signed yet. There is no PPA for this SHP until the validation of this project.	PP states that no PPA has been sign yet for the São Paulo SHP. Seeing this, the DOE will use the assured energy of São Paulo (as approved by ANEEL (http://www.aneel.gov.br/aplicacoes/capacidadebrasil/energiaassegurada.asp): 8.63 MW x 8760 hours/year = 75,599MWH/ year to validate the expected energy generation of the São Paulo SHPP. Seeing the above, this CL was closed.

CL 20: Please complete in reference 5 of Section A.4.4 of the PDD version 1, the expected operation start of SHPs Boa Fé And São Paulo, so it is clear why the SHP Autódromo's expected start of operation has been chosen as the date in which the project is expected to become operational.	EB 41 Ann 12	The reference 5 in Section A.4.4 was completed with the information requested.	Reference 5 was completed accordantly: The schedule provides SHP Autódromo commercial operation beginning in 23/05/2011. For projection purposes, it was considered the start of commercial operation on 01/06/2011, which it is the first of three SHP to get operational. SHPs Boa Fé and São Paulo have as an expected commercial operation date 18/06/2011 and 21/09/2011 respectively. For emission reduction projection, was considered the dates 1/07/2011 and 1/10/2011 respectively. Seeing the above, this CL was closed.

CAR BQA 1 – Provide evidences to support the period of expected operation used in the investment analysis.	EB 51 annex 58	The time of the concession/authorization period provided by National Agency of Electric Energy for small hydropower plants is usually 30 years. This information can be proven by page 92 of the book "Small Hydropower Plants – Commercial, technical and legal Aspects. The resolutions, issued by the National Agency of Electric Energy (ANEEL), which conceded the authorization to explore the hydraulic potential of the SHPs Boa Fé, São Paulo e Autodromo also provides 30 years as authorization term. Evidences for that are ANEEL Resolution 55; ANEEL Resolution 60 and ANEEL Resolution 64. Evidences of lifetime of the equipments (turbine and generators) are also provided to DOE. Authorization period covers construction period and operation period. The period of expected operation used in the investment analysis was defined accordingly the official schedule of the company provided to DOE in the site visit. The expected time for construction predicted in this schedule is 2 years and the authorization period is 30 years. Therefore, the period of expected operation used in the investment analysis is 28 years.	**Answer 1 (18/03/2011)** **According with the document National Energy Plan 2030 from Brazilian Ministry of Mines and Energy (2007) a 30 years period is appropriate for a hydropower project (page 126).** **Document available at:** **http://www.epe.gov.br/Estudos/Paginas/Plano%20Nacional%20de%20Energia%20%E2%80%93%20PNE/Estudos_12.aspx?CategorialD=346** **CAR BQA 1 is closed.**

CAR BQA 2 – It was not possible to reproduce the results of the sensitivity analylsis.	EB 51 annex 58	To reproduce each result of the sensitivity analysis, DOE should use the projected situation and change in the spreadsheets of the input value for each SHP. Instructions about how to get the results of the sensitivity analysis were added in each sensitivity analysis spreadsheet.	**Answer 1 (18/03/2011)** **The referred instructions are correct and the validation team was able to reproduce the sensitivity analysis.** **CAR BQA 2 is closed.**
CAR BQA 3 – The actual interest payable was not taken into account in the calculation of income tax.	EB 51 annex 58	In the Brazilian Presumed Profit Taxation Regime, the calculus of Income Tax and Social Contribution does not take into account neither actual interest payable nor any expenses. Taxes rates are calculated directly over gross revenue. The following laws and legal rules proves that: • Brazilian Law 10,637 of 30th December 2002 ; • Brazilian Law 9,718 of 27th of November 1998; • Regarding Income Tax - Law 8,981/95 and Act 3,000/99. Regarding Social Contribution – Laws 7,689/98 and 10,637/02 and Temporary Measure 2,158-25/01 are the main references for that.	**Answer 1 (18/03/2011)** **Referred evidences were checked and the interest payable is not applicable to this project.** **CAR BQA 3 is closed.**

CAR BQA 4 – Explain how was determined the plant load factor.	EB 51 annex 58	The plant load factors or the assured energy of the plants are numbers calculated by the Ministry of Mines and Energy (MME). The plant load factor of each plant were determined by Ministry of Mines and Energy Ordinances below: • SHP Boa Fé – MME No. 100. May 31th , 2007; • SHP São Paulo - MME No. 100. May 31th, 2007 • SHP Autodromo - No. 100. May 31th, 2007.	**Answer 1 (18/03/2011)** **The validation team has checked all evidences and was able to confirm that the PLF input values were suitable and applicable at the time of investment decision.** **CAR BQA 4 is closed.**

CAR BQA 5 – Provide a spreadsheet containing all the assumptions and input values used in the investment analysis with its respective description and provide the evidences to justify the respective evidence, the description of the evidence and evidence's date. 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. (Total investment, energy price, plant load factor, O&M costs and among others)	VVM 111	PDD provides information regarding all input values. Spreadsheet with the evidences is provided to DOE together with PDD version 02. Answer 02 Letters sent to National Bank of Economic and Social Development requiring loans for the plants were supplied to DOE during the site visit and they were also re-sent to DOE during the validation process. These evidences show the total investment of the plants. With regard financial spreadsheet, the annual interest rate was corrected. 3% of losses due domestic consumption and other losses were also removed from the spreadsheet once the electricity sold is the same as assured energy. Other errors were identified in the auxiliary spreadsheet. Annual financial expenses (line 21 of each Cash Flow spreadsheet) were not considering interest and principle payment. It was just considering interest. This was not in accordance with item 10 of the Guidance on the assessment of Investment Analysis. These corrections were also made to follow correctly the Guidance. Also, loan cost was in nominal terms and it should be in real terms. With these changes, equity IRRs of the plants are not the same mentioned in the CAR BQA 5.	Answer 1 (18/03/2011) The spreadsheet was provided, all assumptions were described and evidences submitted. Regard to total investment, according to document National Energy Plan 2030 from Brazilian Ministry of Mines and Energy (2007) the SHP average total investment costs per kW is around R$ 4,000.00 (page 120). Comparing this value with project SHP Autodromo, SHP Sao Paulo and SHP Boa Fe total investment costs per kW it was found a discrepancy between them. Total investment costs per kW: - SHP Autodromo R$ 4,752 (19% higher) - SHP Sao Paulo R$ 5,581 (40% higher) - SHP Boa Fe R$ 4,500 (13% higher)

CAR BQA 5 cont.	VVM 111		Cont. Answer 1 (18/03/2011) The validation team understands that these costs can differ substantially depending on each project characteristic, but can you provide evidences to substantiate the suitability of these input values? Referred document available at: http://www.epe.gov.br/Estudos/Paginas/Plano%20Nacional%20de%20Energia%20%E2%80%93%20PNE/Estudos_12.aspx?CategoriaID=346 With regard to project financing it was used the annual interest rate (9.90%) instead of the 3 months interest rate (2.39%) to calculate the deferred interest during the construction period. After correcting for such mistake the new project IRRs are as follows: - SHP Autodromo: 13.48% - SHP Sao Paulo: 11.80% - SHP Boa Fe: 14.54% Check line 19 from each auxiliary worksheet of the project financial analysis document to check this issue. CAR BQA 5 is not closed.

			Cont. Answer 1 (18/03/2011) Concerning the amount of energy generated, remove the 3% losses due domestic consumption and other losses from the calculation, because according to the power purchase agreements provided by PP, the energy sold to the buyers is the same as the assured energy, without any deduction due to losses or internal consumption. Answer 2 The validation team cross-checked the total investment with the third party available document National Energy Plan 2030* from Brazilian Ministry of Mines and Energy (2007) which states that in average the SHP total investment costs per kW is around R$ 4 million/MW. (Page 120).

* Available at:
http://www.epe.gov.br/Estudos/Paginas/Plano%20Nacional%20de%20Energia%20%E2%80%93%20PNE/Estudos_12.aspx?CategoriaID=346

			It is also stated that depending on project characteristics investment values can vary significantly. The project`s total investment per installed capacity is around R$ 4.8 million/MW and it was determined by the company specialists. The company sent a letter to BNDES, 18/09/2009 (National Development Bank) requesting a loan based on these values of investment which was accepted on 29/03/2011. The validation team also cross-checked the total investment comparing three actual registered projects (project 3898: "Guanhães Energia CDM Project, Minas Gerais, Brazil (JUN1123)", project 3316: "Queluz and Lavrinhas Renewable Energy Project" and "project Bundled Estelar CDM Project") registered during 2010/2011. The total investments per installed capacity of these projects are around R$ 5.7 million/MW, R$ 5.2 million/MW and R$ 5.1 million/MW respectively. So as the total investment per installed capacity of this project is around R$ 4.8 million MW and it was accepted by BNDES the validation team agreed with the suitability and appropriateness of the referred input value. **CAR BQA 5 is closed.**

CAR BQA 6 – Present all the evidences in a manner that can be clearly validated by the DOE. When answering the protocol refer to the evidences by their numbers and provided all the evidences with the respective number in order to facilitate, organize and present their in a clearly way.	VVM 111	All evidences were provided to DOE. Numbering evidences is a DOE work.	**Answer 1 (18/03/2011)** **All evidences were provided in a manner that could be clearly validated by the DOE.** **CAR BQA 6 is closed.**
CAR BQA 7 – The PP should explain how it has determined that the parameters used in the sensitivity analysis are the most critical and that the ranges of variations are appropriate.	VVM 111	PDD Version 01 already provided a lot of information regarding how the parameters used in the sensitivity analysis were defined as the most critical. Also the ranges of variations were discussed, showing that they are appropriate. Each item included in the sensitivity analysis contains comments about why it was varied. However, to attend the auditor, PPs added more information.	**Answer 1 (18/03/2011)** **PP has provided an explanation about how it has determined that the parameters used in the sensitivity analysis are the most critical and that the ranges of variations are appropriate, besides all the values were submitted to variations between -10% and +10% as required by the additionality tool.** **CAR BQA 7 is closed.**

CL BQA 1 – Clarify with evidences the moment of investment decision, in order to guarantee that the input values are the correct ones at this moment in the project chronology.	EB 51 annex 58	The moment of investment decision is 01/10/2009. This time of the investment decision is evidenced by Board Minutes Meeting supplied to the DOE.	**Answer 1 (18/03/2011)** **The moment of investment decision was evidenced by Board Minutes Meeting supplied to the DOE.** **CL BQA 1 is closed.**
CL BQA 2 – 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	In Brazil, National Authorities does not approve Feasibility Study Reports. National Authorities approves Engineering Project, as it was supplied to the DOE. Electricity investors compete among them to sell electricity through auctions organized by Brazilian Government. Therefore, financial information about the project is confidential. All evidences for values used in the financial spreadsheet were supplied to DOE during the site visit.	**Answer 1 (18/03/2011)** **In Brazil, National Authorities don`t approve Feasibility Study Reports and it was provided to the validation team other evidences to support all assumptions and input values.** **CL BQA 2 is closed.**