VALIDATION REPORT
CAROLINA GERAÇÃO DE ENERGIA LTDA

VALIDATION OF THE
CDM PROJECT SHP SANTA CAROLINA

REPORT NO. BRAZIL-VAL/ 02613/2009-POA

REVISION NO. 03

BUREAU VERITAS CERTIFICATION

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VALIDATION REPORT

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17/06/2011	Bureau Veritas Certification Holding SAS
Client: CAROLINA GERAÇÃO DE ENERGIA LTDA	Client ref.: Mr. Joao Alderi do Prado

Summary:
Bureau Veritas Certification has made the validation of the CDM PROJECT SHP SANTA CAROLINA of CAROLINA GERAÇÃO DE ENERGIA LTDA located in the Cities of André da Rocha and Muitos Capões, 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 AMS I.D version 16 and meets the relevant UNFCCC requirements for the CDM and the relevant host country criteria.

Report No.: BRAZIL-VAL/ 02613/2009-POA	Subject Group: CDM
Project title: CDM PROJECT SHP SANTA CAROLINA	
Work carried out by: Marco Prauchner (lead verifier) Guilherme Lefèvre (verifier) Ricardo Fontenele (verifier) Bernardo Lima (financial specialist) Roberval Kaminski (technical specialist)	
Internal Technical Review carried our by: Marcelo Antoniazzi Porto	
Date of this revision: 05/08/2011	Rev. No.: 03 / Number of pages: 187

Indexing terms

Work approved by:

Flavio Gomes – Global Product Manager

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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.
- EIA: Environmental Impact Assessment
- 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 Electric Energy (from the Portuguese: Programa de Incentivo às Fontes Alternativas de Energia Elétrica)
- RGE: Rio Grande Energia – State of Rio Grande do Sul Electric Energy Distribution Company
- SIN – Brazilian National Interconnected Electricity System (from the Portuguese: Sistema Interligado Nacional)

1 INTRODUCTION

CAROLINA GERAÇÃO DE ENERGIA LTDA has commissioned Bureau Veritas Certification to validate its Small Scale CDM project CDM PROJECT SHP SANTA CAROLINA (hereafter called "the project") at the Cities of André da Rocha and Muitos Capões, 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 and RI**
Verifier	Ricardo Fontenele	**Yes**	**SV**

Technical Specialist	Roberval Kaminski	**Yes**	**DR and RI**
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 CAROLINA GERAÇÃO DE ENERGIA LTDA and additional background documents related to the project design and baseline, i.e. country Law, Guidelines for Completing the Project Design Document (CDM-SSC-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, CAROLINA GERAÇÃO DE ENERGIA LTDA revised the PDD and resubmitted it on 23/05/2011

The validation findings presented in this report relate to the project as described in the PDD version 04 /4/.

2.2 Follow-up Interviews

On 21/08/2009 Bureau Veritas Certification performed interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of MULTILAGOS GERAÇÃO DE ENERGIA ELÉTRICA LTDA 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
MULTILAGOS GERAÇÃO DE ENERGIA ELÉTRICA LTDA. (PP)	➢ 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 (PP)	➢ 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

37 Corrective Action Requests (CARs) and 26 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-SSC-PDD) Version 03 - in effect as of: 22/12/2006 /A/

- Guidelines for completing the simplified project design document (CDM-SSC-PDD) and the form for proposed new small scale methodologies (CDM-SSC-NM) (Version 05) /B/.

3.4 Changes in the Project Activity

As was observed by the validation team through documentation analysis and during site visit held on 21/08/2009, the project is being implemented in accordance with the descriptions provided in the webhosted PDD. However, the following minor changes were identified:

- PP Enerbio Consultoria Ltda – ME changed its name on the PDD version 03. In the webhosted PDD, the name was: “Enerbio Consultoria Ltda”.

- PP Carolina Geração de Energia Ltda. was included as Project Participant in the PDD version 03, due to contractual arrangements between PP Multilagos Geração De Energia Elétrica Ltda. and Carolina Geração de Energia Ltda.

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 a small hydropower plant (SHP) in the Rio Grande do Sul State in Brazil. The hydropower plant is called Santa Carolina and its exact location is 28º 37' 08.11" S and 51º 24' 03.52" W. The Plant has an installed capacity of 10.5 MW, with 2 turbine/generator units and a reservoir area of 0.0926 km^2. With a Plant Load Factor (PLF) of 0.52, the Plant has an average electricity generating capacity of 5.46 MW.

The PLF 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 /C/: "The plant load factor provided to (...) the government while applying the project activity for implementation approval", according to evidence: Basic Engineering Project /5/, ANEEL's approval of Basic Engineering Project /6/ and ANEEL's Technical Note /7/. In this Technical Note, ANEEL defines a PLF of 0.52 for the SHP.

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: /5/ and /8/.

- A site visit and interviews with PP and consultant held on 21/08/2009.

- An analysis of official background documents related to the project activity: /6/ and /7/.

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, except those changes mentioned in Section 3.4 above and changes that have been supported by CARs and CLs opened by the DOE, which have already been discussed in the Validation Protocol

3.6 Baseline and monitoring methodology

3.6.1 General requirement (76-77)

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

The project applies the approved small-scale baseline and monitoring methodology AMS I.D "Grid connected renewable electricity generation", version 16 /D/.

The applied small scale baseline and monitoring methodology is justified as it has been demonstrated that the project activity meets the following applicability conditions:

Applicability conditions of AMS I.D version 16:

1. This category comprises renewable energy generation units, such as photovoltaic, hydro, tidal/wave, wind, geothermal and renewable biomass that supply electricity to a national or a regional grid. Project activities that displace electricity from an electricity distribution system that is or would have been supplied by at least one fossil fuel fired generating unit shall apply AMS-I.F.

The project activity comprises the installation of a new power plant 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: "The CDM Project SHP Santa Carolina consists of the supply of clean hydropower electricity to the Brazilian National Interconnected System (SIN) through the implantation and operation of the Small Hydropower Plant (SHP) Santa Carolina." The DOE was able to validate this through a site visit to the Project's site (21/08/2009) and by analyzing project activity related documents: /5/, /6/, /7/ and /8/.

2. This methodology is applicable to project activities that (a) install a new power plant at a site where there was no renewable energy power plant operating 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: project activity comprises the installation of a new power plant at a site where there was no renewable energy power plant operating prior to the implementation of the project activity (Greenfield plant). The DOE was able to validate this through a site visit to the Project's site (21/08/2009) and by analyzing project activity related documents: /5/, /6/, /7/ and /8/.

3. Hydro power plants with reservoirs that satisfy at least one of the following conditions are eligible to apply this methodology:

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

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

• The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the Project Emissions section, is greater than 4 W/m^2.

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, is greater than 4 W/m^2. The DOE was able to validate that the hydro power plant results in new reservoir through a site visit to the Project's site and by analyzing official background documents related to the project activity: /6/, /7/ and /8/.

To validate that the power density of the Project is greater than 4 W/m^2, the DOE analyzed the following documents: /6/ (installed capacity) and /5/, /6/ and /9/ (reservoir area). As correctly described in the PDD version 4 Section A.4.2, power density of the project is 113.39 W/m^2.

4. In the case of biomass power plants, no other biomass types than renewable biomass are to be used in the project plant.

Not applicable to the project activity, seeing that it comprises the installation of a new hydro power plant (Greenfield plant).

5. If the new unit has both renewable and non-renewable components (e.g., a wind/diesel unit), the eligibility limit of 15 MW for a small-scale CDM project activity applies only to the renewable component. If the new unit co-fires fossil fuel, the capacity of the entire unit shall not exceed the limit of 15 MW.

Not applicable to the project activity, seeing that it comprises the installation of a new hydro power plant (Greenfield plant).

6. Combined heat and power (co-generation) systems are not eligible under this category.

Not applicable to the project activity, seeing that it comprises the installation of a new hydro power plant (Greenfield plant).

7. In the case of project activities that involve the addition of renewable energy generation units at an existing renewable power generation facility, the added capacity of the units added by the project should be lower than 15 MW and should be physically distinct from the existing units.

Not applicable to the project activity, seeing that it comprises the installation of a new hydro power plant (Greenfield plant).

8. In the case of retrofit or replacement, to qualify as a small-scale project, the total output of the retrofitted or replacement unit shall not exceed the limit of 15 MW.

Not applicable to the project activity, seeing that it comprises the installation of a new hydro power plant (Greenfield plant).

Applicability conditions of the Tool to calculate the emission factor for an electricity system version 02.1.0 /E/.

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: /5/, /6/ and /7/.

The DOE hereby confirms that the selected baseline and monitoring methodology AMS I.D version 16 is previously approved by the CDM Executive Board, and is applicable to the project activity, which, complies with all the applicability conditions therein.

As stated above, the project installed capacity is 10.5 MW, which is less than the limit of 15 MW specified in the General Guidelines to SSC CDM methodologies (version 17) /F/. The DOE was able to validate the installed capacity of 10.5 MW through ANEEL's official approval of the Basic Engineering Project /6/.

In the PDD version 4, PP confirms that the small-scale project activity is not a debundled component of a large scale project activity. The DOE was able to validate this by checking the project database of the UNFCCC (http://cdm.unfccc.int/Projects/projsearch.html) accessed on 16/06/2011.

There is no registered or application to register a small scale project activity with the same project participants in the same project category and technology measure, within previous two years, whose project boundary is within 1 km of the proposed small scale activity at the closest point. Therefore, the DOE could confirm that the small-scale project activity is not a debundled component of a large scale project activity, in accordance with the Guidelines on Assessment of Debundling for SSC Project Activities (version 03) /G/.

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 physical, geographical site of the renewable generation source delineates the project boundary. Section B.3 of the PDD version 4 correctly states that the Santa Carolina Project boundary is restricted to the physical-geographical area of localization of the SHP.

The DOE validated the project boundary by:

a) The DOE was able to validate that the delineation in the PDD of the project boundary is correct and meets the requirements of the selected baseline methodology, based on the following documented evidence: /5/ and /8/.

b) Also, through a site visit, that took place on 21/08/2009, the DOE was able to validate that the project boundary is in accordance with the relevant methodology, by observing the Project's site and by interviewing the 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 a new grid-connected renewable power plant. Consequently, according to the relevant methodology, the baseline scenario is as follows:

"(...) the baseline scenario is the electricity delivered to the grid by the project activity that otherwise would have been generated by the operation of grid-connected power plants and by the addition of new generation sources." (AMS I.D version 16, paragraph 10).

In Section B.4, the PDD version 4 correctly identifies the baseline scenario as presented above. In addition, the PDD correctly defines the relevant grid (where the electricity will be dispatch) as the Brazilian National Interconnected Electricity System (SIN), as prescribed by the Brazilian DNA in its resolution nr 8 of 26/05/2008: /10/.

Following the methodology AMS I.D version 16, the Tool to calculate the emission factor for an electricity system (version 02.1.0) and the resolution nr 8 of the Brazilian DNA, the PDD version 4 correctly defines as the relevant grid (SIN) as the project electricity system.

As methodology AMS I.D (version 16) prescribes the baseline scenario and no further analysis is required, there is no need to take other steps to identify the baseline scenario.

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:

According to the applicable methodology (AMS I.D version 16), project emissions have to be considered following the procedure described in the most recent version of the methodology ACM0002. For hydro power plants, the only possible source of project emissions is the emissions from water reservoirs.

Due to the fact the Power Density of the Project (as calculated in the PDD version 4) is 113.39 W/m^2, option (b) of the Project Emission Calculations Section of ACM002v12.1.0 applies:

(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 in accordance to the equations provided by ACM0002 version 12.1.0: 10,500,000 W / 92,600 m^2 = 113.39 W/m^2.

The DOE was able to validate the above mentioned PD value through analyzing the following documents in conjunction with equation (5) of ACM0002v12.1.0: /5/, /6/ and /9/.

Seeing that the DOE was able to validate that the PD of the SHP is greater than 10 W/m^2, option (b) above applies and, therefore, $PE_{HP,y} = 0$. Consequently, no project emissions need to be accounted for. In Section A.4.2, the PDD version 4 correctly states that the project does not present relevant emissions.

Baseline emissions:

Baseline emissions need to be calculated in accordance with equation (1) of the relevant methodology (AMS I.D version 16):

$BE_y = EG_{BL,y} * EF_{co2,grid,y}$

Where:
BE_y = Baseline emissions in year y (tCO_2)
$EG_{BL,y}$ = Quantity of net electricity supplied to the grid as a result of the implementation of the CDM project activity in year y (MWh)
$EF_{co2,grid,y}$ = CO_2 emission factor of the grid in year y (t CO_2/MWh)

In the Emission Reduction Calculation Spreadsheet (version 3) /13/ and in the PDD version 4, PP calculates $EG_{BL,y}$ as the expected net electricity generation supplied by the project plants to the grid per year: 46,394 MWh.

The PDD version 4 presents the above mentioned values, by multiplying the hours in a year (8,760 hours) with the power plant's average electricity generating capacity of 5.46 MW (PLF of 0.52) minus 3% losses due to internal consumption and transmission losses. The DOE was able to validate this 3% loss due to transmission losses and internal consumption, seeing that this is a premise commonly used in the national electrical sector. This was confirmed in a CCEE official report of 2004, where average losses in generation in 2003 and 2004 were estimated in 3% /30/.

The DOE was able to validate the Plant's average electricity generating capacity of 5.46 MW with the following evidences: Basic Engineering Project /5/, ANEEL's official statement containing the approval of Basic Engineering Project /6/ and ANEEL's Technical Note, containing energy generation simulations, where a PLF of 0.52 was defined /7/.

Calculated according to paragraph 12(a) of AMS I.D version 16, the $EF_{co2,grid,y}$ value presented in the PDD version 04 is 0.1635 tCO_2/MWh. This number has been calculated in accordance with the Tool to calculate

the emission factor for an electricity system (version 02.1.0), with Operating Margin and Build Margin Emission factors calculated by the Brazilian DNA, according to /13/ and /25/.

The DOE confirms that all choices made in the PDD version 4 to calculate $EF_{co2,grid,y}$ have been justified adequately and have been presented in accordance with the Tool to calculate the emission factor for an electricity system (version 02.1.0).

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 /13/ and by accessing the Brazilian DNA website: http://www.mct.gov.br/index.php/content/view/4007.html (accessed on 15/06/2011). A print screen of the website of the Brazilian DNA containing 2009 figures is presented /25/.

Leakage:

According to AMS I.D version 16, if the energy generating equipment is transferred from another activity, leakage is to be considered. According to the PDD version 4, In case of Santa Carolina Project, new equipments will be used, manufactured for the activity. So, no leakage is to be considered. The DOE was able to validate this statement with: /5/, where a third party engineering company defines the necessity to purchase new equipment for the construction of a new Green field Hydro Power Plant.

Emission reductions:

Emission reductions are calculated in accordance with equation (13) of the relevant methodology (AMS I.D version 16):

$$ER_y = BE_y - PE_y - LE_y$$

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

Seeing that project emissions and leakage are 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 "Attachment A to Appendix B of Simplified Modalities and Procedures for Small-scale CDM Project Activities" /I/. In the PDD version 4, PP provides an explanation to show that the project activity would not have occurred anyway due to the following barriers:

- Investment barrier: a financially more viable alternative to the project activity would have led to higher emissions;
- Barrier due to prevailing practice: prevailing practice or existing regulatory or policy requirements would have led to implementation of a technology with higher emissions.

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 version 3 /16/ and other related documents, as can be observed in items 3.7.2 to 3.7.5.

Details on the assessment of the investment barrier and barrier due to prevailing practice, 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: 01/02/2012, being the future date in which the signing of

contract between PP and the company responsible for the construction of plant is expected to happen.

The DOE has validated the starting date of the project activity on 01/02/2012, 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 /J/. In this particular case, the first "real action" is expected to be the contract signing on 01/02/2012.

A future date was considered in accordance with the clarification the DOE received from the CDM team /26/. This future date needs to be defined in accordance with the Glossary of CDM terms /J/. Thus, the expected signing of the contract for construction work on 01/02/2012 can be accepted as the earliest date at which either the implementation or construction or real action of a project activity is expected to begin.

The DOE was able to validate this expected date with the schedule provided by PP wherein the expected starting of the actual construction is set to happen at 16/02/2012.This schedule was produced by third party: MEK Engenharia Ltda, which is an engineering company /17/.

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 "CDM PROJECT SHP SANTA CAROLINA" was conducted in accordance with paragraph 2 of the Guidelines on the demonstration and assessment of prior consideration of the CDM (version 03) /K/.

The upload of the PDD by the DOE for global stakeholder consultation occurred on 06/08/2009, according to the UNFCCC website. Seeing that the starting date of the CDM project activity occurred after the PDD was published for global stakeholder consultation, the DOE was able to validate the prior consideration of the CDM based on paragraph 2 of the Guidelines on the demonstration and assessment of prior consideration of the CDM (version 03) /K/.

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 06 Aug 09 - 04 Sep 09,

- Site visit carried out by the DOE: 21 of August 09,

- Project Starting Date: 01 of February 2012.

3.7.2 Identification of alternatives (107)

As described above in section 3.6.1 of this report, the project participant has correctly applied the baseline and monitoring methodology AMS I D, version 16. Paragraph 10 of the applied methodology prescribes the baseline scenario for project activity involving the installation of a new grid-connected renewable power plant /unit as: "the electricity delivered to the grid by the project activity that otherwise would have been generated by the operation of grid-connected power plants and by the addition of new generation sources". Hence, no further analysis is required as per paragraph 105 of VVM, version 1.2. /L/.

The DOE hereby confirms that no identification of alternatives is required, seeing that the applied methodology itself prescribes the baseline scenario.

3.7.3 Investment analysis (114)

The 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. 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. 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)" /27/ 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.

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 13, 14 and 15 which were considered valid and appropriate by the validation team.

Input Value/Assumption	Value	Means of validation
Date of investment decision	10/07/2009	It was considered as the date of investment decision, the date of the first PDD version of the referred project: 10/07/2009. As the starting date is a future date it was considered reasonable to assume that the date of PDD version 1 was the moment of investment decision.
Total Investment	R$ 51,931,989	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 Project proponent presented a budget from a third-party company from June 2009 (MEK Engenharia e consultoria) /28/ which was checked and accepted. The validation team cross-checked the total investment with the third party available document National Energy Plan 2030‡ from

* 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 .
‡ Available at: http://www.epe.gov.br/PNE/20080512_3.pdf

		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). 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$ 4.9 million/MW. The validation team 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 2994 "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$ 4.9 million MW the validation team agreed with the suitability and appropriateness of the referred input value.
O&M costs	2 % of the total investme nt.	It was cross-checked by using a third party available source. The validation team cross-checked this assumption with the "Manual of guidelines for SHP Eletrobras" from 1999 /29/, which stated that the O&M costs vary up to 5% of the total investment. So as the O&M costs of this project is around 2% 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$ 140	It was cross-checked by using a third party available source. The validation team cross-checked the referred input value with the price of the first Electricity Auction from Renewable Sources, from 2007*.
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). As the concession period is limited to 30 years and the construction period takes 1.5 years the validation team considered the period of assessment suitable.

* The average price at the auction was BRL 134.99/MWh, but it was chosen the price of BRL 140/MWh as a conservative assumption. Available at: http://www.ccee.org.br/StaticFile/Arquivo/biblioteca_virtual/Leiloes/1_leilao_fontes_alternativas/Resultados/resumo_comprador.pdf, Accessed on 14/05/2010.

Average energy	5.46 MW	It was cross-checked by using third party available source. Project average energy was determined by a third company hired by project proponent (MEK engineering - 06/2009) which was confirmed by a governmental agency (ANEEL) in February 2010 /7/.

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

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

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

d) Sensitivity analysis: To confirm how solid the investment analysis is, project participants presented a sensitivity analysis varying the most important parameters from the cash flow: (i) the electricity price, (ii) the total amount of investment, (iii) Plant Load Factor, (iv) O&M costs and (v) Loan 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 on table 8, at Page 17 of PDD.

Conclusion:

Project equity IRR:
SHP Santa Carolina – 6.39%
Benchmark – 11.93%

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 to 5 and CARs BQA 1 to 3 were issued and they have been satisfactorily solved and closed.

Refer to Appendix A.

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

3.7.4 Barrier analysis (118)

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

Barrier due to prevailing practice:

In the PDD version 4, PP demonstrates that there are existing regulatory and policy requirements that lead to the implementation of a technology with higher emission than the emission of its own project. The following argumentation is brought forward in version 04 of the PDD:

"The projection for the period 2008-2017, elaborated by MME, described previously points to a growth of the thermal capacity and a fall in the hydro share in the energetic matrix of Brazil."

The DOE crosschecked this Information on:

Decennial Energy Plan (Ministry of Mines and Energy 2008 – 2017. Chapter III (electric energy offer), Part I (electric energy generation) – page 45 and 46, table 32 and graph 06. (available at http://www.epe.gov.br/PDEE/Forms/EPEEstudo.aspx) /18/.

In the PDD version 4, PP also presents table 09 – results of electric energy auctions by ANEEL in 2007-2009, showing predominance in thermal power energy in auctions for the last 3 years /19/, /20/, /21/, /22/ and /23/. These auctions are driven by a minimum price. Due to the fact that thermal power plants have (in general) a lower price, these auction systems bring advantages for thermal plants. This kind of policy leads to the implementation of technology with higher emissions.

PP also provides information regarding the prevailing practice in Brazil regarding large hydro power plants. SHP Santa Carolina is a small enterprise with small installed capacity and power generation, not similar, therefore to the major national hydroelectric power. The DOE crosschecked this information on the ANEEL's "BIG" web based databank: http://www.aneel.gov.br/aplicacoes/capacidadebrasil/capacidadebrasil.asp (crosschecked on 16/06/2011). The configuration of enterprises like Santa Carolina, with small reservoir, can avoid higher emission provided by the big reservoirs of big hydropower plants (CH_4 emissions).

PP also demonstrates that economic incentives (such as the CDM) are important to motivate small hydro plants in Brazil. PP does this providing information regarding PROINFA-Program of the Brazilian Federal Government. PROINFA, established by Law No. 10.438 of 26 April 2002 and revised by Law No. 10762 of 11 November 2003, aims to diversifying the Brazilian energy matrix and the search for solutions with the use of renewable energy (renewable biomass, wind or small hydro). Without incentives such as PROINFA and CDM, thermal plants and big hydro plants tend to maintain their predominance. The DOE crosscheck the information regarding PROINFA at: Eletrobras website: http://www.eletrobras.gov.br/EM_Programas_Proinfa/default.asp. (crosschecked on 16/06/2011).

PROINFA can be seen as an incentive to change the prevailing practice in the energy generation segment in Brazil. Apparently, incentives are necessary due to the fact that the prevailing practice is not the generation of energy with the use of alternative sources of energy (PROINFA is a programme that provided incentives to alternative forms of energy generation, such as SHPPs. PROINFA does not exist anymore.).

SHP Santa Carolina does not participate in PROINFA and, this way, considers the revenue from the sale of CERs as an important factor to realize the investment.

Seeing that PP has demonstrated that the development of the energy generation mix of Brazil (2008-2017) will cause an increase in thermal power plants and, seeing that PP has demonstrated that the current mix in Brazil has a predominance of Large Hydro (responsible for CH_4 emission), and seeing that PP has demonstrated that incentives for SHPPs (such as PROINFA and CDM) are necessary in Brazil, The DOE hereby confirms that the Barrier described by PP is real and that the barriers do not affect the implementation of other project activities such as large hydro and thermal power plants and that, therefore, the barrier analysis performed is credible.

3.7.5 Common practice analysis (121)

Due to the fact that the CDM PROJECT SHP SANTA CAROLINA is a small scale CDM project activity, the Additionality of the Project has been demonstrated by using the Attachment A to Appendix B of Simplified Modalities and Procedures for Small-scale CDM Project Activities" /I/, the Non-binding best practice examples to demonstrate additionality for SSC project activities, EB 35 – Annex 34 /M/, as well as the Guidelines on the assessment of investment analysis (version 4) /N/. These documents do not prescribe that a common practice analysis is carried out. Seeing the above, no common practice analysis was included in the PDD version 4.

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 AMS I.D version 16. The project involves the installation of a new grid connected small hydro power plant.

The Combined Margin CO_2 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 Plant's substation. The meters in the Substation (one main meter and one backup meter) consist of a single measurement point, where the net electricity of the SHP that is feed into the grid is measured. The measurement will be continuously done and recorded monthly. The calibration of the energy meters follow the rules established by the National System Operator (ONS) and Rio Grande Energia (RGE).

According to the PDD version 4 (Section B.7.1), if necessary, the information can be confronted with reports provided by CCEE, the Electric Power Commercialization Chamber. CCEE is the independent agency that manages the commercialization of energy in Brazil and keeps the official records for sold electricity. This crosscheck procedure is in line with paragraph 22 of the AMS I.D methodology version 16, which states that for this parameter: "If applicable, measurement results shall be cross checked with records for sold/purchased electricity.

Also, according to the PDD version 4, the parameter A_{PJ} will be monitored in accordance with AMS I.D version 16 and ACM002 version 12.1

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 2 municipalities involved
- Municipal Assembly of the 2 municipalities involved

- Municipal secretariats of environment of the two municipalities involved
- Rural workers unions
- State environmental Agency (FEPAM)
- Brazilian NGO Forum (FBOMS)
- 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 Article 3rd of the Brazilian DNA's Resolution 7: http://www.mct.gov.br/upd_blob/0023/23744.pdf /24/.

Reasonable time was given to local stakeholders to respond to invitations to comment on the project: letters were sent to local stakeholders on the 10/07/2009 and the validation started only on the 06th August of 2009 (publication of the PDD on the UNFCCC website for global stakeholders consultation, is accordance with VMM version 01.2 paragraph 128). So, PP complies with the Brazilian DNA's Resolution 7 (which states that letters to local stakeholders should be sent 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 (EIA) 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 license (Previous License), which is described in the PDD version 4:

LP nº 458/2009-DL. Issued on April 27th of April 2009 /9/.

The PDD describes the five main environmental programs and actions that will be carried out to minimize the impact of the SHPP construction and operation. These actions were needed after the Environmental Impact Assessment (EIA) identified the possible environmental impacts caused by SHPP. The DOE received a copy of the EIA during site visit /8/. According to the EIA, a total of 20 environmental programs will be carried out, in order to minimize the SHPs environmental impacts.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

The PDD using methodology AMS I.D version 14 was webhosted on the UNFCCC for global stakeholders comments as per CDM requirements. The project was webhosted from 06 Aug 09 - 04 Sep 09.

No comments were received.

5 VALIDATION OPINION

Bureau Veritas Certification has performed a validation of the CDM PROJECT SHP SANTA CAROLINA 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 “Attachment A to Appendix B of Simplified Modalities and Procedures for Small-scale CDM Project Activities” /I/. The PDD provides an investment barrier analysis, as well as a “barrier due to

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

By the construction of the small hydro power plant of 10.5 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. Barriers (financial and barrier due to prevailing practice) 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 CAROLINA GERAÇÃO DE ENERGIA LTDA that relate directly to the GHG components of the project.

/1/ PDD version 01, dated 10/07/2009
/2/ PDD version 02, dated 30/02/2010
/3/ PDD version 03, dated 01/04/2010
/4/ PDD version 04, dated 23/05/2011
/5/ Basic Engineering Project dated 01/06/2006
/6/ ANEEL's official approval of Basic Engineering Project: Dispatch 404 of 22/02/2010.
/7/ ANEEL's Technical Note 080/2010-SGH/ANEEL of 18/02/2010
/8/ Environmental Impact Assessment – Volume 1 of December 2007
/9/ Project's first environmental license (LP) nr. 458/2009-DL
/10/ Brazilian DNA Resolution nr. 8 of 26/05/2008.
/11/ Emission Reduction Calculation Spreadsheet version 1
/12/ Emission Reduction Calculation Spreadsheet version 2
/13/ Emission Reduction Calculation Spreadsheet version 3
/14/ Investment and Sensitive Analysis Spreadsheet version 1
/15/ Investment and Sensitive Analysis Spreadsheet version 2
/16/ Investment and Sensitive Analysis Spreadsheet version 3
/17/ Implementation Schedule produced by third party: MEK Engenharia Ltda of July 2011.
/18/ Decennial Energy Plan (Ministry of Mines and Energy 2008 – 2017. Chapter III (electric energy offer), Part I (electric energy generation).
/19/ Results 4th Auction New Energy CCEE 2007
/20/ Results 5th Auction New Energy CCEE 2007
/21/ Results 6th Auction New Energy CCEE 2008
/22/ Results 7th Auction New Energy CCEE 2008
/23/ Results 8th Auction New Energy CCEE 2009
/24/ Brazilian DNA Resolution nr. 7 of 05/03/2008.
/25/ Brazilian DNA website figures for OM and BM emission factors values for 2009 (latest available)
/26/ Clarification UNFCCC Starting date
/27/ Draft tool to determine the weighted average cost of capital (WACC)
/28/ Budget from MEK Engenharia e consultoria from June 2009.
/29/ Manual of guidelines for SHP Eletrobras from 1999.
/30/ CCEE Report from 2004 – Report for public information 2004 – part IV – Annual Analysis.

Category 2 Documents:

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

/A/ Clean Development Mechanism Project Design Document Form (CDM-SSC-PDD) Version 03 - in effect as of: 22 December 2006

/B/ Guidelines for completing the simplified project design document (CDM-SSC-PDD) and the form for proposed new small scale methodologies (CDM-SSC-NM) (Version 05)

/C/ Guidelines for the reporting and validation of plant load factors (version 01), EB 48 report, Annex 11.

/D/ Approved small-scale baseline and monitoring methodology AMS I.D "Grid connected renewable electricity generation", version 16.

/E/ Tool to calculate the emission factor for an electricity system version 02.1.0

/F/ General Guidelines to SSC CDM methodologies (Version 17).

/G/ Guidelines on Assessment of Debundling for SSC Project Activities (version 03)

/H/ Approved consolidated baseline and monitoring methodology ACM0002: "Consolidated baseline methodology for grid-connected electricity generation from renewable sources", Version 12.1.0. "

/I/ "Attachment A to Appendix B of Simplified Modalities and Procedures for Small-scale CDM Project Activities"

/J/ Glossary of CDM terms, version 5.

/K/ Guidelines on the demonstration and assessment of prior consideration of the CDM (version 03)

/L/ Clean Development Mechanism Validation and Verification Manual (Version 01.2)

/M/ Non-binding best practice examples to demonstrate additionality for SSC project activities, EB 35 – Annex 34

/N/ Guidelines on the assessment of investment analysis (version 04).

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/ Luiz Antônio Leão – Multilagos geração de Energia Ltda.

/3/ Michel Belleboni - Enerbio Consultoria Ltda-ME

/4/ Elisa Kich – Enerbio Consultoria Ltda-ME.

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 – Team member, GHG Verifier
Ricardo Fontenele - MsC in Environmental Risk Assessment by the Universidade Federal Fluminense. Post Graduate in Environmental Management at the Open University (UK). ASQ Certified Quality Engineer (USA). Graduate in Mechanical Engineering. Environmental Lead Auditor in Brazil. Verifier of sustainability reports. Tutor on training course for environmental auditors leaders recognized by IRCA (UK). Instructor training MMA for environmental auditors on CONAMA Resolution 306 of compulsory statutory audits. Technical Manager of Bureau Veritas Certification until 2006, responsible for all product certification in Latin America, and is currently Product Manager for Sustainability and Climate Change business responsible for Validation and Verification Project of Carbon Credits and Emissions Inventories. Validator of CDM Projects.

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 – Qualified as lead GHG verifier, he 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 –. ISO 9001 and SA8000 auditor, he is also trained as a lead auditor in the fields of environment (ISO 14001) and organizational health and safety (OHSAS 18001).

VALIDATION PROTOCOL

Table 1 Validation requirements based on the Validation and Verification Manual (EB44 Annex 3)

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	The final decision from the DNA will be available only after its first ordinary meeting, after the receiving of all the required documents necessary for evaluation, including this validation report, according to Article 6 of the Resolution n0 1 of CIMGC – Comissão Interministerial de Mudança Global do Clima.		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	Refer to item 1.a		OK	OK
c. Does the letter of approval from DNA of each Party involved:	VVM	45	Refer to item 1.a		OK	OK
i. confirm that the Party is a Party of the Kyoto Protocol?	VVM	45.a	Refer to item 1.a		OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS		Draft Concl	Final Concl
ii. confirm that participation is voluntary?	VVM	45.b	Refer to item 1.a		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	Refer to item 1.a		OK	OK
iv. Refers to the precise proposed CDM project activity title in the PDD being submitted for registration?	VVM	45.d	Refer to item 1.a		OK	OK
d. Is(are) the letter(s) of approval unconditional with respect to (i) to (iv) above?	VVM	46	Refer to item 1.a		OK	OK
e. Has(ve) the letter(s) of approval been issued by the respective Party's designated national authority (DNA)?	VVM	47	Refer to item 1.a		OK	OK
f. If there is doubt with respect to (e) above, was verified with the DNA that the letter of approval is valid for the proposed CDM project activity under validation?	VVM	47	Refer to item 1.a		OK	OK
g. Is there doubt with respect to the authenticity of the letter of approval?	VVM	48	Refer to item 1.a		OK	OK
h. If yes, was verified with the DNA that the letter of approval is authentic?	VVM	48	Refer to item 1.a		OK	OK
2. Participation			*PP1 (Multilagos Geração de Energia Elétrica Ltda.)*	*PP2 (Enerbio Consultoria Ltda)*		
a. Have all project participants been listed in a consistent manner in the project documentation?	VVM	51	Yes.	Yes.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS		Draft Concl	Final Concl
b. Has the participation of the project participants in the project activity been approved by a Party to the Kyoto Protocol?	VVM	51	Refer to item 1.a.	Refer to item 1.a.	OK	OK
c. Are the project participants listed in tabular form in section A.3 of the PDD?	VVM	52	Yes.	Yes.	OK	OK
d. Is the information in section A.3 consistent with the contact details provided in annex 1 of the PDD?	VVM	52	Yes.	Yes.	OK	OK
e. Has the participation of each of the project participants been approved by at least one Party involved, either in a letter of approval or in a separate letter specifically to approve participation? (Provide reference of the approval document for each of the project participants)	VVM	52	Refer to item 1.a		OK	OK
f. Are any entities other than those approved as project participants included in these sections of the PDD?	VVM	52	No.		OK	OK
g. Has the approval of participation issued from the relevant DNA?	VVM	53	Refer to item 1.a		OK	OK
h. Is there doubt with respect to (g) above? I	VVM	53	Refer to item 1.a		OK	OK
i. If yes, was verified with the DNA that the approval of participation is valid for the proposed project participant?	VVM	53	Refer to item 1.a		OK	OK
3. Project desing document						
a. Is the PDD used as a basis for validation prepared in accordance with the latest template and guidance from the CDM Executive Board available on the UNFCCC CDM website?	VVM	55	Yes. The PDD is prepared using the latest template: CLEAN DEVELOPMENT MECHANISM PROJECT DESIGN DOCUMENT FORM (CDM-SSC-PDD) Version 03 - in effect as of: 22		OK	OK

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			December 2006.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
b. Is the PDD in accordance with the applicable CDM requirements for completing the PDD?	VVM	56	No. Refer to remaining questions on section 3 below.	OK	OK
c. In CDM-SSC-PDD section A.1 are following provided?	EB 34	Ann 09		OK	OK
i. Title of project	EB 34	Ann 09	Yes. CDM Project SHP Santa Carolina.	OK	OK
ii. Current version number and date of document	EB 34	Ann 09	Yes. PDD Version number: 1. Date: July 10th, 2009.	OK	OK
d. In CDM-SSC-PDD section A.2 are following provided (max. one page)?	EB 34	Ann 09	CAR 1: Section A.2 has more than one Page.	CAR 1	OK
i. A brief description of the project activity covering purpose which includes the scenario existing prior to the start of project, present scenario and baseline	EB 34	Ann 09	The project consists of the construction of the Santa Carolina Small Hydropower Plant (SHP) with an installed capacity of 10.5 MW. CL 1: Please explain the phrase : “The project activity reduces the emissions of greenhouse gases (GHGs) by preventing the electricity generation by fossil fuel sources with consequent CO2 emissions that would be generated if the project did not exist” Considering the description that is provided in the Methodology AMS 1.D. for the baseline of activity. CL 2: Please explain the insertion of the letter “s” placed in the third line of paragraph one. CAR 2: Link to MME website is not accessible. (https://www.mme.gov.br/download.do?attachmentId=17397&download)	CL 1 CL 2 CAR 2	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
ii. Explanation how the GHG emission reductions are effected	EB 34	Ann 09	Yes. By supplying electricity to and/or displace electricity from an electricity distribution system that is or would have been supplied by at least one fossil fuel fired generating unit.	OK	OK
iii. The PP's view on the contribution of project activity to sustainable development	EB 34	Ann 09	Yes. The project will contribute to sustainable development by the following actions: (a) Through the operation of the SHP Carolina, clean and renewable energy will be dispatched to the Brazilian National Interconnected System; (b) The construction of SHPs like SHP Santa Carolina causes positive impacts on the local economy, once it provides a growth of the average consumption in the region, developing social and economic activities of the region where the Project is located; (c) The project implementation can attract investment to the region and foster an increase in industrial presence in the cities around the Project; (d) The electricity supply of Santa Carolina Project creates a great incentive for the rising of new ventures and businesses in the region (e) SHP Santa Carolina presents low environmental impact; (f) The implementation of SHP Santa Carolina presupposes the acquisition of high-technology equipment;	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			(g) The implementation of the enterprise will provide the increment of tax revenues of the cities, state and country where the project is located.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
e. In CDM-SSC-PDD section A.3 are following provided in the tabular format?	EB 34	Ann 09			
i. List of project participants and Party(ies)	EB 34	Ann 09	Yes. Participant 1: Private Entity: Multilagos Geração de Energia Elétrica Ltda. Participant 2: Private Entity: Enerbio Consultoria Ltda. Party: Brazil (host).	OK	OK
ii. Identification of host party	EB 34	Ann 09	Yes. Brazil	OK	OK
iii. Indication whether the Party wishes to be considered as project participant	EB 34	Ann 09	Yes. The Party involved does not wish to be considered as project participant.	OK	OK
f. In CDM-SSC-PDD section A.4.1 are following provided?	EB 34	Ann 09			
i. Technical description, location, host party(ies) and address as required?	EB 34	Ann 09	Yes. Location: country: Brazil (host); region: southern Brazil; cities: André da Rocha and Muitos Capões.	OK	OK
ii. Detailed physical location with unique identification of the project activity (eg. Longitude/latitude) – not to exceed one page	EB 34	Ann 09	Information allowing the unique identification of this small-scale project activity: SHP Santa Carolina will be constructed in the city of André da Rocha and Muitos Capões, in Taquari-Antas, basin 8 e sub-basin 86, at Turvo River. The coordinates of the entrepreneurship are Latitude 51º24'03'' South and Longitude 28º37'08'' West. CAR 3: Longitude/latitude coordinates are not correct, as they are inverted.	CAR 3	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
g. In CDM-SSC-PDD section A.4.2 are following provided	EB 34	Ann 09			
i. the list of categoreis of project activities as per the latest categorization of Appendix B to to the simplified modalities and procedures for small-scale CDM project activities, hereafter referred to as Appendix B. (refer http://cdm.unfccc.int/methodologies/SSCmethodologies	EB 34	Ann 09	Yes. Project Type (i): Renewable energy projects. Project Category: D. Electricity generation for a system. CAR 4: Please explain how it is possible that the Nominal Capacity (kW) of each turbine is 5.5. CL 3: Power density of 113.39 MW/km2 is given. Please explain why it is necessary to state that the SHP has a power density below 10MW/km2, seeing that the applicable methodology is the AMS I.D. CAR 5: Please provide the Basic Engineering Project of the enterprise, which was accepted by ANEEL in accordance with ANEEL document 1919/2007-SGH/ANEEL. CAR 6: According to table 2, the SHP Santa Carolina has an installed capacity (MW) of 10.5. Also according to table 2, the turbines have the following nominal capacity: 5.5 [MW], thus 11 MW in total. 11 MW x 91.5% (maximum performance) = 10.065 MW. Please explain this divergence. CL 4: Please provide information on how many	CAR 4 CL 3 CAR 5 CL 4 CAR 6	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			generators will be installed.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
ii. A description of how environmentally safe and sound technology and know how is being applied by the project activity interalia technology transfer to the Host Party(ies) for application in the project activity	EB 34	Ann 09	The technology and equipment used in the project activity are developed and manufactured in Brazil. It is not expected any transfer of know-how or technology to the host country. CL 5: Please provide a reference supporting the statement that Francis turbines are the most widely used in hydropower plants projects in the world.	CL 5	OK
h. In CDM-SSC-PDD section A.4.3 is the estimation of emission reductions provided, as requested, in a tabular format?	EB 34	Ann 09	CAR 7: Annual Emission Reduction Estimation (tCO2e)" is not the correct phrase. It should state: Estimation of annual emission reductions in tonnes of CO2 e. (in accordance with GUIDELINES FOR COMPLETING THE SIMPLIFIED PROJECT DESIGN DOCUMENT (CDM-SSC-PDD) AND THE FORM FOR PROPOSED NEW SMALL SCALE METHODOLOGIES (CDM-SSC-NM) (Version 05)) CAR 8: Total Reduction Estimation (tCO2e)" is not the correct phrase. It should state: Total estimated reductions (tonnes of CO2 e). (in accordance with GUIDELINES FOR COMPLETING THE SIMPLIFIED PROJECT DESIGN DOCUMENT (CDM-SSC-PDD) AND THE FORM FOR PROPOSED NEW SMALL SCALE METHODOLOGIES (CDM-SSC-NM) (Version 05)) CAR 9: "Total Years of Crediting" is not the correct phrase. It should state: Total number of crediting	CAR 7 CAR 8 CAR 9 CAR 10 CL 6	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			years. (in accordance with GUIDELINES FOR COMPLETING THE SIMPLIFIED PROJECT DESIGN DOCUMENT (CDM-SSC-PDD) AND THE FORM FOR PROPOSED NEW SMALL SCALE METHODOLOGIES (CDM-SSC-NM) (Version 05)) CAR 10: Annual average during the first crediting period (tCO2e)" is not the correct phrase. It should state: Annual average of the estimated reductions over the crediting period (tCO2 e). (in accordance with GUIDELINES FOR COMPLETING THE SIMPLIFIED PROJECT DESIGN DOCUMENT (CDM-SSC-PDD) AND THE FORM FOR PROPOSED NEW SMALL SCALE METHODOLOGIES (CDM-SSC-NM) (Version 05)) CL 6: Please explain why the Total Reduction Estimation (tCO2e) isn't 102,956.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
i. In CDM-SSC-PDD section A.4.4 is information regarding Public funding provided?	EB 34	Ann 09	Yes. According to the PDD, There is no public funding provided of the small-scale project activity.	OK	OK
j. In CDM-SSC-PDD section A.4.5 are following provided?	EB 34	Ann 09			
i. Confirmation that the small-scale project activity is not a debundled component of a	EB 34	Ann 09	In relation to the Santa Carolina Project, there is no other small scale project activity which fits the criteria mentioned above; therefore, the proposed project activity is not to be considered a debundled component of a large project activity.	OK	OK
ii. Indication ir there is a registered small-scale project activity under the CDM or an application to register another small-scale project activity under the CDM	EB 34	Ann 09	Yes. Please see 3.j.i	OK	OK
a. With the same project participants	EB 34	Ann 09	Yes. Please see 3.j.i	OK	OK
b. Registered within the period of 2 years	EB 34	Ann 09	Yes. Please see 3.j.i	OK	OK
c. Whose project boundary is within 1 km of the project boundary of the proposed small-scale activity under the CDM at the closest point.	EB 34	Ann 09	Yes. Please see 3.j.i	OK	OK
k. In CDM-SSC-PDD section B.1 is the approved baseline and monitoring methodology and version no provided?	EB 34	Ann 09	CL 7: Please explain why the Version 05.2 of the “Tool to demonstration and assessment of Additionality” has been chosen for a small scale project activity.	CL 7	OK
l. In CDM-SSC-PDD section B.2 are the following provided?	EB 34	Ann 09			
i. Justification of the choice of project activity and category?	EB 34	Ann 09	Yes. The methodology AMS I.D applies to the project activities of renewable energy generation	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			connected to the grid. Therefore, Santa Carolina Project can be classified as Project Type (i): Renewable energy projects and Project Category: D. Electricity generation for a system.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
ii. Demonstration that the project activity qualifies as a small-scale project activity and that it will remain under the limits of small-scale project activity types during every year of the crediting period as per the following:For Type I : the capacity of the proposed project activity will not exceed 15 MW (or an appropriate equivalent); For Type II: the annual energy savings on account of efficiency improvements will not exceed 60 GWh (or an appropriate equivalent) in any year of the crediting period; For Type III: the estimated emission reductions of the project activity will not exceed 60 ktCO2e in any year of the crediting period.	EB 34	Ann 09	Yes. Santa Carolina's SHP has an installed capacity of 10.5 MW and qualifies as a small-scale project activity.	OK	OK
m. In CDM-SSC-PDD section B.3 is the project boundary of the project activity, based on the guidance of the applciable project category, provided?	EB 34	Ann 09	Yes. The Santa Carolina Project boundary is restricted to the physical-geographical area of localization of the SHP.	OK	OK
n. In CDM-SSC-PDD section B.4 are following provided?	EB 34	Ann 09			
i. The baseline for the proposed project activity with reference to the chosden project category	EB 34	Ann 09	Yes, the baseline is given in accordance with the chosen project category.	OK	OK
ii. Justification of key assumptions and rationales	EB 34	Ann 09	Yes.	OK	OK
iii. Transparent illustration of all data used to determine the baseline emissions (variables, parameters, data sources etc)	EB 34	Ann 09	Yes.	OK	Ok
o. In CDM-SSC-PDD section B.5 are following provided?	EB 34	Ann 09			

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
i. Explanation that the proposed project activity is additional as per options provided under attachment A to Appendix B of the simplified modalities and procedures for small-scale CDM project activities	EB 34	Ann 09	Refer to CL 7 CAR 11: Link on reference 4 not accessible. http://www.aneel.gov.br/aplicacoes/capacityBrazil/capacityBrazil.asp Refer to CL BQA 1, 2, 3, 4, 5 and CAR BQA 1 Refer to CL 14, CAR 29, CAR 30, CAR 31, CAR 32 CAR 33, CL 15, CL 16, CL 17, CL 18, CL 19, CL 20. CAR 12: The insertion of reference 2 and 3 in the third and fourth paragraph of page 18 is not correct.	CL 7 CAR 11 CAR 12 CL BQA 1, 2, 3, 4, 5 and CAR BQA 1 CL 14 CAR 29 CAR 30 CAR 31 CAR 32 CAR 33 CL 15 CL 16 CL 17 CL 18 CL 19 CL 20	OK
ii. National policies and circumstances relevant to the baseline of the proposed project activity	EB 34	Ann 09	YES	OK	OK
iii. 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. (this is part of the large scale project guidelines. It is better to be retained)	EB 34	Ann 09	CAR 13: In table 2 of the PDD, the Medium Electricity (MW) of the SHP is given: 5.64. However, in the letter sent to the CIMGC – Brazilian DNA – on the 22nd of May 2009, a medium electricity of 5.75 MW is given.	CAR 13	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			The CDM prior consideration of the project was cross checked on the UNFCCC website: http://cdm.unfccc.int/Projects/PriorCDM/notifications/index_html		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
p. In CDM-SSC-PDD section B.6.2 are following provided?	EB 34	Ann 09			
i. A compilation of information on the data and parameters that are not monitored but determined upfront so as to be available for validation	EB 34	Ann 09	YES	OK	OK
ii. The actual value applied	EB 34	Ann 09	YES	OK	OK
iii. Explanation and justification for the choice of the source of data	EB 34	Ann 09	YES	OK	OK
iv. Clear and transparent references or additional documentation in Annex 3	EB 34	Ann 09	YES	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 of measurement(s) and the measurement results	EB 34	Ann 09	Not applicable	OK	OK
q. In CDM-SSC-PDD section B.6.3 are following provided?	EB 34	Ann 09		OK	OK
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 34	Ann 09	Yes.	OK	OK
ii. Documentation how each equation is applied,	EB	Ann	Yes. For BEy Calculation it was applied the	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
in a manner that enables the reader to reproduce the calculation	34	09	equation as follows: BEy = EGBL,y * EFCO2 - EGBL,y was calculate assuming power plant operation during 24 hours per day, 30 days per month and 12 months per year. It's also assumed that the electricity generation is projected according to the SHP's medium electricity (as described in table 2 of the PDD) minus the estimated transmission losses and internal consumption (3%), resulting in 5.4708 MW as medium electricity. - EFCO2 was obtained by the average between the operating and the build margin of the Brazilian National Grid for the year 2008, as provided by the Brazilian Designated National Authority.		
iii. Additional background information and or data in Annex 3, including relevant electronic files (i.e. spreadsheets)	EB 34	Ann 09	Yes. Additional information was provided in the form of a electronic file (spreadsheet) of the ex-ante emission reduction calculations	OK	OK
iv. Emission reduction calculations for each component are provided separately if more than one component activity is applied	EB 34	Ann 09	Not applicable	OK	OK
r. In CDM-SSC-PDD section B.6.4 are the results of the ex ante estimation of emission reductions for	EB 34	Ann 09	CAR 14: The table in section B.6.4 states the crediting period of the project activity as being from	CAR 14 CAR 15	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
all years of the crediting period, in a tabular format, provided?			2010 to 2017. This is not in accordance with information in table 3, 11 and 13. CAR 15: Please modify table 14 by using the EXACT table as provided by the GUIDELINES FOR COMPLETING THE SIMPLIFIED PROJECT DESIGN DOCUMENT (CDM-SSC-PDD) AND THE FORM FOR PROPOSED NEW SMALL SCALE METHODOLOGIES (CDM-SSC-NM) (Version 05).		
s. In CDM-SSC-PDD section B.7.1 are following provided?	EB 34	Ann 09		OK	OK
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 34	Ann 09	CAR 16: In B.7.1, third paragraph, please correct the phrase: All data collected as part of the monitoring will be archived electronically and kept for at least two (2) years after the last period of accreditation. Please correct the use of the word: “accreditation”. CAR 17: Please modify the tables used in this section by using the EXACT table as provided by the GUIDELINES FOR COMPLETING THE SIMPLIFIED PROJECT DESIGN DOCUMENT (CDM-SSC-PDD) AND THE FORM FOR PROPOSED NEW SMALL SCALE METHODOLOGIES (CDM-SSC-NM) (Version 05). More specifically, the following terminology is not correct:	CAR 16 CAR 17	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			- "Data / Parameter" - "Data Unit" - "Source of Data to be used" - "Description of measurement methods and procedures to be applied" - "QA / QC procedures to be applied"		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
ii. For each below parameter the following information, using the table provided:	EB 34	Ann 09		OK	OK
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 justify which data sources should be preferred	EB 34	Ann 09	CL 8: Regarding Data / Parameter: - Electricity Supplied to the Grid (EG BL, y) - Total Electricity Generated (TEGBL,y) - Reservoir Area (APJ) - Please give more detailed information on the SOURCE of data to be used. Also, regarding the Reservoir Area (APJ), please explain how the "Enterprise Previous License" can be used as source to monitor the reservoir area during the project crediting period. CAR 18: Please correct the Data unit and/or the Value of data: Reservoir Area (APJ). CAR 19: Please correct Data Unit and/or Value of Data: Installed Capacity.	CL 8 CAR 18 CAR 19	OK
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	EB 34	Ann 09	CL 9: Regarding Data / Parameter: Reservoir Area (APJ): please explain how PPs plan to monitor this data using the entire project crediting period. Please explain this as it is not clear how this will be done as the PDD only states that this data will be checked by local environmental agency during the	CL 9 CL 3	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
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.			licensing period. Also, please see CL 3 on the necessity of the provision of data regarding the energetic density of the reservoir.		
iii. A detailed description of the monitoring plan.	EB 34	Ann 09			
a. 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 34	Ann 09	Yes.	OK	Ok
b. Thes responsibilities for and institutional arrangements for data collection and archiving	EB 34	Ann 09	Yes.	OK	Ok
c. Does the monitoring plan reflect good monitoring practice appropriate to the type of project activity	EB 34	Ann 09	Yes.	OK	Ok
d. Relevant further background information in Annex 4	EB 34	Ann 09	Yes.	OK	Ok
t. In CDM-SSC-PDD section B.8 are following provided	EB 34	Ann 09			

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
i. Date of completion of the application of the methodology to the project activity study in DD/MM/YYYY	EB 34	Ann 09	Yes. June 10, 2009	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 34	Ann 09	Yes. Eduardo Baltar de Souza Leão Enerbio Consultoria Ltda. Porto Alegre, Brazil. Phone: 55 51 3392-1505 Email: eduardo@enerbio-rs.com.br www.enerbio-rs.com.br	OK	Ok
iii. Indicated if the person/entity is also a project participant listed in Annex 1	EB 34	Ann 09	Enerbio Consultoria is also a project participant	OK	Ok
u. In CDM-SSC-PDD section C.1.1 are following provided?	EB 34	Ann 09		OK	OK
i. The starting date of a CDM project activity 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 34	Ann 09	CAR 20: the following phrase is not in accordance with the definition for "Starting date of a CDM project activity (P - SSC)" given by the Glossary of CDM terms (Version 04): "This document [*letters to the Brazilian DNA and CDM EB stating PP's intention to turn SHP Santa Carolina into a CDM Project activity*] respects the notification deadline of 6 months before the project activity start, once it was already sent before the beginning of the SHP construction."	CAR 20	OK
ii. A description of how this start date has been determined, and a description of the evidence available to support this start date	EB 34	Ann 09	See CAR 20.	CAR 20	OK
iii. If this starting date is earlier than the date of publication of the CDM-SSC-PDD for global	EB 34	Ann 09	See CAR 20.	CAR 20	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
stakeholder consultation by a DOE, does Section B.5 above contain a description of how the benefits of the CDM were seriously considered prior to the starting date (EB41, Para 68).? (though this is in guideline for large scale projects, it is advisable to maintain this for small scale projects as well)					
v. In CDM-SSC-PDD section C.1.2 is the expected operational lifetime of the project activity in years and months provided?	EB 34	Ann 09	Yes. 30 years.	OK	OK
w. In CDM-SSC-PDD section C.2 is it statet whether the project activity will use a renewable or a fixed crediting period and completed C.2.1 or C.2.2 accordingly?	EB 34	Ann 09	Yes. The project activity uses renewable crediting periods.	OK	OK
x. In CDM-SSC-PDD section C.2.1 is it indicated thath 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 34	Ann 09	Yes.	OK	OK
y. In CDM-SSC-PDD section C.2.1.1 are the dates in the following format: (DD/MM/YYYY) provided?	EB 34	Ann 09	Yes. 01/06/2011.	OK	OK
z. In CDM-SSC-PDD section C.2.1.2 is the length of the first crediting period in years and months?	EB 34	Ann 09	Yes. 7 years.	OK	OK
aa. In CDM-SSC-PDD section C.2.2 is it indicated fixed crediting period at most ten (10) years	EB 34	Ann 09	Not applicable	OK	OK
bb. In CDM-SSC-PDD section C.2.2.1 are the dates	EB	Ann	Not applicable	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
in the format (DD/MM/YYYY) provided?	34	09			
cc. In CDM-SSC-PDD section C.2.2.2 is the length of the crediting period in years and months provided?	EB 34	Ann 09	Not applicable	OK	OK
dd. In CDM-SSC-PDD section D.1 is the documentation on the analysis of the environmental impacts, if required by Host Party, provided?	EB 34	Ann 09	CL 10: Please provide the document containing the Environmental Impact Analysis (EIA) of the SHP.	CL 10	OK
ee. In CDM-SSC-PDD section E.1 are following provided?	EB 34	Ann 09			
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 34	Ann 09	Yes. 15 letters were sent to local stakeholders in accordance with GUIDELINES FOR COMPLETING THE SIMPLIFIED PROJECT DESIGN DOCUMENT (CDM-SSC-PDD) AND THE FORM FOR PROPOSED NEW SMALL SCALE METHODOLOGIES (CDM-SSC-NM) (Version 05)	OK	OK
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 34	Ann 09	Yes.	OK	OK
iii. The local stakeholder process has been completed before submitting the proposed project activity to the DOE for validation	EB 34	Ann 09	Yes.	OK	OK
ff. In CDM-SSC-PDD section E.2 are following provided?	EB 34	Ann 09	Yes.	OK	OK
i. Local stakeholders that have made comments	EB	Ann	Yes.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
identified	34	09			
ii. Asummary of these comments	EB 34	Ann 09	Yes.	OK	OK
gg. In CDM-SSC-PDD section E.3 is and explanation of how due account have been taken of comments received from local stakeholders provided?	EB 34	Ann 09	Yes.	OK	OK
hh. In CDM-SSC-PDD Annex 1 are following provided?	EB 34	Ann 09			
i. Contact information of project participants	EB 34	Ann 09	Yes.	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 34	Ann 09	Yes.	OK	OK
ii. In CDM-SSC-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 34	Ann 09	Yes. No public funding coming from Annex I countries was used in this project.	OK	OK
jj. In CDM-SSC-PDD Annex 3 is the background information used in the application of the baseline methodology provided?	EB 34	Ann 09	Yes.	OK	OK
kk. In CDM-SSC-PDD Annex 4 is the background information used in the application of the monitoring methodology provided?	EB 34	Ann 09	Yes.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
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	No, refer to CAR 4, CAR 6, CAR 13, CL 1, CL 3, CL 4.	CAR 4 CAR 6 CAR 13 CL 1 CL 3 CL 4	OK
b. Is the description of the proposed CDM project activity as contained in the PDD:	VVM	59	Refer to 4.a	OK	OK
i. sufficiently covering all relevant elements?	VVM	59	Refer to 4.a	OK	OK
ii. acurate?	VVM	59	Refer to 4.a	OK	OK
iii. providing the reader with a clear understanding of the nature of the proposed CDM project activity?	VVM	59	Refer to 4.a	OK	OK
c. Is the proposed CDM project activity in existing facilities or or utilizing existing equipments?	VVM	60	No. The proposed CDM activity is a green field activity. It will not use existing equipments.	OK	OK
d. Is the CDM project activity one of the following types:	VVM	60			
i. Large scale?	VVM	60	No. The activity is a small scale CDM project activity in accordance with Modalities and procedures for a clean development mechanism as defined in Article 12 of the Kyoto Protocol, paragraph 6.c.i: Renewable energy project activities with a maximum output capacity equivalent of up to 15 megawatts (or an appropriate equivalent).	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
ii. Non-bundled small scale projects with emission reductions exceeding 15,000 tonnes per year?	VVM	60	No. Project is a small scale activity and its ex-ante calculation for its annual average emission reduction during the first crediting period (tCO2e) is 14,708.	OK	OK
iii. Bundled small scale projects, each with emission reductions not exceeding 15,000 tonnes?	VVM	60	No. Please see 3.j.i	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	Not applicable.	OK	OK
f. If yes to (d.iii) above, was the number of physical site visits base on samping?	VVM	60	Not applicable.	OK	OK
g. If yes is the sampling size appropriately justified through statistical analysis?	VVM	60	Not applicable.	OK	OK
h. For all other proposed CDM project activities not referred to in paragraphs 59 – 60, and for other individual proposed small scale CDM project activities with emission reductions not exceeding 15,000 tonnes per year, was a physical site inspection conducted?	VVM	62	Yes. A physical site visit was conducted on the 21st of August, 2009. The SHP construction is scheduled to start in 02/01/2010. Therefore, no activity could be observed on site.	OK	OK
i. If no:	VVM	62			
i. Was the validation undertaken by reviewing available designs and feasibility studies, conducting comparison analysis to equivalent projects, as appropriate?	VVM	62	Not applicable.	OK	OK
ii. Was it appropriately justified?	VVM	62	Not applicable.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
j. Does the proposed CDM project activity involve the alteration of an existing installation or process?	VVM	63	No. Please see 4.c.	OK	OK
k. If yes, does the project description clearly state the differences resulting from the project activity compared to the pre-project situation?	VVM	63	Not applicable.	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 methodology used is the Version 14 of AMS I.D – "Grid connected renewable electricity generation". This methodology complies with the methodologies previously approved by the CDM Executive Board.	OK	OK
b. Is the selected methodology applicable to the project activity?	VVM	66	Refer to (5.b.a) below	-	-
c. Had the selected methodology been correctly applied?	VVM	66	Refer to (5.b.c) 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	Refer to Section 6 below.	-	-
h. Had the selected methodology been correctly	VVM	67	Refer to Section 7 below.	-	-

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
applied with respect to monitoring methodology?					
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?	VVM	68	Yes. The methodology AMS I.D applies to the project activities of renewable energy generation connected to the grid. Therefore, Santa Carolina Project can be classified in the I.D. category, because it presents the following characteristics: 1. The project activity consists on the supply of clean hydroelectric electricity to the Brazilian National Interconnected System through the implantation and operation of the Small Hydroelectric Power Plant (SHP) Santa Carolina, displacing, this way, electricity generated from fossil fuels that would occur in the absence of the project. 2. The project activity has a total installed capacity of 10.50MW, not exceeding 15MW of maximum capacity.	OK	OK
b. Is the methodology correctly quoted?	VVM	69	Yes. "Grid connected renewable electricity generation"	OK	OK
c. Are the applicability conditions of the methodology met?	VVM	70	Applicability conditions: 1. This category comprises renewable energy generation units, such as photovoltaics, hydro, tidal/wave, wind, geothermal and renewable biomass, that supply electricity to and/or displace electricity from an electricity distribution system that is or would have been supplied by at least one	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			fossil fuel fired generating unit. Yes. Project activity will generate renewable energy form a small hydropower plant. This SHP will supply electricity to and/or displace electricity from an electricity distribution system that is or would have been supplied by at least one fossil fuel fired generating unit. 2. If the unit added has both renewable and non-renewable components (e.g.,. a wind/diesel unit), the eligibility limit of 15 MW for a small-scale CDM project activity applies only to the renewable component. If the unit added co-fires fossil fuel1, the capacity of the entire unit shall not exceed the limit of 15 MW. Not applicable as the project activity will only have a renewable component. 3. Combined heat and power (co-generation) systems are not eligible under this category. Yes. The project activity will not co-generate energy. 4. In the case of project activities that involve the addition of renewable energy generation units at an existing renewable power generation		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			facility, the added capacity of the units added by the project should be lower than 15 MW and should be physically distinct2 from the existing units. Not applicable 5. Project activities that seek to retrofit or modify an existing facility for renewable energy generation are included in this category. To qualify as a small-scale project, the total output of the modified or retrofitted unit shall not exceed the limit of 15 MW. Not applicable.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
d. Is the project activity expected to result in emissions other than those allowed by the methodology?	VVM	70	No. project activity will not result in emissions other than those allowed by the methodology	OK	OK
e. Is the choice of the methodology justified?	VVM	70	Yes, please se b.a.	OK	OK
f. Have the project participants shown that the project activity meets each of the applicability conditions or the approved methodology?	VVM	70	Refer to (5.b.c) above	-	-
g. 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	70	Refer to CL 7. Regarding the use of the "Tool to calculate the emission factor for an electricity system" Version 1.01, yes project participants have shown that the project activity meets each of the applicability conditions, which are: This tool may be referred to in order to estimate the OM [*operating margin*], BM [*build margin*] and/or CM [*combined margin*] for the purpose of calculating baseline emissions for a project activity substitutes electricity from the grid, i.e. where a project activity supplies electricity to a grid (…)	CL 7	OK
h. 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	70	Yes. See 5.b.i below.		
i. 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	VVM	70	In general, the PPD was cross checked using the official notification with ANEEL document 1919/2007-SGH/ANEEL.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
choices)			The applicability conditions are: 1. This category comprises renewable energy generation units, such as photovoltaics, hydro, tidal/wave, wind, geothermal and renewable biomass, that supply electricity to and/or displace electricity from an electricity distribution system that is or would have been supplied by at least one fossil fuel fired generating unit. This was crosschecked with Processo_energia_assegurada_SGH_Ago2009. 2. If the unit added has both renewable and non-renewable components (e.g.,. a wind/diesel unit), the eligibility limit of 15 MW for a small-scale CDM project activity applies only to the renewable component. If the unit added co-fires fossil fuel1, the capacity of the entire unit shall not exceed the limit of 15 MW. This was crosschecked with “Licença Prévia” document - LP nr. 458/2009 DL 3. Combined heat and power (co-generation) systems are not eligible under this category.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			This was crosschecked with Processo_energia_assegurada_SGH_Ago2009. 4. In the case of project activities that involve the addition of renewable energy generation units at an existing renewable power generation facility, the added capacity of the units added by the project should be lower than 15 MW and should be physically distinct2 from the existing units. This was crosschecked with "Licença Prévia" document - LP nr. 458/2009 DL. 5. Project activities that seek to retrofit or modify an existing facility for renewable energy generation are included in this category. To qualify as a small-scale project, the total output of the modified or retrofitted unit shall not exceed the limit of 15 MW. This was crosschecked with "Licença Prévia" document - LP nr. 458/2009 DL.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
j. Can a determination regarding the applicability of the selected methodology to the proposed CDM project activity be made?	VVM	71	Yes.	OK	Ok
k. If no, clarification of the methodoloy was requested, in accordance with the guidance provided by the CDM Executive Board?	VVM	71	Not applicable	OK	Ok
l. If answer to (5.b.c) above is “no”, revision or deviation from the methodology was requested, in accordance with the guidance provided by the CDM Executive Board?	VVM	72	Not applicable	OK	Ok
m. If yes to (5.b.k) and (5.b.l) above, a request for registration was submited before the CDM Executive Board has approved the proposed deviation or revision?	VVM	73	Not applicable	OK	Ok
c. Project boundary					
a. Does the PDD correctly describe the project boundary, including the physical delineation of the proposed CDM project activity included within the project boundary for the purpose of calculating project and baseline emissions for the proposed CDM project activity?	VVM	77	Refer to 3.m	OK	OK
b. Is the delineation in the PDD of the project boundary correct?	VVM	78	Refer to 5.c.a.	OK	OK
c. Does the delineation in the PDD of the project boundary meet the requirements of the selected baseline?	VVM	78	Refer to 5.c.a.	OK	OK
d. Have all sources and GHGs required by the methodology been included within the project boundary?	VVM	78	Yes.	OK	Ok

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
e. Does the methodology allow project participant to choose whether a source or gas is to be included within the project boundary?	VVM	78	No.	OK	Ok
f. If yes, have the project participants justified that choice?	VVM	78	Not applicable	OK	Ok
g. If yes, is the justification provided reasonable? (provide reference to the supporting documented evidence provided by the project participants)	VVM	78	Not applicable	OK	Ok
d. Baseline identification					
a. Does the PDD identify the baseline for the proposed CDM project activity, defined as the scenario that reasonably represents the anthropogenic emissions by sources of GHGs that would occur in the absence of the proposed CDM project activity?	VVM	80	CAR 21: The following phrase is not correct: "According to the version 14 of methodology AMS I.D - Grid connected renewable electricity generation – the baseline of the Project component related to renewable electricity generation connected to the grid is the kWh produced by the renewable generation unit multiplied by a emission factor (measured by kg CO2e/kWh) (...)" Moreover, emission factor should be measured in kg CO2e/kWh but in t CO2e/kWh.	CAR 21	OK
b. Has any procedure contained in the methodology to identify the most reasonable baseline scenario, been correctly applied?	VVM	81	CL 11: Please include information regarding the most reasonable baseline scenario: the scenario that reasonably represents the anthropogenic emissions by sources of GHGs that would occur in the absence of the proposed CDM project activity. Moreover, please provide detailed information on what would occur in the absence of the activity.	CL 11	OK
c. Does the selected methodology require use of tools (such as the "Tool for the demonstration and assessment of additionality" and the	VVM	81	No.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
"Combined tool to identify the baseline scenario and demonstrate additionality") to establish the baseline scenario?					
d. If yes, was the methodology consulted on the application of thes tools? (In such cases, the guidance in the methodology shall supersede the tool.)	VVM	81	Not applicable.	OK	OK
e. Does the methodology require several alternative scenarios to be considered in the identification of the most reasonable baseline scenario?	VVM	82	No.	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	82	Not applicable.	OK	OK
g. Has any reasonable alternative scenario been excluded?	VVM	82	Not applicable.	OK	OK
h. Is the baseline scenario identified reasonably supported by:	VVM	83			
i. Assumptions?	VVM	83	Yes. The baseline of the Project should be calculated by multiplying the expected renewable electricity generation connected to the grid (kWh) by the emission factor of the grid.	OK	OK
ii. Calculations?	VVM	83	A spreadsheet was provided to clarify how the baseline scenario was calculated. During validation, this spreadsheet was analysed. The baseline scenario identified was reasonable supported by calculations.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
iii. Rationales?	VVM	83	Yes. See 3.h.i	OK	OK
i. Are the documents and sources referred to in the PDD correctly quoted and interpreted?	VVM	83	CAR 22: In the phrase "From this moment on, the Brazilian Designated National Authority (...) approved by the Executive Board of CDM and published in annex 12 of CE's Report 35". Specifically, please correct the use of the abbreviation "CE".	CAR 22	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	83	Yes, the PDD's information was cross checked with the following source: Brazilian DNA. The following Link was accessed for cross checking purposes on September 7th 2009: http://www.mct.gov.br/index.php/content/view/303077.html#ancora	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	84	Yes.	OK	OK
l. Have all relevant policies and circumstances been identified and correctly considered in the PDD, in accordance with the guidance by the CDM Executive Board?	VVM	84	Yes.	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	VVM	85	Refer to CL 11.	CL 11	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
project activity?					
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	88	Project emission: PDD states that, in accordance to the methodology chosen, no project emissions need to be calculated and/or considered. This statement is in accordance with the chosen methodology, more specifically, with paragraph 13 of the chose methodology. Regarding the calculation for establishing the emission factor: CL 12: Please insert reference for the following statement: "This way, the Brazilian DNA defined that the National Interconnected System must be considered as a unique System and that this configuration will be valid for calculating the emission factor of CO2 used to calculate the emission reduction of greenhouse gases in CDM Projects of electricity generation connected to the grid." (PDD, page 20) CL 13: Please insert reference for the following statement: "This method was chosen because, according to Brazilian DNA, it is the most accurate and the most recommended if information is available." (PDD, page 21).	CL 12 CL 13 CAR23 CAR24	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			CAR 23: In the phrases: "At the moment of the PDD development, the most recent data published by the Designated National Authority was the build margin emission factor for the year 2008 dispatch and it will be used to the ex-ante estimation of CER generation." (PDD, page 21). And "At the moment of PDD development, the most recent data published by the DNA the operation margin emission factors for 2008 dispatch and will be used to the ex-ante estimation of CER generation." (PDD, page 22) The "build margin" and "operation margin" should be swapped. CAR 24: In B.6.3., please exclude the comment: "Formatado: Inglês (EUA)".		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
b. Have the equations and parameters in the PDD been correctly applied with respect those in the select approved methodology?	VVM	89	No. See CAR 4, 6 and 13. See also CL 4	CAR 4 CAR 6 CAR13 CL 4	OK
c. Does the methodology provide for selection between different options for equations or parameters?	VVM	89	Yes, regarding the equation and parameters used to calculate the emission factor.	OK	OK
d. 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	89	Yes. The equations and parameters used for the calculation of the emission factor have been clearly justified.	OK	OK
e. If yes, have correct equations and parameters been used, in accordance with the methodology selected?	VVM	89	Refer to (5.e.b) above	-	-
f. Will data and parameters be monitored throughout the crediting period of the proposed CDM project activity?	VVM	90	Yes.	OK	OK
g. If no, and these data and parameters will remain fixed throughout the crediting period, are all data sources and assumptions:	VVM	90	Not applicable.	OK	OK
i. Appropriate and correct?	VVM	90	Not applicable.	OK	OK
ii. Applicable to the proposed CDM project activity?	VVM	90	Not applicable.	OK	OK
iii. Resulting in a conservative estimate of the emission reductions?	VVM	90	Not applicable.	OK	OK
h. Will data and parameters be monitored on implementation and hence become available only after validation of the project activity?	VVM	90	Yes. The following data and parameters will be monitored: - Electricity Supplied to the Grid	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			- Total Electricity Generated - Reservoir Area - Installed Capacity - Combined Margin CO2 Emission Factor		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
i. If yes, are the estimates provided in the PDD for these data and parameters reasonable?	VVM	90	No. Refer to CL 8 and 9.	CL 8 CL 9	OK
6. Additionality of a project activity					
a. Does the PDD describe how a proposed CDM projet activity is additional?	VVM	93	Yes. The PDD has used the tool "Annex A of attachment B of Simplified modalities and procedures for small-scale CDM project activities". The following barriers were addressed: - Financial barrier; - Barrier due to prevailing practice. Refer to CL 7 and to section 6.c below, which deals with barriers.	CL 7	OK
b. Does the CDM-PDD state the latest version of the additionality tool being used?	VVM	94	Yes. The tool stated in the PDD: The Annex A of attachment B of Simplified modalities and procedures for small-scale CDM project activities. According to Annex A, project participants shall provide an explanation to show that the project activity would not have occurred anyway due to at least one of the following barriers: Investment barrier; Technological barrier; Barrier due to prevailing practice; Other barriers.	OK	OK
c. Were the following steps of the tool to assess additionality used:	EB 39	Ann 10		OK	OK
i. Identification of alternatives to the project activity?	EB 39	Ann 10	Not applicable. The tool used for small scale project is: "Annex A of attachment B of Simplified modalities and procedures for small-scale CDM project activities" for assessing project's	CAR 25 CAR 26 CAR 27 CAR 28	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			Additionality. CAR 25: Please update Table 5: Sources of Energy Explored in Brazil, as it is no correct when Link was accessed during validation (on 26/08/09). CAR 26: Link to ANEEL in reference 6 (page 11) is not accessible. CAR 27: Please provide reference to Graph 1: Evolution of Fossil Fueled Installed Capacity (MWh) Decennial Plan for Electric Energy Expansion 2008-2017 (page 11) CAR 28: Reference to table 6 (note7) is not correct CAR 29: Link on note 18 not accessible.	CAR 29	

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
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	No.	OK	OK
iii. Barriers analysis?	EB 39	Ann 10	Yes. The following 2 barriers were used: - Financial barrier; - Barrier due to prevailing practice.	OK	OK
iv. Common practice analysis?	EB 39	Ann 10	No.	OK	OK
d. In step 1 (i) have all the sub-steps as below been followed?	EB 39	Ann 10	Not applicable. The tool used to assess the additionality was "Annex A of attachment B of Simplified modalities and procedures for small-scale CDM project activities".	OK	OK
i. Sub-step 1a: Define alternatives to the project activity	EB 39	Ann 10	Not applicable. The tool used to assess the additionality was "Annex A of attachment B of Simplified modalities and procedures for small-scale CDM project activities".	OK	OK
ii. Sub-step 1b: Consistency with mandatory laws and regulations	EB 39	Ann 10	Not applicable. The tool used to assess the additionality was "Annex A of attachment B of Simplified modalities and procedures for small-scale CDM project activities".	OK	OK
e. Have the following alternatives been included while defining alternatives as per sub-step 1a?	EB 39	Ann 10	Not applicable. The tool used to assess the additionality was "Annex A of attachment B of Simplified modalities and procedures for small-scale CDM project activities".	OK	OK
i. (a) The proposed project activity undertaken without being registered as a CDM project activity;	EB 39	Ann 10	Not applicable. The tool used to assess the additionality was "Annex A of attachment B of Simplified modalities and procedures for small-scale CDM project activities".	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
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	Not applicable. The tool used to assess the additionality was "Annex A of attachment B of Simplified modalities and procedures for small-scale CDM project activities".	OK	OK
iii. (c) If applicable, continuation of the current situation (no project activity or other alternatives undertaken).	EB 39	Ann 10	Not applicable. The tool used to assess the additionality was "Annex A of attachment B of Simplified modalities and procedures for small-scale CDM project activities".	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	Not applicable. The tool used to assess the additionality was "Annex A of attachment B of Simplified modalities and procedures for small-scale CDM project activities".	OK	OK
g. Has the outcome of Step 1a: Identified realistic and credible alternative scenario(s) to the project activity done correctly? Please briefly mention the outcome.	EB 39	Ann 10	Not applicable. The tool used to assess the additionality was "Annex A of attachment B of Simplified modalities and procedures for small-scale CDM project activities".	OK	OK
h. Is the alternative(s) in compliance with all mandatory applicable legal and regulatory requirements, even if these laws and regulations have objectives other than GHG reductions, e.g. to mitigate local air pollution.?	EB 39	Ann 10	Not applicable. The tool used to assess the additionality was "Annex A of attachment B of Simplified modalities and procedures for small-scale CDM project activities".	OK	OK
i. If an alternative does not comply with all mandatory applicable legislation and regulations,	EB 39	Ann 10	Not applicable. The tool used to assess the additionality was "Annex A of attachment B of	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
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?			Simplified modalities and procedures for small-scale CDM project activities".		
j. Has the outcome of Step 1b: Identified realistic and credible alternative scenario(s) to the project activity that are in compliance with mandatory legislation and regulations taking into account the enforcement in the region or country and EB decisions on national and/or sectoral policies and regulations done correctly? Please state the outcome.	EB 39	Ann 10	Not applicable. The tool used to assess the additionality was "Annex A of attachment B of Simplified modalities and procedures for small-scale CDM project activities".	OK	OK
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 barrier analysis in accordance with the tool used to assess the additionality: "Annex A of attachment B of Simplified modalities and procedures for small scale project. See therefore 6.c.ii	OK	OK
l. In step 2, have all the sub-steps as below been followed?	EB 39	Ann 10	PP has selected barrier analysis in accordance with the tool used to assess the additionality: "Annex A of attachment B of Simplified modalities and procedures for small scale project. See therefore 6.c.ii	OK	OK
i. Sub-step 2a: Determine appropriate analysis method;	EB 39	Ann 10	PP has selected barrier analysis in accordance with the tool used to assess the additionality: "Annex A of attachment B of Simplified modalities and procedures for small scale project. See	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			therefore 6.c.ii		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
ii. Sub-step 2b: Option I. Apply simple cost analysis;	EB 39	Ann 10	PP has selected barrier analysis in accordance with the tool used to assess the additionality: "Annex A of attachment B of Simplified modalities and procedures for small scale project. See therefore 6.c.ii	OK	OK
iii. Sub-step 2b: Option II. Apply investment comparison analysis;	EB 39	Ann 10	PP has selected barrier analysis in accordance with the tool used to assess the additionality: "Annex A of attachment B of Simplified modalities and procedures for small scale project. See therefore 6.c.ii	OK	OK
iv. Sub-step 2b: Option III. Apply benchmark analysis;	EB 39	Ann 10	PP has selected barrier analysis in accordance with the tool used to assess the additionality: "Annex A of attachment B of Simplified modalities and procedures for small scale project. See therefore 6.c.ii	OK	OK
v. Sub-step 2c: Calculation and comparison of financial indicators (only applicable to Options II and III);	EB 39	Ann 10	PP has selected barrier analysis in accordance with the tool used to assess the additionality: "Annex A of attachment B of Simplified modalities and procedures for small scale project. See therefore 6.c.ii	OK	OK
vi. Sub-step 2d: Sensitivity analysis (only applicable to Options II and III).	EB 39	Ann 10	PP has selected barrier analysis in accordance with the tool used to assess the additionality: "Annex A of attachment B of Simplified modalities and procedures for small scale project. See therefore 6.c.ii	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	PP has selected barrier analysis in accordance with the tool used to assess the additionality: "Annex A of attachment B of Simplified modalities and procedures for small scale project. See	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			therefore 6.c.ii		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
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	PP has selected barrier analysis in accordance with the tool used to assess the additionality: "Annex A of attachment B of Simplified modalities and procedures for small scale project. See therefore 6.c.ii	OK	OK
ii. Otherwise, use the investment comparison analysis (Option II) or the benchmark analysis (Option III). Specify option used with justification.	EB 39	Ann 10	PP has selected barrier analysis in accordance with the tool used to assess the additionality: "Annex A of attachment B of Simplified modalities and procedures for small scale project. See therefore 6.c.ii	OK	OK
n. Has the below guideline followed for sub-step 2b Option I. Apply simple cost analysis? Document the costs associated with the CDM project activity 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	PP has selected barrier analysis in accordance with the tool used to assess the additionality: "Annex A of attachment B of Simplified modalities and procedures for small scale project. See therefore 6.c.ii	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	PP has selected barrier analysis in accordance with the tool used to assess the additionality: "Annex A of attachment B of Simplified modalities and procedures for small scale project. See therefore 6.c.ii	OK	OK
p. Has the below guideline followed for Sub-step 2b: Option III. Apply benchmark analysis?	EB 39	Ann 10	PP has selected barrier analysis in accordance with the tool used to assess the additionality: "Annex A of attachment B of Simplified modalities and procedures for small scale project. See therefore 6.c.ii	OK	OK
i. Identify the financial/economic indicator, such as IRR, most suitable for the project type and	EB 39	Ann 10	PP has selected barrier analysis in accordance with the tool used to assess the additionality:	OK	OK

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decision context.			"Annex A of attachment B of Simplified modalities and procedures for small scale project. See therefore 6.c.ii		
ii. When applying Option II or Option III, the financial/economic analysis shall be based on parameters that are standard in the market, considering the specific characteristics of the project type, but not linked to the subjective profitability expectation or risk profile of a particular project developer. Only in the particular case where the project activity can be implemented by the project participant, the specific financial/economic situation of the company undertaking the project activity can be considered.	EB 39	Ann 10	PP has selected barrier analysis in accordance with the tool used to assess the additionality: "Annex A of attachment B of Simplified modalities and procedures for small scale project. See therefore 6.c.ii	OK	OK
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	EB 39	Ann 10	PP has selected barrier analysis in accordance with the tool used to assess the additionality: "Annex A of attachment B of Simplified modalities and procedures for small scale project. See therefore 6.c.ii	OK	OK

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cost of the company), only in the particular case referred to above in 2. The project developers shall demonstrate that this benchmark has been consistently used in the past, i.e. that project activities under similar conditions developed by the same company used the same benchmark; (d) Government/official approved benchmark where such benchmarks are used for investment decisions; (e) Any other indicators, if the project participants can demonstrate that the above Options are not applicable and their indicator is appropriately justified. Please specify benchmark and justify.					
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	PP has selected barrier analysis in accordance with the tool used to assess the additionality: "Annex A of attachment B of Simplified modalities and procedures for small scale project. See therefore 6.c.ii	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	EB 39	Ann 10	PP has selected barrier analysis in accordance with the tool used to assess the additionality: "Annex A of attachment B of Simplified modalities and procedures for small scale project. See therefore 6.c.ii	OK	OK

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practice for the selection of public investments in the host country.					
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	PP has selected barrier analysis in accordance with the tool used to assess the additionality: "Annex A of attachment B of Simplified modalities and procedures for small scale project. See therefore 6.c.ii	OK	OK
iii. Justify and/or cite assumptions.	EB 39	Ann 10	PP has selected barrier analysis in accordance with the tool used to assess the additionality: "Annex A of attachment B of Simplified modalities and procedures for small scale project. See therefore 6.c.ii	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	PP has selected barrier analysis in accordance with the tool used to assess the additionality: "Annex A of attachment B of Simplified modalities and procedures for small scale project. See therefore 6.c.ii	OK	OK
v. Assumptions and input data for the investment analysis shall not differ across the project activity and its alternatives, unless differences can be well substantiated.	EB 39	Ann 10	PP has selected barrier analysis in accordance with the tool used to assess the additionality: "Annex A of attachment B of Simplified modalities and procedures for small scale project. See therefore 6.c.ii	OK	OK
vi. Present in the CDM-PDD a clear comparison of the financial indicator for the proposed CDM activity.Please specify details for above.	EB 39	Ann 10	PP has selected barrier analysis in accordance with the tool used to assess the additionality: "Annex A of attachment B of Simplified modalities and procedures for small scale project. See therefore 6.c.ii	OK	OK
r. Has the below guideline followed for Sub-step 2d: Sensitivity analysis (only applicable to Options II	EB 39	Ann 10	PP has selected barrier analysis in accordance with the tool used to assess the additionality:	OK	OK

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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.			"Annex A of attachment B of Simplified modalities and procedures for small scale project. See therefore 6.c.ii		
s. Has the outcome of Step 2 clearly mentioned with justification?	EB 39	Ann 10	PP has selected barrier analysis in accordance with the tool used to assess the additionality: "Annex A of attachment B of Simplified modalities and procedures for small scale project. See therefore 6.c.ii	OK	OK
t. In step 3: Barrier analysis have all the sub-steps as below been followed?	EB 39	Ann 10		OK	OK
i. Sub-step 3a: Identify barriers that would prevent the implementation of the proposed CDM project activity;	EB 39	Ann 10	The tool for assessing the project Additionality was the "Annex A of attachment B of Simplified modalities and procedures for small-scale CDM project activities". Therefore, see item "c" below.	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	The tool for assessing the project Additionality was the "Annex A of attachment B of Simplified modalities and procedures for small-scale CDM project activities". Therefore, see item "c" below.	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		OK	OK
i. (a) Investment barriers: For alternatives undertaken and operated by private entities: Similar activities have only been implemented	EB 39	Ann 10	The tool for assessing the project Additionality was the "Annex A of attachment B of Simplified modalities and procedures for small-scale CDM	OK	OK

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with grants or other non-commercial finance terms. No private capital is available from domestic or international capital markets due to real or perceived risks associated with investment in the country where the proposed CDM project activity is to be implemented, as demonstrated by the credit rating of the country or other country investments reports of reputed origin.			project activities". Therefore, see item "c" below.		
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	Not applicable	OK	OK
iii. (c) Barriers due to prevailing practice: The project activity is the "first of its kind".	EB 39	Ann 10	The tool for assessing the project Additionality was the "Annex A of attachment B of Simplified	OK	OK

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			modalities and procedures for small-scale CDM project activities". Therefore, see item "c" below.		

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iv. (d) Other barriers, preferably specified in the underlying methodology as examples.	EB 39	Ann 10	Not applicable.	OK	OK
v. Has the outcome from Step 3a clearly mentioned in PDD?	EB 39	Ann 10		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	The tool for assessing the project Additionality was the “Annex A of attachment B of Simplified modalities and procedures for small-scale CDM project activities”. Therefore, see item “c” below.	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	The tool for assessing the project Additionality was the “Annex A of attachment B of Simplified modalities and procedures for small-scale CDM project activities”. Therefore, see item “c” below.	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	The tool for assessing the project Additionality was the “Annex A of attachment B of Simplified modalities and procedures for small-scale CDM project activities”. Therefore, see item “c” below.	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	The tool for assessing the project Additionality was the “Annex A of attachment B of Simplified modalities and procedures for small-scale CDM project activities”. Therefore, see item “c” below.	OK	OK

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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	The tool for assessing the project Additionality was the "Annex A of attachment B of Simplified modalities and procedures for small-scale CDM project activities". Therefore, see item "c" below.	OK	OK
y. In step 4: Common practise analysis have all the sub-steps as below followed?	EB 39	Ann 10	Not applicable	OK	OK
i. Sub-step 4a: Analyze other activities similar to the proposed project activity;	EB 39	Ann 10	Not applicable	OK	OK
ii. Sub-step 4b: Discuss any similar Options that are occurring.	EB 39	Ann 10	Not applicable	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	EB 39	Ann 10	Not applicable	OK	OK

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analysis. Provide documented evidence and, where relevant, quantitative information. On the basis of that analysis, describe whether and to which extent similar activities have already diffused in the relevant region.					
aa. Has the below guideline followed for Sub-step 4b: Discuss any similar Options that are occurring? If similar activities are identified, then it is necessary to demonstrate why the existence of these activities does not contradict the claim that the proposed project activity is financially/economically unattractive or subject to barriers. This can be done by comparing the proposed project activity to the other similar activities, and pointing out and explaining essential distinctions between them that explain why the similar activities enjoyed certain benefits that rendered it financially/economically attractive (e.g., subsidies or other financial flows) and which the proposed project activity cannot use or did not face the barriers to which the proposed project activity is subject. In case similar projects are not accessible, the PDD should include justification about non-accessibility of data/information.	EB 39	Ann 10	Not applicable	OK	OK
bb. Has the outcome from Step 4 clearly mentioned in PDD?	EB 39	Ann 10	Not applicable	OK	OK
cc. Has it been proved that the porject is additional?	EB	Ann	Refer to CL 7 and to section 6.c below that deals	CL 7	OK

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	39	10	with the barriers		
dd. Has the PP demonstrated additionality by explaining Investment barrier, Access-to-finance barrier, Technological barrier, Barrier due to prevailing practice or other barriers?	EB 35	Ann 34	Yes, the PP has demonstrated the Additionality by using the following barriers: - Investment barrier - Barrier due to prevailing practices. Refer to CL 7 and to section 6.c below that deals with the barriers	CL 7	OK
ee. If Investment barrier has been explained, is it demonstraed that financilly more viable alternative to the project activity would have led to higher emissions? Please explain.	EB 35	Ann 34	Refer to section 6.c below that deals with the barriers	OK	OK
ff. If Access-to-finance has been explained, is it demonstraed that the project activity could not access appropriate capital without consideration of the CDM revenues? Please explain.	EB 35	Ann 34	Refer to section 6.c below that deals with the barriers	OK	OK
gg. If Technological barrier has been explained, is it demonstraed that a less technologically advanced alternative to the project activity involves lower risks due to the performance uncertinity or low market share of the new technology adopted for the project activity and so	EB 35	Ann 34	Not applicable	OK	OK

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would have led to higher emissions? Please explain.					
hh. If prevailing practise barrier has been explained, is it demonstrated that the prevailing practice or existing regulatory or policy requirements would have led to implementation of a technology with higher emissions? Please explain.	EB 35	Ann 34	Refer to section 6.c below that deals with the barriers	OK	OK
ii. If other barrier has been explained, is it demonstrated that Other barriers such as institutional barriers or limited information, managerial resources, organizational capacity, or capacity to absorb new technologies would prevent the project activity any way?	EB 35	Ann 34	Not applicable	OK	OK
jj. Have the project participants identifed the most relevant barrier?	EB 35	Ann 34	Yes, financial barrier and barrier due to prevailing practice.	OK	OK
kk. Have the project participants provided transparent and documented third party evidence such as national/international statistics, national/provincial policy and legislation, studies/surveys by independent agencies etc. to demonstrate the most relevant barrier? Please explain.	EB 35	Ann 34	Yes, PPs have provided third party evidence from the following sources: - ANEEL – Brazilian National Agency for Energy: Aneel BIG - UTEs em Operação Aneel BIG - UHEs em Operação - MME – Brazilian Ministry for Mines and Energy: Plano Decenal de Expansão de Energia 2008/2017	OK	OK

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			Refer to section 6.c below that deals with the barriers		

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Prior consideration of the clean development mechanism					
Is the project ativity start date prior to the date of publication of the PDD for stakeholder comments?	VVM	96	Upload DOE for global consultation: 06.08.09 and Consultation until: 04.09.09 PPs have stated that the starting date of the CDM project activity should be considered the start of the SHPs construction. This construction is scheduled to start on 02 January 2010 (PDD page 31). Therefore, the upload of PDD for global consultation (on 06.08.09) took place before the alleged CDM project activity starting date and, consequently, no notification regarding the PPs prior consideration of the CDM should have been sent to Brazilian DNA and to the EB of the CDM (this in accordance with Annex 46 of EB 41 report). Observation: on the subject of the project starting date, please see also CAR 20.	CAR 20	OK
If yes, were the CDM benefits considered necessary in the decision to undertake the project as a proposed CDM project activity?	VVM	96	See above	OK	OK
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	97	Refer to CAR 20 and to items above (regarding VVM paragraph 96).	CAR 20	OK

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Does the project activity require construction, retrofit or other modifications?	VVM	97	Yes. The project comprises the construction of a new SHP.	OK	OK
If yes, is it ensured that the date of commissioning cannot be considered as the project activity start date?	VVM	97	Refer to CAR 20 and to items above (regarding VVM paragraph 96).	CAR 20	OK
Is it a new project activity (project activities with staring date on or after 02 August 2008) or an existing project activity (project activities with a start date before 02 August 2008)?	VVM	98	Refer to CAR 20 and to items above (regarding VVM paragraph 96).	CAR 20	OK
a. For a new project, for which PDD has not been published for global stakeholder consultation or a new methodology proposed to the Executive Board before the project activity start date, had the PP informed the Host Party DNA and/or the UNFCCC secretariat in writing of the commencement of the project activity and of their intention to seek CDM status? (Provide reference to such confirmation from Hos Party DNA and/or UNFCCC secretariat).	VVM	99	Refer to CAR 20 and to items above (regarding VVM paragraph 96).	CAR 20	OK
b. 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	100	Refer to CAR 20 and to items above (regarding VVM paragraph 96).	CAR 20	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	100	Refer to CAR 20 and to items above (regarding VVM paragraph 96).	CAR 20	OK

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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?			Refer to CAR 20 and to items above (regarding VVM paragraph 96).	CAR 20	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	100	Refer to CAR 20 and to items above (regarding VVM paragraph 96).	CAR 20	OK
a. contract with consultants for CDM/PDD/methodology services?	VVM	100	Refer to CAR 20 and to items above (regarding VVM paragraph 96).	CAR 20	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	100	Refer to CAR 20 and to items above (regarding VVM paragraph 96).	CAR 20	OK
c. evidence of agreements or negotiations with a DOE for validation services?	VVM	100	Refer to CAR 20 and to items above (regarding VVM paragraph 96).	CAR 20	OK
d. submission of a new methodology to the CDM Executive Board?	VVM	100	Refer to CAR 20 and to items above (regarding VVM paragraph 96).	CAR 20	OK
e. publication in newspaper?	VVM	100	Refer to CAR 20 and to items above (regarding VVM paragraph 96).	CAR 20	OK
f. interviews with DNA?	VVM	100	Refer to CAR 20 and to items above (regarding VVM paragraph 96).	CAR 20	OK
g. earlier correspondence on the project with the DNA or the UNFCCC secretariat?	VVM	100	Refer to CAR 20 and to items above (regarding VVM paragraph 96).	CAR 20	OK
a. Identification of alternatives					

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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	103	Yes	Ok	OK
b. If no, does the PDD identify credible alternatives to the project activity in order to determine the most realistic baseline scenario?	VVM	103	Not applicable	OK	OK
c. Does the list of alternatives given in the PDD esure that:	VVM	104	Not applicable	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	104	Not applicable	OK	OK
ii. the list contains all plausible alternatives that the DOE, on the basis of its local and sectoral knowledge, considers to be viable means of supplying the outputs or services that are to be supplied by the proposed CDM project activity?	VVM	104	Not applicable	OK	OK
iii. the alternatives comply with all applicable and enforced legislation?	VVM	104	Not applicable	OK	OK
b. Investment analysis					
a. Has investment analysis been used to demonstrate the additionality of the proposed CDM project activity?	VVM	106	No. The project proponent used the barrier analysis to demonstrated the additionality of the proposed CDM project activity	OK	OK
b. If yes, does the PDD provide evidence that the proposed CDM project activity would not be:	VVM	106	Not applicable	OK	OK
i. the most economically or financially	VVM	106	Not applicable	OK	OK

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attractive alternative?					
ii. economically or financially feasible, without the revenue from the sale of certified emission reductions (CERs)?	VVM	106	Not applicable	OK	OK
c. Was this shown by one of the following approaches?	VVM	107	Not applicable	OK	OK
i. Demonstrate that the proposed CDM project activity would produce no financial or economic benefits other than CDM-related income. Document the costs associated with the proposed CDM project activity and the alternatives identified and demonstrate that there is at least one alternative which is less costly than the proposed CDM project activity.	VVM	107	Not applicable	OK	OK
ii. The proposed CDM project activity is less economically or financially attractive than at least one other credible and realistic alternative.	VVM	107	Not applicable	OK	OK
iii. The financial returns of the proposed CDM project activity would be insufficient to justify the required investment.	VVM	107	Not applicable	OK	OK
d. Is the period of assessment limited to the proposed crediting period of the CDM project activity?	EB 41	Ann 45	Not applicable	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	EB 41	Ann 45	Not applicable	OK	OK

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value of the project activity assets at the end of the assessment period?					
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 41	Ann 45	Not applicable	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 41	Ann 45	Not applicable	OK	OK
h. Does the cash flow in the final year include a fair value of the project activity assets at the end of the assessment period?	EB 41	Ann 45	Not applicable	OK	OK
i. Has the fair value been calculated in accordance with local accounting regulations where available, or international best practice?	EB 41	Ann 45	Not applicable	OK	OK
j. Does the fair value calculations include both the book value of the asset and the reasonable expectation of the potential profit or loss on the realization of the assets?	EB 41	Ann 45	Not applicable	OK	OK
k. Was depreciation, and other non-cash items related to the project activity, which have been deducted in estimating gross profits on which tax is calculated, added back to net profits for the purpose of calculating the financial indicator (e.g. IRR, NPV)?	EB 41	Ann 45	Not applicable	OK	OK
l. Has taxation been included as an expense in the IRR/NPV calculation in cases where the	EB 41	Ann 45	Not applicable	OK	OK

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benchmark or other comparator is intended for post-tax comparisons?					
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 41	Ann 45	Not applicable	OK	OK
n. Is the timing of the investment decision consistent and appropriate with the input values?	EB 41	Ann 45	Not applicable	OK	OK
o. Are all the listed input values been consistently applied in all calculations?	EB 41	Ann 45	Not applicable	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 project activities for which implementation ceases after the commencement and where implementation is recommenced due to consideration of the CDM?	EB 41	Ann 45	Not applicable	OK	OK
q. Have project participants supplied the spreadsheet versions of all investment analysis?	EB 41	Ann 45	Not applicable	OK	OK
r. Are all formulas used in this analysis readable and all relevant cells be viewable and unprotected?	EB 41	Ann 45	Not applicable	OK	OK
s. In cases where the project participant does not wish to make such a spreadsheet available to the public has the PP provided an exact read-only or PDF copy for general publication?	EB 41	Ann 45	Not applicable	OK	OK
t. In case the PP wishes to black-out certain elements of the publicly available version, is it justifiable?	EB 41	Ann 45	Not applicable	OK	OK

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u. Was the cost of financing expenditures (i.e. loan repayments and interest) included in the calculation of project IRR?	EB 41	Ann 45	Not applicable	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 41	Ann 45	Not applicable	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 41	Ann 45	Not applicable	OK	OK
x. In cases where a benchmark approach is used is the applied benchmark appropriate to the type of IRR calculated?	EB 41	Ann 45	Not applicable	OK	OK
y. Has local commercial lending rates or weighted average costs of capital (WACC) selected as appropriate benchmarks for a project IRR?	EB 41	Ann 45	Not applicable	OK	OK
z. Has required/expected returns on equity selected as appropriate benchmark for an equity IRR?	EB 41	Ann 45	Not applicable	OK	OK
aa. In case benchmarks supplied by relevant national authorities selected is it applicable to the project activity and the type of IRR calculation presented?	EB 41	Ann 45	Not applicable	OK	OK
bb. 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 41	Ann 45	Not applicable	OK	OK
cc. Have internal company benchmarks/expected returns (including those used as the expected	EB 41	Ann 45	Not applicable	OK	OK

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return on equity in the calculation of a weighted average cost of capital - WACC) been applied in cases where there is only one possible project developer?					
dd. 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 41	Ann 45	Not applicable	OK	OK
ee. Has a minimum clear evidence of the resolution by the company's Board and/or shareholders been provided to the effect as above?	EB 41	Ann 45	Not applicable	OK	OK
ff. 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 41	Ann 45	Not applicable	OK	OK
gg. 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 41	Ann 45	Not applicable	OK	OK
hh. Has an investment comparison analysis and not a benchmark analysis used when the proposed	EB 41	Ann 45	Not applicable	OK	OK

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baseline scenario leaves the project participant no other choice than to make an investment to supply the same (or substitute) products or services?					
ii. 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 41	Ann 45	Not applicable	OK	OK
jj. 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 41	Ann 45	Not applicable	OK	OK
kk. Is the range of variations selected is reasonable in the project context?	EB 41	Ann 45	Not applicable	OK	OK
ll. 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 41	Ann 45	Not applicable	OK	OK
mm. 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	EB 41	Ann 45	Not applicable	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
as well as the specific socio-economic and policy context of the project activity?					
nn. 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	109	Not applicable	OK	OK
oo. Were the parameters cross-checked agains third-party or publicly available sources, such as invoices or price indices?	VVM	109	Not applicable	OK	OK
pp. Were feasibility reports, public announcements and annual financial reports related to the proposed CDM project activity and the project participants reviewed?	VVM	109	Not applicable	OK	OK
qq. Was the correctnes of computations carried out and documented by the project participants assessed?	VVM	109	Not applicable	OK	OK
rr. 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	109	Not applicable	OK	OK
ss. Is the type of benchmark applied is suitable for the type of financial indicator presented?	VVM	110	Not applicable	OK	OK
tt. Do any risk premiums applied determining the benchmark reflect the risks associated with the project type or activity?	VVM	110	Not applicable	OK	OK
uu. To determine this, was it assessed whether it is reasonable to assume that no investment would			Not applicable	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
be made at a rate of return lower than the benchmark by:					
i. assessing previous investment decisions by the project participants involved?	VVM	110	Not applicable	OK	OK
ii. determining whether the same benchmark has been applied?	VVM	110	Not applicable	OK	OK
iii. determining if there are verifiable circumstances that have led to a change in the benchmark?	VVM	110	Not applicable	OK	OK
vv. Did the project participants rely on values from Feasibility Study Reports (FSR) that are approved by national authorities for proposed project activities?	VVM	111	Not applicable	OK	OK
tt. If yes:	VVM	111	Not applicable	OK	OK
i. has the FSR been the basis of the decision to proceed with the investment in the project, i.e. that the period of time between the finalization of the FSR and the investment decision is sufficiently short for the DOE to confirm that it is unlikely in the context of the underlying project activity that the input values would have materially changed?	VVM	111	Not applicable	OK	OK
ii. Are the values used in the PDD and associated annexes fully consistent with the FSR?	VVM	111	Not applicable	OK	OK
iii. If not, was the appropriateness of the values validated?	VVM	111	Not applicable	OK	OK
iv. On the basis of its specific local and	VVM	111	Not applicable	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
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?					
c. Barrier analysis					
a. Has barrier analysis been used to demonstrated the additionality of the proposed CDM project activity?	VVM	113	Yes. (1) financial barrier and (2) barrier due to prevailing practice.	OK	Ok
b. If yes, does the PDD demonstrate that the proposed CDM project activity faces barriers that:	VVM	113			
i. prevent the implementation of this type of proposed CMD project activity?	VVM	113	Financial barrier: Yes, investment barrier was used to show that the implementation of the project activity without CDM is not financially feasible, since the weighted average cost of capital of the SHP Santa Carolina is considerably above the Project's Internal Rate of Return (IRR). The cash flow of the Project is based on the following premises: · Total Gross Electricity Generated per Year – Result of the multiplication between 8760 annual hours and the Medium Electricity Generated per Hour; · 3% of Commercial Losses – It is considered that will occur 3% of transmission commercial losses and internal consumption. This is a premised commonly used in the national electrical sector.	CL 14 CAR 30 CAR 31 CAR 32 CAR 33 CAR 34 CL 15 CL 16 CL 17 CL 18 CL 19 CL 20 CL BQA 1, 2, 3, 4, 5 and CAR	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			· Net Electricity Generated per Year = Total Gross Electricity Generated per Year – Commercial Losses; · The energy tariff of R$ 140.00 / MWh is based on the results published by CCEE in the 1st Electricity Auction from Renewable Sources, realized in 2007; · Total Investment = R$ 56,381,000, distributed as: o R$ 51,745,000 related to the Consolidated Basic Project, developed by MEK Engenharia; o R$ 3,500,000 related to the transmission line budget; o R$ 1,106,000 related to expenses with the financial arranger, the agent responsible for the funding intermediation; (2% of Total Investment). · The company projects that 70% of the Total Investment will be financed by BNDES, The National Bank for Economic and Social Development. The estimated tax for this loan is 9% per year with an amortization term of 12 years, as indicated by information present in the BNDES website and previous contacts with financial arrangers; · The taxes (PIS/COFINS/CSLL/IR) follow the Brazilian taxation of Real Profit; · The ANEEL supervision tax was estimated according to Guidelines for SHP Projects, developed by Eletrobrás; · The CCEE tax was estimated taking into account the ANEEL supervision tax; · The RGR tax was based on Resolution nº 23 from	BQA 1	

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			5th February 1999; · The expenditures with insurance were estimated as being 0.5% of the total project investment. The projection was realized taking into account the previous experience of Multilagos' team; · The cost of O & M (Operation and Maintenance) was estimated at R$ 5.00 per MW generated by enterprise; · The spending on TUSD (Tariff of Use of Distribution System) were estimated based on Resolution Nº 810 of 14th April 2009 · The IRR calculation follows the Guidance on the Assessment of Investment Analysis, present in the Tool for the demonstration and assessment of Additionality. In this sense, the financial expenses, depreciation, social contribution taxes and income taxes were not considered in the IRR calculation. The Internal Rate of Return of the Project resulting from the project's cash flow is 8.03%. The project proponent choosed the weighted average cost of capital (WACC) as a benchmark. The WACC is calculated by the composition of costs and the percentage of participation of each source of capital in the capital structure of the project. See PDD pages 14 and 15 for further explanation. The project's WACC is 11.29%. IRR 8.03% vs WACC 11.29%		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			Observations: All the assumptions considered to calculate the benchmark were cross-checked and the references are in the PDD pages 15 and 16. The installed capacity was cross-checked at: http://www.sema.rs.gov.br/sema/jsp/descnoticias.jsp?ITEM=2349&TIPO=1. CL BQA 1 - Are there available evidences to cross-checked the total investment, energy price, medium electricity generated and the O&M cost? CL BQA 2 - Both project IRR and equity IRR calculations shall as a preference reflect the period of expected operation of the underlying project activity (technical lifetime), please clarify the period of expected operation of the underlying project activity. CL BQA 3 – The used benchmark is an internal benchmark or is a national approved benchmark? Explain the reasons to use the respect benchmark. CL BQA 4 – Please explain how it has determined that the parameters used in the sensitivity analysis are the most critical and that the ranges of		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			variations are appropriate. CL BQA 5 – Why the load factor is not included in the investment analysis and in the sensitivity analysis? CAR 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. Barrier due to prevailing practice: Yes, the existence of barriers due to prevailing practice was used to describe the project's Additionality. - PPs describe that there is a prevailing practice of large hydroelectric and thermoelectric power plants to fossil fuels in national energy matrix. - PPs state that the generation of hydroelectric power in Brazil is composed mainly by large enterprises. - According to PPs, the construction of the SHP Santa Carolina, although responsible for minimum environmental impacts,		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			requires significant investments to be able to comply with environmental legislation. These investments can be compared to the investments that large scale hydropower plants need to make. However, the revenues of SHPs cannot be compared to the revenues of large scale hydropower plants, and therefore the revenues from the sale of CERs are important for the Santa Carolina's financial feasibility. - According to PPs, the fact that Santa Carolina is not included in the government program that incentives renewable energy generation (PROINFA) makes it necessary to use the CDM as a financial incentive to make the SHP economically speaking feasible. CL 14: please explain why the panorama on the current energetic matrix in Brazil and its perspective for the future (page 11 and 12 of the PDD) is relevant for the financial barrier analysis. Moreover, please explain why this panorama is not included in the section on pages 18 and 19 of the PDD, which describe the barrier due to prevailing		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			practice. CAR 30: Link to ANEEL in reference 4 (page 10) is not accessible: http://www.aneel.gov.br/aplicacoes/capacityBrazil/capacityBrazil.asp. CAR 31: Numbers on table 4 should be presented in the English manner. CL 15: please provide a reference to the statement on page 12: "The MME projection estimates a growth in the electricity supply from fossil fueled plants in the next years." CL 16: please provide a reference for the statement on page 11: "Most of hydroelectric power plants (HPPs) were implemented through investments state-owned investments, when the electric sector was still centrally regulated. They present the characteristic of using great reservoir areas with high socio-environmental impacts, once the Brazilian legislation was still soft in the past concerning the implantation of entrepreneurships for energy generation." Also, please explain why this is relevant for the barriers analysis. CL 17: please provide a reference for the following statement on page 12: The country has several		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			enterprises in the study and construction phase, aiming the start of operation in the medium term, which totalize additional 6,959 MW in coal-fired Thermoelectric Plants and 7,500 MW in oil-fired. CL 18: Regarding the following statement: "Observing the graph 1 above, it can be concluded that the supply of non-renewable electricity sources tends to a strong growth in the next years. The total oil-fire plants installed capacity should grow 427%, as well as the coal-fired plants should grow 124%, bearing in mind the baseline of 2008." please provide referenced information on the expected growth for the same period of the other energy sources given on table 4 and 5. CL 19: please provide a reference for the statement on page 11: "Also according to Aneel2, historically the use of hydraulic potential in Brazil for electricity generation required the formation of large reservoirs and the flooding of large areas. These constructions had used, in most cases, the		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			accumulation of water reservoirs and regularization of flows that cause changes in water regimes and the formation of microclimates, facilitating, impairing or even extinguishing species." Also, please explain why this is relevant when describing an existing barrier due to prevailing practice. CAR 32: The following three paragraphs have no relevancy when describing an existing barrier due to prevailing practice: Another factor that must be highlighted is that, analyzing the history of the Brazilian electric sector, it is verified that the Brazilian legislation did not incorporate the environmental variables in the national electric sector planning. However, facing the undesirable social-environmental impacts resulting from the implantation of hydroelectric entrepreneurships, a series of legal demands that aim at avoiding and mitigating the environmental effects of this kind of project have become requirements of the conceding power and of the legislative organs. With this, new investments, in the implantation of hydro electrical entrepreneurships in Brazil are demanded from the investors. The SHP Santa Carolina is a small enterprise with small installed capacity and power generation, not similar, therefore, to the major national hydroelectric power and not having, therefore, the enormous revenue potential for this type of enterprise. Moreover, the SHP Santa Carolina is a run-of-river plant with low environmental impacts and considers in its planning a series of investments in environmental programs and actions that did not exist when the occurred the deployment of most of the hydroelectric plants of the South the country.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			Thus, the implementation of this project does not have substantial income like the large Brazilian hydroelectric enterprises and has minimal environmental impacts that require investment, and having these characteristics, its cash flow presents rates of return below the market reference rates and the revenues from the sale of certified emission reductions (CERs) becomes important to make the project feasible. CAR 33: All information regarding the PROINFA program (Brazilian government program that gave incentives for the development of power plants that used renewable as energy source) is not relevant as the program only involved enterprises that started generating energy before 2007. Therefore, the PROINFA incentives cannot be used in a analysis of existing barriers, as it will not affect any new to be developed power plant (regardless of the energy source used). CAR 34: The following phrase needs to be revised: "In this way, through the data and information presented, it is perceived that the establishment of small hydroelectric plants is not a common practice in the country and is not configured as a common scenario of the energy matrix of the country and the region.". Moreover, the section where this statement is inserted describes a prevailing practice analysis. CL 20: Regarding the following statement on page		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			19: "The non-implementation of SHP Santa Carolina would promote (i) the continuity of the current situation, with electricity being generated by the current generation of composition of National Interconnected System, specifically the South Subsystem (with great presence of coal-fired and oil-fired plants) or (ii) the construction of new thermoelectric power plants." please described more clearly how the barriers due to prevailing practice that were identified do not affect the alternatives (i) and (ii).		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
ii. do not prevent the implementation of at least one of the alternatives?	VVM	113	Please refer to CL 20	CL 20	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	114	CL 21: please explain if there any issues that have a clear direct impact on the financial returns of the project activity, other than: risk related barriers, that could have negative effects on the financial performance; or barriers related to the unavailability of sources of finance for the project activity?	CL 21	OK
d. Were the barriers determined as real by:	VVM	115		OK	OK
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	115	Yes, and assessment of the available evidence were carried out. Refer to item 6.c.b.i and 6.c.b.ii (VVM 113).	OK	OK
ii. ensuring that existence of barriers is substantiated by independent sources of data such as relevant national legislation, surveys of local conditions and national or international statistics?	VVM	115	Refer to 6.c.d.iii below Refer to item 6.c.b.i and 6.c.b.ii (VVM 113).	OK	OK
iii. Is existence of a barrier substantiated only by the opinions of the project participants? (If yes, this barrier cannot be considered as adequately substantiated)	VVM	115	No. additional independent sources were consulted, such as the Brazilian National Energy Agency (ANEEL) website, the website of the Ministry of Mines and Energy (MME) and the	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			Secretary of Environment of the Rio Grande do Sul State (SEMA-RS) website. Documents used: Aneel BIG - UTEs em Operação Aneel BIG - UHEs em Operação Plano Decenal de Expansão de Energia 2008/2017 Refer to item 6.c.b.i and 6.c.b.ii (VVM 113).		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
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	115	Refer to item 6.c.b.i and 6.c.b.ii (VVM 113).	OK	OK
d. Common practice analysis					
a. Is this a large-scale, or first-of-its kind small-scale project activity?	VVM	117	No. the project is a small scale project activity that is not the first-of-its kind.	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	117	Not applicable.	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 assessment will be local and for others it may be transnational/global.	VVM	118	Not applicable.	OK	OK
d. Was a region other than the entire host country chosen?	VVM	118	Not applicable.	OK	OK
e. If yes, was the explanation why this region is more appropriate assessed?	VVM	118	Not applicable.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
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	118	Not applicable.	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	118	Not applicable.	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	118	Not applicable.	OK	OK
7. Monotoring plan					
a. Does the PDD include a monitoring plan?	VVM	120	Yes.	OK	OK
b. Is this monitoring plan based on the approved monitoring methodology applied to the proposed CDM project activity?	VVM	120	Yes. According the methodology AMS ID - Version 14. The only parameter to be monitored in this kind of project activity is the electricity generated by the renewable technology.	OK	OK
c. Were the list of parameters required by the the selected methodology identified?	VVM	121	The monitoring plan comprises the following parameters: - Electricity Supplied to the Grid - Total Electricity Generated - Reservoir Area - Installed Capacity - Combined Margin CO2 Emission Factor Refer to CAR 18, CAR 19, CL 8 and CL 9.	CAR 18 CAR 19 CL 8 CL 9	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
d. Does the monitoring plan contains all necessary parameters?	VVM	121	See 7.c.		
e. Are the parameters clearly described?	VVM	121	No, refer to CAR 18, CAR 19, CL 8 and CL 9.	CAR 18 CAR 19 CL 8 CL 9	OK
f. Does the means of monitoring described in the plan comply with the requirements of the methodology?	VVM	121	No, refer to CAR 18, CAR 19, CL 8 and CL 9.	CAR 18 CAR 19 CL 8 CL 9	OK
g. Are the monitoring arrangements described in the monitoring plan feasibl within the project design?	VVM	121	No, refer to CAR 18, CAR 19, CL 8 and CL 9.	CAR 18 CAR 19 CL 8 CL 9	OK
h. 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	121	No, refer to CAR 18, CAR 19, CL 8 and CL 9.	CAR 18 CAR 19 CL 8 CL 9	OK
i. data management procedures?	VVM	121		OK	OK
ii. quality assurance procedures?	VVM	121		OK	OK
iii. quality control procedures?	VVM	121		OK	OK
8. Sustainable development					
a. Does the CDM project activity assists Parties not included in Annex I to the Convention in achieving sustainable development?	VVM	123	The final decision from the DNA will be available only after the first ordinary meeting, after the receiving of all the required documents necessary	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			for evaluation, including this validation report, according to Article 6 of the Resolution n0 1 of CIMGC – Comissão Interministerial de Mudança Global do Clima		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
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	124	Please refer to 8.a. 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	126	The period for comments of the PDD on the UNFCCC website is from 06 August 09 to 04 September 09. 15 letters were sent to stakeholders on the subject of the proposed CDM project activity. Refer to items in the protocol that deal with VVM paragraph 96 and CAR 20.	VVM96 CAR 20	OK
b. Have comments by local stakeholders that can reasonably be considered relevant for the proposed CDM project activity been invited?	VVM	127	No comments were received.	OK	OK
c. Is the summary of the comments received as provided in the PDD complete?	VVM	127	Not applicable	OK	OK
d. Have the project participants taken due account of any comments received and described this process in the PDD?	VVM	127	Not applicable	OK	OK
10. Environmental impacts					
a. Have the project participants submitted documentation on the analysis of the environmental impacts of the project activity?	VVM	129	Refer to CL 10	CL 10	OK
b. Have the project participants undertaken an analysis of environmental impacts?	VVM	130	Yes, refer to CL 10	CL 10	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
c. Does the host Party require an environmental impact assessment?	VVM	130	Yes.	OK	OK
d. If yes, have the project participants undertaken an environmental impact assessment?	VVM	130	Yes, according to the PDD, The SHP Santa Carolina has a restricted flooded area and it will not significantly alter the environment. However, aiming to identify the possible environmental impacts caused by the SHP, an Environmental Impact Analysis (EIA) was carried out. Refer to CL 10. The following activities will be carried out by PPs to ensure minimum social and environmental impacts: - Program for Limnologic Monitoring and Water Quality - Implementation Program of the Conservation Plan and Use of the Reservoir Surroundings - Recovery Program of Degraded Areas - Social Communication Program - Environmental Education Program - Program of Environmental Action Management	OK	OK

Table 2 Specific validation activities *(delete this table if the project activity is not a small scale project activity)*

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
1. Project design of small-scale clean development mechanism project activities *(delete this table if the project activity is not a small scale project activity)*					
a. Does the proposed small-scale project activity meet the requirements of the simplified modalities and procedures for small-scale CDM project activities?	VVM	133	Yes.	OK	OK
b. Does the project activity qualify within the thresholds of the three prossble types of small scale project activities? [Type (i) project activities: renewable energy project activities with a maximum output capacity equivalent to up to 15 megawatts; Type (ii) project activities: energy efficiency improvement project activities which reduce energy consumption, on the supply and/or demand side, by up to the equivalent of 15 gigawatt hours per year; Type (iii) project activities: other project activities that both reduce anthropogenic emissions by sources and directly emit less than 15 kilotonnesof carbon dixide equivalent annually.]	VVM	134	Yes. The project activity is Type (i).	OK	OK
c. Does the project activity conform to one of the approved small-scale categories?	VVM	134	Yes. The project is in accordance with the Methodology AMS ID – Version 14.	OK	OK
d. Does the project activity apply the relevant tool and methodology?	VVM	134	Refer to (5.b.g) above	-	-
e. Are the small-scale methodologies applied in conjunction with the general guidance to the	VVM	134	Yes.	OK	Ok

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
methodologies, which provides guidance on equipment capactiy, equipment performance, sampling and other monitoring-related issues?					
f. Is the project activity a debundled component of a large-scale project, i.e., is there a registered small-scael CDM project activity or an application to register another CDM project actifity: (a) with the same project participants; (b) in the same project category and technology/measure; and (c) registered within the previous 2 years; and (d) whose project boundary is within 1 km of the proposed boudary of the proposed small-scale activity at the closest point?	VVM	134	No. Please see 3.j.i	OK	OK
g. Is and assessment of the environmental impacts of the proposed CDM project activity required by the host Party?	VVM	134	Refer to 10.c above.	OK	OK
h. Is the project additional?	VVM	135	Refer to 6.c above	OK	OK

Table 3 Indicative Simplified Baseline and Monitoring Methodologies for selected small-scale CDM project activity categories - AMS I.D.

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
1. Technology/measure					
1.1. Does the project comprise renewable energy technologies that supply electricity to a grid?	-		Yes. The project comprises hydro energy generation units that supply electricity to an electricity distribution system, that would have been supplied by at least one fossil fuel fired generation unit.	OK	OK
2. Boundary					
2.1. Does the project boundary encompass the physical, geographical site of the renewable generation source?	-		According to the methodology AMS I.D, the boundary of a renewable energy generation project connected to the grid, encompasses the physical and geographical site of the renewable generation source. Thus, the project boundary for baseline encompasses the physical and geographical locality of source of renewable generation.	OK	OK
3. Baseline					
3.1. Did the project participants identify the most plausible baseline scenario among all realistic and	-		Yes. The baseline of the project related to the generation of renewable energy	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
credible alternatives(s)?			connected to the grid is the KWh produced by the renewable generating unit multiplied by an emission coefficient (measured in tones of CO2e/KWh) calculated in a transparent and conservative manner, according to a combined margin (CM), resulted of the combination of operating margin (OM) and build margin (BM), according to the procedures prescribed in the "Tool to calculate the emission factor for an electricity system". $BE_y = EF_{grid,CM,y} \cdot EG_y$		
3.2 Were the emission reductions calculations based on data from an official source and made publicly available.			Yes. The emission reductions of the project will be calculated are calculated based in the operating margin emission factor and the build margin emission factor, that were made with basis on the information supplied by the Brazilian DNA - Designated National Authority.	OK	OK
4. Monitoring					
4.1 Does the monitoring consist of metering the quantity of electricity generated?	-		Yes. Based on the Methodology AMS I.D, the monitoring consists of metering the amount of electricity supplied to the grid by the project activity.	OK	OK

Table 4 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 1: Section A.2 has more than one Page.	EB 34 Ann 09	According to the "Guidelines for completing the simplified Project Design Document and the form for proposed new small scale methodologies (CDM-SSC-NM)" version 05, just the view of the project participants on the contribution of the project activity to sustainable development must have maximum of one page. The description of the view of the project participants on the contribution of the project activity to sustainable development has less than one page.	The answer that PP has given has been accepted. Only the description of the view of the project participants on the contribution of the project activity to sustainable development has to have a maximum of one page. Therefore this CAR has been closed.
CAR 2: Link to MME website is not accessible. (https://www.mme.gov.br/download.do?attachmentId=17397&download)	EB 34 Ann 09	The website of MME was reformulated. Therefore, the link to where the information was described has changed. The link was corrected in the PDD.	On May 7th, 2010, the corrected link was checked by the verification team and it has found to be accessible en correct. Therefore this CAR has been closed.

CAR 3: Longitude/latitude coordinates are not correct, as they are inverted.	EB 34 Ann 09	FIRST PP RESPONSE: The order of the coordinates was corrected. SECOND PP RESPONSE: PDD version 03 provides coordinates corrected.	FIRST DOE ANALYSIS: The coordinates are still not correct. According to the documents presented (e.g. page 61 of the Projeto Básico Consolidado: *"O arranjo geral do projeto básico compreende um conjunto de obras e equipamentos eletromecânicos projetados para aproveitar uma queda bruta da ordem de 39,0 m existente no rio Turvo, no trecho situado nas coordenadas geográficas 28º 36' 52'' de latitude Sul e 51º 24' 10'' de Longitude Oeste, nos municípios de Muitos Capões e André Rocha, no estado do Rio Grande do Sul."* THIS CAR IS STILL OPEN. SECOND DOE ANALYSIS: The order of the coordinates was changed and they are now correct: Latitude 28º37'8.11'' South and Longitude 51º24'3.52'' West (power house). The DOE was able to validate these coordinates with the Consolidated Basic Engineering Project and ANEEL Dispatch 404 of 22.02.2010. Seeing this, the CAR was closed.

CAR 4: Please explain how it is possible that the Nominal Capacity (kW) of each turbine is 5.5.	EB 34 Ann 09	Technical characteristics described in the first version of the PDD were wrong. PDD Version 02 was updated with the correct characteristics.	The DOE has analyzed the technical description contained in PDD version 2 and it has been found to be in accordance with the Basic Engineering Project (presented to the DOE, see CAR 5). It is also in accordance with the ANEEL resolution nr. 463-2010 (23.02.2010) and technical note nr. 080-2010 (18.02.2010) which approve the Basic Engineering Project. Therefore, this CAR has been closed by the DOE.
CAR 5: Please provide the Basic Engineering Project of the enterprise, which was accepted by ANEEL in accordance with ANEEL document 1919/2007-SGH/ANEEL.	EB 34 Ann 09	The Final Basic Engineering Project approved by ANEEL in 18th February 2010 is provided to the DOE. The approval by ANEEL of the Project is also provided to the DOE.	The Basic Engineering Project was presented and analyzed by the DOE. The technical description of the project, as stated in the PDD version 2, is in accordance with the Basic Engineering Project. It is also in accordance with the ANEEL resolution nr. 463-2010 (23.02.2010) and technical note nr. 080-2010 (18.02.2010) which approve the Basic Engineering Project. Therefore, this CAR has been closed by the DOE.

CAR 6: According to table 2, the SHP Santa Carolina has an installed capacity (MW) of 10.5. Also according to table 2, the turbines have the following nominal capacity: 5.5 [MW], thus 11 MW in total. 11 MW x 91.5% (maximum performance) = 10.065 MW. Please explain this divergence.	EB 34 Ann 09	Technical characteristics described in the first version of the PDD were wrong. PDD Version 02 was updated with the correct characteristics.	The Basic Engineering Project describes the characteristics of the equipment that will be used (generators, turbines, etc.) This new data differs from the data of PDD version 1 and is now included in the PDD version 2. The technical description of the Basic Engineering Project has been validated by the ANEEL resolution nr. 463-2010 (23.02.2010) and technical note nr. 080-2010 (18.02.2010). In ANEEL's technical note nr. 080-2010, the installed capacity of the Project is described: 10.5 MW. Therefore, this CAR has been closed by the DOE.
CAR 7: Annual Emission Reduction Estimation (tCO2e)" is not the correct phrase. It should state: Estimation of annual emission reductions in tonnes of CO2 e. (in accordance with GUIDELINES FOR COMPLETING THE SIMPLIFIED PROJECT DESIGN DOCUMENT (CDM-SSC-PDD) AND THE FORM FOR PROPOSED NEW SMALL SCALE METHODOLOGIES (CDM-SSC-NM) (Version 05))	EB 34 Ann 09	The sentence was corrected in accordance with the "Guidelines for completing the simplified Project Design Document and the form for proposed new small scale methodologies (CDM-SSC-NM)" version 05.	The DOE has observed that the sentence has been correctly changed and is now in accordance with the GUIDELINES FOR COMPLETING THE SIMPLIFIED PROJECT DESIGN DOCUMENT (CDM-SSC-PDD) AND THE FORM FOR PROPOSED NEW SMALL SCALE METHODOLOGIES (CDM-SSC-NM) (Version 05). Therefore, this CAR has been closed

CAR 8: Total Reduction Estimation (tCO2e)" is not the correct phrase. It should state: Total estimated reductions (tonnes of CO2 e). (in accordance with GUIDELINES FOR COMPLETING THE SIMPLIFIED PROJECT DESIGN DOCUMENT (CDM-SSC-PDD) AND THE FORM FOR PROPOSED NEW SMALL SCALE METHODOLOGIES (CDM-SSC-NM) (Version 05))	EB 34 Ann 09	The sentence was corrected in accordance with the "Guidelines for completing the simplified Project Design Document and the form for proposed new small scale methodologies (CDM-SSC-NM)" version 05.	The DOE has observed that the sentence has been correctly changed and is now in accordance with the GUIDELINES FOR COMPLETING THE SIMPLIFIED PROJECT DESIGN DOCUMENT (CDM-SSC-PDD) AND THE FORM FOR PROPOSED NEW SMALL SCALE METHODOLOGIES (CDM-SSC-NM) (Version 05). Therefore, this CAR has been closed.
CAR 9: "Total Years of Crediting" is not the correct phrase. It should state: Total number of crediting years. (in accordance with GUIDELINES FOR COMPLETING THE SIMPLIFIED PROJECT DESIGN DOCUMENT (CDM-SSC-PDD) AND THE FORM FOR PROPOSED NEW SMALL SCALE METHODOLOGIES (CDM-SSC-NM) (Version 05))	EB 34 Ann 09	The sentence was corrected in accordance with the "Guidelines for completing the simplified Project Design Document and the form for proposed new small scale methodologies (CDM-SSC-NM)" version 05.	The DOE has observed that the sentence has been correctly changed and is now in accordance with the GUIDELINES FOR COMPLETING THE SIMPLIFIED PROJECT DESIGN DOCUMENT (CDM-SSC-PDD) AND THE FORM FOR PROPOSED NEW SMALL SCALE METHODOLOGIES (CDM-SSC-NM) (Version 05). Therefore, this CAR has been closed.

CAR 10: Annual average during the first crediting period (tCO2e)" is not the correct phrase. It should state: Annual average of the estimated reductions over the crediting period (tCO2 e). (in accordance with GUIDELINES FOR COMPLETING THE SIMPLIFIED PROJECT DESIGN DOCUMENT (CDM-SSC-PDD) AND THE FORM FOR PROPOSED NEW SMALL SCALE METHODOLOGIES (CDM-SSC-NM) (Version 05))	EB 34 Ann 09	The sentence was corrected in accordance with the "Guidelines for completing the simplified Project Design Document and the form for proposed new small scale methodologies (CDM-SSC-NM)" version 05.	The DOE has observed that the sentence has been correctly changed and is now in accordance with the GUIDELINES FOR COMPLETING THE SIMPLIFIED PROJECT DESIGN DOCUMENT (CDM-SSC-PDD) AND THE FORM FOR PROPOSED NEW SMALL SCALE METHODOLOGIES (CDM-SSC-NM) (Version 05). Therefore, this CAR has been closed.
CAR 11: Link on reference 4 not accessible. http://www.aneel.gov.br/aplicacoes/capacityBrazil/capacityBrazil.asp	EB 34 Ann 09	The link is accessible. To access it, you should press "Ctrl" over the link.	The link has been changed and is now accessible. This has been checked by the DOE on 10.05.2010. Please note that it is now reference 5, due to the fact the PP has inserted a new reference (reference 4) in this new version of the PDD (version 2). Seeing the above, this CAR has been closed.
CAR 12: The insertion of reference 2 and 3 in the third and fourth paragraph of page 18 is not correct	EB 34 Ann 09	The references were corrected.	The DOE has assessed that reference 2 and 3 o PDD version 1 have been corrected in PDD version 2. They are now references 21 and 22. Now that the references have been corrected, the DOE has closed this CAR.

CAR 13: In table 2 of the PDD, the Medium Electricity (MW) of the SHP is given: 5.64. However, in the letter sent to the CIMGC – Brazilian DNA – on the 22nd of May 2009, a medium electricity of 5.75 MW is given.	EB 34 Ann 09	During the process, ANEEL approved the Medium Electricity of 5.46 MW. The letter of approval by ANEEL is provided to DOE.	The letter of approval of ANEEL (resolution nr. 463-2010 of 23.02.2010) has been provided by PP. It states that the Project's medium electricity is indeed 5.46 MW. The new version of the PDD has been correctly changed. Therefore, this CAR has been closed.
CAR 14: The table in section B.6.4 states the crediting period of the project activity as being from 2010 to 2017. This is not in accordance with information in table 3, 11 and 13.	EB 34 Ann 09	Table 14 in section B.6.4 was corrected.	Table 14 has been correctly changed. It now states that the crediting period of the Project is from 2011 to 2018. This is in accordance with the other information provided in the PDD. This CAR has been closed.
CAR 15: Please modify table 14 by using the EXACT table as provided by the GUIDELINES FOR COMPLETING THE SIMPLIFIED PROJECT DESIGN DOCUMENT (CDM-SSC-PDD) AND THE FORM FOR PROPOSED NEW SMALL SCALE METHODOLOGIES (CDM-SSC-NM) (Version 05).	EB 34 Ann 09	Table 14 was corrected.	Table 14 has been modified and it's now exactly the same as the model provided by the GUIDELINES FOR COMPLETING THE SIMPLIFIED PROJECT DESIGN DOCUMENT (CDM-SSC-PDD) AND THE FORM FOR PROPOSED NEW SMALL SCALE METHODOLOGIES (CDM-SSC-NM) (Version 05). Therefore, this CAR has been closed.

CAR 16: In B.7.1, third paragraph, please correct the phrase: All data collected as part of the monitoring will be archived electronically and kept for at least two (2) years after the last period of accreditation. Please correct the use of the word: "accreditation".	EB 34 Ann 09	The phrase was corrected. The new phrase says: "All data collected as part of the monitoring will be archived electronically and kept for at least two (2) years after **the last crediting period**."	The DOE has verified that the phrase has been corrected. It now uses the correct nomenclature: "crediting period". Therefore, this CAR has been closed.
CAR 17: Please modify the tables used in this section by using the EXACT table as provided by the GUIDELINES FOR COMPLETING THE SIMPLIFIED PROJECT DESIGN DOCUMENT (CDM-SSC-PDD) AND THE FORM FOR PROPOSED NEW SMALL SCALE METHODOLOGIES (CDM-SSC-NM) (Version 05). More specifically, the following terminology is not correct: - "Data / Parameter" - "Data Unit" - "Source of Data to be used" - "Description of measurement methods and procedures to be applied" - "QA / QC procedures to be applied"	EB 34 Ann 09	Tables were modified to reflect the exact model provided by the "Guidelines for completing the simplified Project Design Document and the form for proposed new small scale methodologies (CDM-SSC-NM)" version 05.	The DOE has verified that in the new version of the PDD the tables were modified to reflect the exact model provided by the "Guidelines for completing the simplified Project Design Document and the form for proposed new small scale methodologies (CDM SSC-NM)" version 05. Therefore, this CAR has been closed.
CAR 18: Please correct the Data unit and/or the Value of data: Reservoir Area (APJ).	EB 34 Ann 09	The unit of the reservoir area data was corrected.	The DOE has verified that in the new version of the PDD the unit of the reservoir area data was corrected (from M^2 to KM^2) Therefore, this CAR has been closed.

CAR 19: Please correct Data Unit and/or Value of Data: Installed Capacity.	EB 34 Ann 09	The unit of the data installed capacity was corrected.	The DOE has verified that in the new version of the PDD the unit of the data installed capacity was corrected. (from MWh to MW) Therefore, this CAR has been closed.

CAR 20: the following phrase is not in accordance with the definition for "Starting date of a CDM project activity (P - SSC)" given by the Glossary of CDM terms (Version 04): "This document [*letters to the Brazilian DNA and CDM EB stating PP's intention to turn SHP Santa Carolina into a CDM Project activity*] respects the notification deadline of 6 months before the project activity start, once it was already sent before the beginning of the SHP construction."	EB 34 Ann 09	FIRST PP RESPONSE: The phrase was excluded from the text. SECOND PP RESPONSE: The starting date has not happened yet, because Project Owners had not hired any company to construct the plant. Also, Project Owners had not signed any contract to buy equipment for the plant. Therefore, a future date was considered based in the schedule elaborated by the engineering company responsible for engineering studies. This position was supported by consultation made to the UNFCCC Team by the DOE.	FIRST DOE ANALYSIS: According to the PP: *"At the time of the PDD development (...) Project Owners had not hired any company to construct the plant. Also, Project Owners had not signed any contract to buy equipment to the plant.* *In 15th October 2009, Project Owners contracted the company "Z&Zen Consultoria Empresarial" to seek sources of financing for the plant. This contract denotes a relevant action to implement the project.* *Therefore, 15th October 2009 is the starting date of the project activity."* The DOE does not agree with this position of PP. According to the Glossary of CDM terms (Version 05): "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 (…) In light of the above definition, the start date shall be considered to be the date on which the project participant has committed to expenditures related to the implementation or related to the construction of the project activity.

Continuation CAR 20			This, for example, can be the date on which contracts have been signed for equipment or construction/operation services required for the project activity. Minor pre-project expenses, e.g. the contracting of services /payment of fees for feasibility studies or preliminary surveys, should not be considered in the determination of the start date as they do not necessarily indicate the commencement of implementation of the project." Therefore, PP is asked to reformulate his answers and provide a date (or an expected date) where real action took (is to take) place, such as the date (or expected date) on which contracts have been signed (or will be sign) for equipment or construction/operation services required for the project activity. In the case of an expected date of real action, PP shall demonstrate how this future date has been defined. THIS CAR IS STILL OPEN. SECOND DOE ANALYSIS: 150

			A future date was considered in accordance with the clarification the DOE received from the CDM team. This future date needs to be defined in accordance with the Glossary of CDM terms. Thus, the expected signing of the contract for construction work on 13/06/2011 can be accepted as the earliest date at which either the implementation or construction or real action of a project activity is expected to begin. The DOE was able to validate this expected date with the chronogram provided by PP wherein the expected starting of the actual construction is set to happen at 27.06.2011.This chronogram was produced by third party: MEK Engenharia Ltda. Seeing the above, this CAR was closed.

CAR 21: The following phrase is not correct: "According to the version 14 of methodology AMS I.D - Grid connected renewable electricity generation – the baseline of the Project component related to renewable electricity generation connected to the grid is the kWh produced by the renewable generation unit multiplied by a emission factor (measured by kg CO2e/kWh) (...)" Moreover, emission factor should be measured in kg CO2e/kWh but in t CO2e/kWh.	VVM 80	This section was corrected in the version 2 of the PDD, according to the AMS I.D (version 15) methodology.	In this new version of the PDD (version 2) PP has chosen to apply the new version of the relevant methodology (AMS I.D). The PDD now uses version 15 of this Methodology. The phrase that CAR 21 addresses has now been modified to: *"According to the version 15 of methodology AMS I.D - Grid connected renewable electricity generation – the baseline emissions of the Project are given by the product of electrical energy baseline (EGBL, y, expressed in kWh of electricity produced) and the baseline emission factor (EFCO2)."* Now that this section (Section B4, third paragraph) has been revised with the insertion of the phrase above, this CAR has been closed by the DOE.
CAR 22: In the phrase "From this moment on, the Brazilian Designated National Authority (...) approved by the Executive Board of CDM and published in annex 12 of CE's Report 35". Specifically, please correct the use of the abbreviation "CE".	VVM 83	The abbreviation was corrected.	The abbreviation has not been corrected. It has been excluded from the text. As this abbreviation is not considered to be essential information, the DOE has accepted the text as included in the new version of the PDD (version 2) and has, therefore, closed this CAR.

CAR 23: In the phrases: "At the moment of the PDD development, the most recent data published by the Designated National Authority was the build margin emission factor for the year 2008 dispatch and it will be used to the ex-ante estimation of CER generation." (PDD, page 21). And "At the moment of PDD development, the most recent data published by the DNA the operation margin emission factors for 2008 dispatch and will be used to the ex-ante estimation of CER generation." (PDD, page 22) The "build margin" and "operation margin" should be swapped.	VVM 88	The terms"build margin" and "operation margin" were swapped.	The DOE has verified that in the new version of the PDD (version 2), the terms have been swapped and are now correct. Therefore, this CAR has been closed.
CAR 24: In B.6.3., please exclude the comment: "Formatado: Inglês (EUA)".	VVM 88	The comment was excluded.	The DOE has verified that in the new version of the PDD (version 2), the comment was excluded. Therefore, this CAR has been closed.

CAR 25: Please update Table 5: Sources of Energy Explored in Brazil, as it is no correct when Link was accessed during validation (on 26/08/09).	EB 39 Ann 10	FIRST PP RESPONSE: The table was updated and the reference was saved to be sent to the DOE. The source of information updates this data constantly. SECOND PP RESPONSE: Table 5 was corrected.	FIRST DOE ANALYSIS: In table 5, please correct the quantity of fossil fuel plants. In accordance with the evidence the PP has provided, this quantity should be 907. THIS CAR IS STILL OPEN. SECOND DOE ANALYSIS: In table 5, the quantity of fossil fuel plants was corrected in accordance with the evidence that PP has provided, this quantity should be 907. Seeing this, the CAR was closed.
CAR 26: Link to ANEEL in reference 6 (page 11) is not accessible.	EB 39 Ann 10	We believe that this CAR refers to the link to Ministry of Mines and Energy (MME). The link was corrected.	The corrected link was checked by the DOE. It has found to be accessible en correct. Please note that it's now (PDD, version 2) reference nr. 8. Seeing the above, this CAR has been closed.

CAR 27: Please provide reference to Graph 1: Evolution of Fossil Fueled Installed Capacity (MWh) Decennial Plan for Electric Energy Expansion 2008-2017 (page 11)	EB 39 Ann 10	The reference was corrected. The graph was constructed with information supplied by Ministry of Mines and Energy (MME). The bibliography used was already delivered to the DOE during the site visit. Anyway, the evidence was sent again to the DOE.	The evidence supplied to the DOE (Plano Decenal - Indicadores - CAR 27) was analyzed. This evidence contains the projections for the evolution of the installed capacity per energy source in Brazil in the period 2008-2017. The source of this evidence is the "Decennial Plan for Electric Energy Expansion 2008-2017" from the Ministry of Mines and Energy (MME). Graph 1 was compared with this evidence and it has found to be in accordance with it. Therefore, this CAR has been closed.

CAR 28: Reference to table 6 (note7) is not correct	EB 39 Ann 10	The reference was corrected. The page which PP's used to construct the table was provided to the DOE.	The evidence supplied to the DOE (_BIG-Capacidade de Geração do Brasil) was analyzed. This evidence contains a list of all the current thermoelectric power plants in Brazil. The source of this evidence (http://www.aneel.gov.br/aplicacoes/capacidadebrasil/GeracaoTipoFase.asp?tipo=2&fase=3) was also checked on 10.05.2010. The information provided by PP on table 6 of PDD version 2 has been compared with its reference and it has found to be correct. Therefore, this CAR has been closed.

CAR 29: Link on note 18 not accessible.	EB 39 Ann 10	FIRST PP RESPONSE: The link was corrected and data in the table was updated. Also, the evidence was saved and it was sent to the DOE. SECOND PP RESPONSE: Table 10 was updated.	FIRST DOE ANALYSIS: The evidence supplied to the DOE (BIG - Capacidade de Geração no Estado - RS) was analyzed. This evidence contains a list of the current different types of power plants in Rio Grande do Sul State. The source of this evidence (http://www.aneel.gov.br/aplicacoes/ResumoEstadual/CapacidadeEstado.asp?cmbEstados=RS:RIO%20GRANDE%20DO%20SUL) was also checked on 10.05.2010). Please note that this now is note 23. The information provided by PP on table 10 of PDD version 2 has been compared with its reference and it has found not to be correct. Therefore, this CAR has not been closed. The total amount of energy is not correct. THIS CAR IS STILL OPEN. SECOND DOE ANALYSIS:

			Table 10 was updated. The DOE was able to validated its content with the evidence provided by PP: Prints screen of ANEEL site containing the information: _BIG - Capacidade de Geração no Estado – RS.pdf The DOE was able to crosscheck this info at http://www.aneel.gov.br/aplicacoes/ResumoEstadual/CapacidadeEstado.asp?cmbEstados=RS:RIO%20GRANDE Seeing this, the CAR was closed.
CAR 30: Link to ANEEL in reference 4 (page 10) is not accessible: http://www.aneel.gov.br/aplicacoes/capacityBrazil/capacityBrazil.asp.	VVM 113	The link is accessible. To acess it, you must click “Ctrl” over the link. The link was updated with updated information. Also, the evidence was saved and it was sent to the DOE	The link has been corrected in the latest version of the PDD (version 2) and is now correct. Therefore, this CAR has been closed.
CAR 31: Numbers on table 4 should be presented in the English manner.	VVM 113	Table 4 was corrected.	The DOE has verified that in the new version of the PDD the numbers on table 4 have been presented in the English manner. So, therefore, this CAR has been closed.

CAR 32: The following three paragraphs have no relevancy when describing an existing barrier due to prevailing practice: Another factor that must be highlighted is that, analyzing the history of the Brazilian electric sector, it is verified that the Brazilian legislation did not incorporate the environmental variables in the national electric sector planning. However, facing the undesirable social-environmental impacts resulting from the implantation of hydroelectric entrepreneurships, a series of legal demands that aim at avoiding and mitigating the environmental effects of this kind of project have become requirements of the conceding power and of the legislative organs. With this, new investments, in the implantation of hydro electrical entrepreneurships in Brazil are demanded from the investors. The SHP Santa Carolina is a small enterprise with small installed capacity and power generation, not similar, therefore, to the major national hydroelectric power and not having, therefore, the enormous revenue potential for this type of enterprise. Moreover, the SHP Santa Carolina is a run-of-river plant with low environmental impacts and considers in its planning a series of investments in environmental programs and actions that did not exist when the occurred the deployment of most of the hydroelectric plants of the South the country. Thus, the implementation of this project does not have substantial income like the large Brazilian hydroelectric enterprises and has minimal environmental impacts that require investment, and having these characteristics, its cash flow presents rates of return below the market reference rates and the revenues from the sale of certified emission reductions (CERs) becomes important to make the project feasible.	VVM 113	FIRST PP RESPONSE: In the opinion of the Project Participants, these three paragraphs do have relevancy because they describe information about the prevailing practice of hydro projects in Brazil and new barriers that Project Participants must face when implementing a Small Hydropower Plant. SECOND PP RESPONSE: The three paragraphs were reformulated. They are important because the reservoirs of big hydropower plants usually provide higher emissions of GHGs. This information was added to the PDD.	FIRST DOE ANALYSIS: PP's response has not been accepted. PP justifies the relevancy of the three questioned paragraphs by stating that they describe the prevailing practice of hydro projects in brazil. These three paragraphs compare large hydroelectric enterprises in Brazil with the project activity, which is a small hydroelectric enterprise. However, according to the ATTACHMENT A TO APPENDIX B OF THE SIMPLIFIED MODALITIES AND PROCEDURES FOR SMALL-SCALE CDM PROJECT ACTIVITIES barriers due to prevailing practice are: "prevailing practice or existing regulatory or policy requirements that lead to the implementation of a technology with higher emissions". So, PP does not need to compare the different types of hydroelectric enterprises (they all have the same emission) but need to compare its project with other energy generation enterprises with higher emission, such as oil and coal fired thermoelectric power plants.

Continuation CAR 32			Moreover, PP is requested to demonstrate that there is prevailing practice, or existing regulatory or policy requirements that lead to the implementation of a technology with higher emission than the emission of its own projects. THIS CAR IS STILL OPEN. SECOND DOE ANALYSIS: PP was requested to demonstrate that there is prevailing practice, or existing regulatory or policy requirements that lead to the implementation of a technology with higher emission than the emission of its own projects. The following argumentation is brought forward in version 03 of the PDD:*"The projection for the period 2008-2017, elaborated by MME, described previously points to a growth of the thermal capacity and a fall in the hydro share in the energetic matrix of Brazil"* The DOE crosschecked this

			Information on: Decennial Energy Plan (Ministry of Mines and Energy 2008 – 2017. Chapter III (electric energy offer), Part I (electric energy generation) – page 45 and 46, table 32 and graph 06. (also available at http://www.epe.gov.br/PDEE/Forms/EPEEstudo.aspx) PP also presents table 09 – results of electric energy auctions by ANEEL in 2007-2009, showing predominance in thermal power energy. These auctions are driven by a minimum price. Due to the fact that thermal power plants have (in general) a lower price, these auction system bring advantages for thermal plants. This kind of policy leads to the implementation of technology with higher emissions. PP also provides information regarding the prevailing practice in Brazil regarding large hydro power plants. SHP Santa Carolina is a small enterprise with small installed capacity and power generation, not similar, therefore to the major national hydroelectric power and not having, therefore, the enormous..

			...revenue potential for this type of enterprise. The configuration of enterprises like Santa Carolina, with small reservoir, can avoid higher emission provided by the huge reservoirs of big hydropower plants (CH4 emissions). Seeing that PP has demonstrated that the development of the energy generation mix of Brazil (2008-2017) will cause an increase in thermal power plants and, seeing that PP has demonstrated that the current mix in Brazil has a predominance of Large Hydro (responsible for CH4 emission) this CAR was closed.

CAR 33: All information regarding the PROINFA program (Brazilian government program that gave incentives for the development of power plants that used renewable as energy source) is not relevant as the program only involved enterprises that started generating energy before 2007. Therefore, the PROINFA incentives cannot be used in a analysis of existing barriers, as it will not affect any new to be developed power plant (regardless of the energy source used).	VVM 113	FIRST PP RESPONSE: The existence of Proinfa Program proves that there were State incentives to projects similar to the SHP Santa Carolina that mitigated mainly financial and regulatory risks which the project owners will face in the future (existing barriers). This program proves that there are uncertainties in the market that make the investment in this kind of projects become very risky. SECOND PP RESPONSE: Information about PROINFA Programa is useful for the context. The existence of this kind of program proves that an economic incentive is important to motivate small hydro plants. Without this kind of program, thermal plants and big hydro plants tends to maintain its predominance.	PP wishes to keep information regarding PROINFA. The DOE accepts this, but asks PP to demonstrate how information that compare energy generation enterprises with the same emission as its own enterprise is relevant in a prevailing practice analysis. According to the ATTACHMENT A TO APPENDIX B OF THE SIMPLIFIED MODALITIES AND PROCEDURES FOR SMALL-SCALE CDM PROJECT ACTIVITIES barriers due to prevailing practice are: “prevailing practice or existing regulatory or policy requirements that lead to the implementation of a technology with higher emissions. PP is asked to demonstrate why, in the light of the above, information regarding PROINFA is relevant to analyse the prevailing practice barrier that it project faces. THIS CAR IS STILL OPEN. SECOND DOE ANALYSIS:

			PP responds that Information regarding PROINFA is useful as contextual information, to prove that an economic incentive is important to motivate small hydro plants. Without this kind of program, thermal plants and big hydro plants tends to maintain its predominance. PROINFA can be seen as an incentive to change the prevailing practice in the energy generation segment in Brazil. Apparently, incentives are necessary due to the fact that the prevailing practice is not the generation of energy with the use of alternative sources of energy (PROINFA is a programme that provided incentives to alternative forms of energy generation, such as SHPPs. PROINFA does not exist anymore.). SHP Santa Carolina does not participate in PROINFA and, this way, considers the revenue from the sale of CERs as an important factor to realize the investment. Seeing the above, the CAR was closed. This information was added in the PDD. Seeing the above, this CAR was closed.

CAR 34: The following phrase needs to be revised: "In this way, through the data and information presented, it is perceived that the establishment of small hydroelectric plants is not a common practice in the country and is not configured as a common scenario of the energy matrix of the country and the region.". Moreover, the section where this statement is inserted describes a prevailing practice analysis	VVM 113	The sentence was revised.	The DOE has verified that in the new version of the PDD (version 2), this sentence has been corrected by PP and that the term "common practice" is not used anymore. It has been replaced by "prevailing practice". Therefore, this CAR has been closed
CAR 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.	VVM 113	FIRST PP response: The construction of the Small Hydropower Plant has not started yet. The moment of the investment decision was considered. The evidence of project starting date is provided to the DOE and it was added more information in the item C.1 of the PDD. SECOND PP RESPONSE: The investment decision has not been made yet. Project Owner has not made any significant investment regarding the project. BVC (Product Manager) checked with UNFCCC that this situation is possible.	FIRST DOE ANALYSIS: The PP didn't provided the evidences to justify the date of investment decision. THIS CAR IS STILL OPEN. SECOND DOE ANALYSIS: Second answer 26/04/2011 It was considered as the date of investment decision, the date of the first PDD version of the referred project: 10/07/2009. CAR BQA 1 was closed.
CAR BQA 2 – Correct the word "factor" in the page 13 of the PDD.	VVM 113	The word "factor" was corrected.	The word "factor" was corrected. CAR BQA 2 is closed.

CAR BQA 3 – The PP compared a WACC in nominal terms with a cash flow in real terms.	VVM 113	Benchmarking and Project Indicators were changed due to the *"Draft tool to determine the weighted average cost of capital (WACC)"* publication. This tool provides a guideline to calculate benchmarking. Even though this tool is still not approved, it is understood that it represents an appropriate way to calculate the benchmarking according to the Executive Board. Therefore, PP decided to change project indicator and benchmarking to be more consistent to Executive Board understandings.	Answer 1 26/04/2011 The referred error was corrected and The validation team accepted the new benchmark because the Additionality tool (ver.05.2) 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. Besides the benchmark was based on the *"Draft tool to determine the weighted average cost of capital (WACC)"* publication. And followed correctly all the procedures to determine the benchmark. CAR BQA 3 is closed.

CL 1: Please explain the phrase : "The project activity reduces the emissions of greenhouse gases (GHGs) by preventing the electricity generation by fossil fuel sources with consequent CO2 emissions that would be generated if the project did not exist" Considering the description that is provided in the Methodology AMS 1.D. for the baseline of activity.	EB 34 Ann 09	When the project generates electricity to the Brazilian National Interconnected System; thermal plants are displaced by the project due to the dispatch order of the system. With that, CO2 emissions are prevented by the project.	PP has explained the questioned phrase and the DOE has accepted this clarification. PP explains that the project prevents the emission of CO2 of thermal power plants due to the dispatch order of the system. Due to this clarification, this CL has been closed.
CL 2: Please explain the insertion of the letter "s" placed in the third line of paragraph one.	EB 34 Ann 09	It was a typing mistake. The letter "s" was excluded.	The DOE has verified that the typing mistake has been corrected in version 2 of the PDD, and therefore this CL was closed.

CL 3: Power density of 113.39 MW/km2 is given. Please explain why it is necessary to state that the SHP has a power density below 10MW/km2, seeing that the applicable methodology is the AMS I.D.	EB 34 Ann 09	FIRST PP RESPONSE: This information was not required by AMS I.D, version 14. However, project participants decided to add it in the PDD to show the high power density of the project. The methodology AMS I.D was updated in the EB 50. In the new version, number 15, this information is required and it defines the eligibility under this methodology. SECOND PP RESPONSE: PDD Version 03 clarified in section A.4.2 how power density was calculated.	FIRST DOE ANALYSIS: Now that PP has chosen to utilize the new version of the relevant methodology (version 15 of AMS I.D) the calculation of the power density of the reservoir is necessary. PP does so, however, it's not clear to the DOE how the power density of 113.39 MW/km2 has been calculated. Please clarify. Also, according to AMS I.D, version 15 and ACM002, version 11, the Power density of the project activity should be provided in W/m2. THIS CL IS STILL OPEN SECOND DOE ANALYSIS: PP has added the equation to calculate power density in Section A.4.2 of the PDD version 03. 10,500,000 W/ 92,600 m^2 = 113.39 W/M^2. Installed capacity and reservoir area validated: http://www.aneel.gov.br/cedoc/atdsp20100404.pdf ANEEL dispatch 404 of 22.02.2010. Also, reservoir area validated with copy of Environmental License (LP). Seeing the above, the CL was closed.

CL 4: Please provide information on how many generators will be installed.	EB 34 Ann 09	Two generators. Information was added in the PDD.	The DOE has verified the new version of the PDD (version 2) and has observed that the information regarding the number of generators was added. Therefore, this CL has been closed.
CL 5: Please provide a reference supporting the statement that Francis turbines are the most widely used in hydropower plants projects in the world.	EB 34 Ann 09	This information was used based in the experience of the project developers. There is no reference to support it. In order to avoid doubts, this information was withdrawn.	The DOE has verified that this information was indeed withdrawn in the PDD version 2. As it does not comprise essential information, the DOE has accepted PP's answer and, therefore, this CL has been close.

CL 6: Please explain why the Total Reduction Estimation (tCO2e) isn't 102,956.	EB 34 Ann 09	FIRST PP RESPONSE: The line "Total Reduction Estimation (tCO2e)" of the Table 03 of the PDD was wrong. The PDD Version 02 presents correct information of Total Reduction Estimation. The whole table had to be corrected due to the approval by ANEEL for the Medium Energy of 5.46 MW. SECOND PP RESPONSE: Energy generation estimative for 2011 in table 11 of the PDD version 02 was corrected in PDD Version 03. The combined emission factor was the same. It was just an approximation. The combined margin emission factor in the PDD is corrected in version 03.	FIRST DOE ANALYSIS: A new excel sheet was provided by PP to support the new number of energy generation (total and yearly) and emission reductions (total, yearly and average), as contained in the new version of the PDD (version 2). This new calculations were needed due to the fact the Brazilian National Energy Agency (ANEEL) has approved the Basic Engineering Project of the Project Activity. In its approval, the agency has changed the medium energy of the power plant to 5.46 MW. Therefore, new calculations were needed. The DOE has checked the new calculations in the new excel sheet and have found them to be correct. However, the number of energy generation estimative for 2011 in table 11 of PDD version 2 is not in accordance with the calculations provided in the new excel sheet. Please also use the same Combined Emission factor in the PDD as used in the excel sheet (0.3112 tCO2e) THIS CL IS STILL OPEN

			SECOND DOE ANALYSIS: In version 03 of the PDD, Energy generation estimative for 2011 in table 11 are provided in accordance with the calculation spreadsheet. Also, the EF used is in accordance with the latest published data by the Brazilian DNA (2009 data): http://www.mct.gov.br/index.php/content/view/303076.html#ancora Seeing the above, this CL was closed.

CL 7: Please explain why the Version 05.2 of the "Tool to demonstration and assessment of Additionality" has been chosen for a small scale project activity.	EB 34 Ann 09	FIRST PP RESPONSE: Although the project is a small scale project activity, the "Tool to demonstration and assessment of Additionality, version 05.2" was used to support and to guide the additionality analysis. SECOND PP RESPONSE: The "Tool to demonstration and assessment of Additionality" was excluded from Section B.1.	FIRST DOE ANALYSIS: This answer has not been accepted by the DOE. If PP wishes to mention the "Tool to demonstration and assessment of Additionality", this tool has to be used entirely. This means that PP has to use this tool to demonstrate the additionality of its project, and not ATTACHMENT A TO APPENDIX B OF THE SIMPLIFIED MODALITIES AND PROCEDURES FOR SMALL-SCALE CDM PROJECT ACTIVITIES. PP is requested to either apply this tool entirely or to exclude it from section B.1 of the PDD version 2. THIS CL IS STILL OPEN. SECOND DOE ANALYSIS: PP has excluded reference to the "Tool to demonstration and assessment of Additionality" in the PD version 03. Seeing the above, this CL was closed.

CL 8: Regarding Data / Parameter: - Electricity Supplied to the Grid (EG BL, y) - Total Electricity Generated (TEGBL,y) - Reservoir Area (APJ) - Please give more detailed information on the SOURCE of data to be used. Also, regarding the Reservoir Area (APJ), please explain how the "Enterprise Previous License" can be used as source to monitor the reservoir area during the project crediting period.	EB 34 Ann 09	Information regarding EG BL,y and TEGBL,y were added to the PDD. Regarding, the reservoir area, the PDD says that: The Enterprise Previous License could be used to prove the value adopted by the Project in the PDD. During the crediting period, the flooded area of the reservoir is monitored by the local environmental agency in the licensing process. Local Environmental Agency monitors the project when issues the Operation Licence. The Operation License is renewed periodically. The area of the reservoir expressed in the operation license (which means the "licensing process" said in the PDD) can be used as source to monitor the reservoir area.	Regarding EG BL, y and TEGBL,y PP has added information on the source of data. The PDD, version 2, now describes that the source of data will be internal spreadsheets and CCEE information. Regarding APJ, PP has explained that the "enterprise Previous Licence" will be used to check periodically the area of the reservoir, as described in the PDD, with the actual reservoir area during the entire crediting period. This will be done by comparing the previous licence with the operational licence of the Plant (which has to be renewed periodically). The DOE has accepted this clarification and, therefore, this CL has been closed.

CL 9: Regarding Data / Parameter: Reservoir Area (APJ): please explain how PPs plan to monitor this data using the entire project crediting period. Please explain this as it is not clear how this will be done as the PDD only states that this data will be checked by local environmental agency during the licensing period. Also, please see CL 3 on the necessity of the provision of data regarding the energetic density of the reservoir.	EB 34 Ann 09	Local Environmental Agency monitors the project during the issuance of the Operation Licence. The Operation License is renewed periodically. The area of the reservoir expressed in the operation license (which means the "licensing process" said in the PDD) can be used as source to monitor the reservoir area. Information regarding energetic density of the reservoir was provided in CL 3.	PP has explained that the "enterprise Previous Licence" will be used to check periodically the area of the reservoir, as described in the PDD, with the actual reservoir area during the entire crediting period. This will be done by comparing the previous licence with the operational licence of the Plant (which has to be renewed periodically). The DOE has accepted this clarification and, therefore, this CL has been closed.
CL 10: Please provide the document containing the Environmental Impact Analysis (EIA) of the SHP.	EB 34 Ann 09	FIRST PP RESPONSE: Environmental Impact Analysis was sent to the DOE. SECOND PP RESPONSE: Environmental Impact Analysis was sent to the DOE.	FIRST DOE ANALYSIS: The EIA has not yet been received by the DOE. THIS CL IS STILL OPEN SECOND DOE ANALYSIS: The EIA was received. Seeing this, the CL was closed.

CL 11: Please include information regarding the most reasonable baseline scenario: the scenario that reasonably represents the anthropogenic emissions by sources of GHGs that would occur in the absence of the proposed CDM project activity. Moreover, please provide detailed information on what would occur in the absence of the activity.	VVM 81	Information was included.	The DOE has verified that additional information was presented in the new version of the PDD, in the first two paragraphs of Section B.4. PP describes there how the project activity will reduce the emissions of greenhouse gases (GHGs) by preventing the electricity generation by fossil fuel sources with consequent CO2 emissions that would be generated if the project did not exist. Therefore, this CL has been closed.
CL 12: Please insert reference for the following statement: "This way, the Brazilian DNA defined that the National Interconnected System must be considered as a unique System and that this configuration will be valid for calculating the emission factor of CO2 used to calculate the emission reduction of greenhouse gases in CDM Projects of electricity generation connected to the grid." (PDD, page 20)	VVM 88	Reference was inserted.	The DOE has verified the insertion of this reference and has found that the information brought by PP is consistent with the reference: Resolution 8 of the Brazilian DNA of 26 March 2008: http://www.mct.gov.br/upd_blob/0024/24719.pdf (accessed on May 10th, 2010). Therefore, this CL has been closed.

CL 13: Please insert reference for the following statement: "This method was chosen because, according to Brazilian DNA, it is the most accurate and the most recommended if information is available." (PDD, page 21).	VVM 88	The statement was replaced by the following statement: "This method was chosen because it is the method which Brazilian DNA uses to calculate the operating margin of the Brazilian Interconnected System."	The phrase that replaced the statement questioned by CL 13 has been analyzed by the DOE and it has found to be a more accurate description of the reason why PP has chosen the dispatched analysis as the method for calculation the operational margin emission factor of the Brazilian Interconnected System. Therefore, this CL has been closed.
CL 14: please explain why the panorama on the current energetic matrix in Brazil and its perspective for the future (page 11 and 12 of the PDD) is relevant for the financial barrier analysis. Moreover, please explain why this panorama is not included in the section on pages 18 and 19 of the PDD, which describe the barrier due to prevailing practice.	VVM 113	The panorama of the current energetic matrix in Brazil and its perspective for the future was described as an introduction for all barriers. That's why it is located in the beginning of the item "B.5" of the PDD. The sub-item "barriers" contains two barriers: financial barriers and barriers due to prevailing practice. All description made before is useful (in Project Participants' point of view) to introduce the scenario where the project is located.	PP has clarify the importance of describing the panorama of the current energy sector in Brazil before describing in detail why the two barriers (financial and barrier due to prevailing practice) exist. PP believes it's important as an introduction to the description of the two barriers that the project´s implementation faces. Now that PP has clarify this issue, this CL has been closed.

CL 15: please provide a reference to the statement on page 12: "The MME projection estimates a growth in the electricity supply from fossil fueled plants in the next years."	VVM 113	The reference is cited in the paragraph before located in the page 11 and also in the end of the same paragraph. The reference is "Decennial Plan for Electric Energy Expansion to the period of 2008 a 2017" elaborated by Brazilian Ministry of Mines and Energy.	The DOE has analyzes the response given by PP. PP informs that the statement "The MME projection estimates a growth in the electricity supply from fossil fuelled plants in the next years." should be seen in conjunction with the information given in that same section regarding the Brazilian MME's document "Decennial Plan for Electric Energy Expansion to the period of 2008 a 2017". This Plan projects an increase in the electricity supplied to the Brazilian Grid from fossil fuelled fired plants. Therefore, this CL has been closed.

CL 16: please provide a reference for the statement on page 11: "Most of hydroelectric power plants (HPPs) were implemented through investments state-owned investments, when the electric sector was still centrally regulated. They present the characteristic of using great reservoir areas with high socio-environmental impacts, once the Brazilian legislation was still soft in the past concerning the implantation of entrepreneurships for energy generation." Also, please explain why this is relevant for the barriers analysis.	VVM 113	FIRST PP RESPONSE: This statement was created by Project Participants based in information presented in the Atlas of Electric Energy in Brazil / National Agency of Electric Energy, pages 45-46. (Atlas de Energia Elétrica do Brasil / Agência Nacional de Energia Elétrica, Páginas 45-46. – Brasília: ANEEL, 2002.). This information is relevant to present the prevailing practice of hydro projects in Brazil and it is also important to show that new demands are required by the Regulators of the Sector in Brazil. Reference was added SECOND PP RESPONSE: Big reservoirs usually provide more emission of greenhouse gases by the decomposition of biomass. This information was added to the PDD.	FIRST DOE ANALYSIS: This answer has not been accepted by the DOE. Please refer to CAR 32. Moreover, PP is requested to demonstrate that there is prevailing practice, or existing regulatory or policy requirements that lead to the implementation of a technology with higher emission than the emission of its own projects. PP does not need to compare the different types of hydroelectric enterprises (they all have the same emission) but need to compare its project with other energy generation enterprises with higher emission, such as oil and coal fired thermoelectric power plants. THIS CL IS STILL OPEN SECOND DOE ANALYSIS: Please refer to CAR 32 for a discussion on this subject. Seeing that PP has provided the information requested in CAR 32, this CL was closed.

CL 17: please provide a reference for the following statement on page 12: The country has several enterprises in the study and construction phase, aiming the start of operation in the medium term, which totalize additional 6,959 MW in coal-fired Thermoelectric Plants and 7,500 MW in oil-fired.	VVM 113	FIRST PP RESPONSE: The reference is cited in the paragraph before located in the page 11 and also in the beginning (the MME projection) and at the ending of the same paragraph. The reference is “Decennial Plan for Electric Energy Expansion to the period of 2008 a 2017” elaborated by Brazilian Ministry of Mines and Energy. SECOND PP RESPONSE: This information was corrected accordingly page 45 of “the Decennial Plan for Electric Energy Expansion to the period of 2008 a 2017”. The Decennial Plan for Electric Energy Expansion to the period of 2008 a 2017 is supplied to the DOE.	FIRST DOE ANALYSIS: The DOE has analyzes the response given by PP. It is still not clear where in the “Decennial Plan for Electric Energy Expansion to the period of 2008 a 2017” this information (these exact values) can be found. Please clarify. THIS CL IS STILL OPEN SECOND DOE ANALYSIS: Please refer to CAR 32. The information can be found on page 45 of the “the Decennial Plan for Electric Energy Expansion to the period of 2008 a 2017” (table 32). Seeing the above, the CL was closed.

CL 18: Regarding the following statement: "Observing the graph 1 above, it can be concluded that the supply of non-renewable electricity sources tends to a strong growth in the next years. The total oil-fire plants installed capacity should grow 427%, as well as the coal-fired plants should grow 124%, bearing in mind the baseline of 2008." please provide referenced information on the expected growth for the same period of the other energy sources given on table 4 and 5.	VVM 113	FIRST PP RESPONSE: The reference for table 4 and 5 were presented in the last paragraph of page (http://www.aneel.gov.br/aplicacoes/capacityBrazil/capacityBrazil.asp . Accessed in May 25th, 2009). Table 4 and 5 refers to data supplied by ANEEL in the time of the PDD Development. Information cited in the CL 18 (Graph 1) Decennial Plan for Electric Energy Expansion to the period of 2008 a 2017. They have different sources. Information in ANEEL website is constantly updated. Project Participants do not see any problem to have different sources of information and date for these data. SECOND PP RESPONSE: Information regarding the expected growth for the same period of other energy source was provided in item B.5. Also evidences and analyses made by PPs that are not included in the PDD were provided to the DOE.	FIRST DOE ANALYSIS: PP's answer has not been accepted. The DOE asked in CL 18 for referenced information regarding the expected growth of other energy sources (other than coal and oil) for the same period (2008-2017). Moreover, PP gives information regarding the expected growth of the total installed capacity of oil and coal fired power plants in Brazil, but does not give the expected growth of other sources. Without this extra information, a comparison cannot be made, so the DOE cannot assess if the growth projections of oil and coal fired plants is relatively speaking high or if it is not higher than the average growth of the Brazilian various energy sources. THIS CL IS STILL OPEN SECOND DOE ANALYSIS: PP has added information on item B.5 of the PDD version 03 (last paragraph page 12). This info was crosschecked and found to be corrected. Crosscheck was done with table 32 and graph 06 of the "the Decennial Plan for Electric Energy Expansion to the period of 2008 a 2017". This document can be assessed at: http://www.epe.gov.br/PDEE/Forms/EPEEstudo.aspx The numbers provided by PP were found to be the same as those provided by the reference. Seeing this, the CL was closed.

CL 19: please provide a reference for the statement on page 11: “Also according to Aneel2, historically the use of hydraulic potential in Brazil for electricity generation required the formation of large reservoirs and the flooding of large areas. These constructions had used, in most cases, the accumulation of water reservoirs and regularization of flows that cause changes in water regimes and the formation of microclimates, facilitating, impairing or even extinguishing species.” Also, please explain why this is relevant when describing an existing barrier due to prevailing practice.	VVM 113	FIRST PP RESPONSE: The reference was added. This information is relevant to present the prevailing practice of hydro projects in Brazil. SECOND PP RESPONSE: These large reservoirs, in general, also provide more emission of CH_4 from the decomposition of the vegetation submerse	FIRST DOE ANALYSIS: PP’s answer has not been accepted. The information was not found on page 32 of the referred document. THIS CL IS STILL OPEN SECOND DOE ANALYSIS: PP has provided additional information in Section B.5 of the PDD version 03. Please refer also to CAR 32. Seeing that PP has provided the requested clarification in CAR 32, this CL was closed.

CL 20: Regarding the following statement on page 19: "The non-implementation of SHP Santa Carolina would promote (i) the continuity of the current situation, with electricity being generated by the current generation of composition of National Interconnected System, specifically the South Subsystem (with great presence of coal-fired and oil-fired plants) or (ii) the construction of new thermoelectric power plants." please described more clearly how the barriers due to prevailing practice that were identified do not affect the alternatives (i) and (ii).	VVM 113	FIRST PP RESPONSE: PDD Version 2 presents a description about how the barriers due to prevailing practice that were identified do not affect the alternatives (i) and (ii). SECOND PP RESPONSE: PPs believe that answers to CARs 32,33 and CL 16 and 18, besides the complementation of the PDD answer this CL.	FIRST DOE ANALYSIS: PP has provided additional information to clarify how the barriers due t prevailing to prevailing practice that were identified do not affect the alternatives (i) and (ii). Regarding alternative ii (the construction of new thermoelectric power plants), PP states that: "With the economic growth that requires more electricity, if new renewable plants are not constructed, generation will be supplied by thermal plants that are in operation or that will be constructed as described in the MME Projection presented before." The DOE belies this statement is relevant, seeing that, according to the ATTACHMENT A TO APPENDIX B OF THE SIMPLIFIED MODALITIES AND PROCEDURES FOR SMALL-SCALE CDM PROJECT ACTIVITIES, PP only needs to demonstrate that there are prevailing practices or existing regulatory or policy requirements that lead to implementation of a technology with higher emissions. However, PP has still to clarify CAR 32, 33 and CL 16 and 18. THIS CL IS STILL OPEN SECOND DOE ANALYSIS: PP has clarified CAR 32, 33 and CL 16 and 18. Seeing this, this CL was closed.

CL 21: please explain if there any issues that have a clear direct impact on the financial returns of the project activity, other than: risk related barriers, that could have negative effects on the financial performance; or barriers related to the unavailability of sources of finance for the project activity?	VVM 114	FIRST PP RESPONSE: Financial returns can be affected by the climatic conditions of the region that impact directly the river flow and the capacity of the plant. This is the main risk of the project. Furthermore, there are some costs of transaction that it makes more difficult for small companies to access capital. The financing cost is higher and it requires more guarantees. This fact brings more cost and risks to small entrepreneurs. SECOND PP RESPONSE: In PP's view, adverse climate conditions are not a risk related to barriers. At the moment, PP's do not see any other issue that can have a clear direct impact on the financial returns of the project activity.	FIRST DOE ANALYSIS: PP was asked to explain if there are any issues that have a clear and direct impact on the financial returns of the project OTHER THAT RISK RELATES BARRIES OR BARRIERS RELATED TO THE UNAVAILABILITY OF SOURCES OF FINANCE. Adverse climate conditions can be seen as a risk related barrier. This part of the response cannot be accepted. PP also states that it is difficult for small companies to access capital and that financial costs are higher and requires more guarantees. These part of PP's answer can also not be accepted. This barrier is related to the unavailability of sources of finance. PP is asked to explain if there are ANY OTHER ISSUES THAT HAVE A CLEAT IMPACT OTHER THAN THOSE MENTIONED ABOVE. These other issues do not need to exist. The DOE only needs to check this as it's asked by the CLEAN DEVELOPMENT MECHANISM VALIDATION AND VERIFICATION MANUAL (Version 01.1), paragraph 115:

			"Issues that have a clear direct impact on the financial returns of the project activity cannot be considered barriers and shall be assessed by investment analysis." SECOND DOE ANALYSIS: PP states that there are no other issues that have a clear direct impact on the financial returns of the project activity. According to VVM 116 (version 1.02): Issues that have a clear direct impact on the financial returns of the project activity cannot be considered barriers and shall be assessed by investment analysis. The only barrier presented by the DOE (other than the financial barrier) is the barrier due to prevailing practice. Seeing that this barrier does not describe an issue that have a clear impact on the financial returns of the project (issues whose impacts can be expressed in monetary terms with reasonable certainty – VVM 116), this CL was closed.

CL BQA 1 - Are there available evidences to cross-checked the total investment, energy price, medium electricity generated and the O&M cost?	VVM 113	FIRST PP RESPONSE: Evidences were supplied to DOE during the site visit. Project Participants have a Protocol signed by the auditor of BVC "Ricardo Fontenelle" where it is described all evidences supplied. Regarding the items quoted in the CL BQA 1, the following evidences will be supplied again: Total Investment – Budget of Engineering Consolidated Basic Project; Budget of the Transmission Line and Contracts with suppliers for financing arrangement and for transmission line studies. Medium Electricity Generated – Approval by ANEEL – "Oficio 463/2010-SGH/ANEEL" Energy Price – Results of the First Auction of Renewable Energy in Brazil. O&M and Administrative cost – Guidelines of Ministry of Mines and Energy. SECOND PP RESPONSE: The investment decision has not been made yet. BVC (Product Manager) checked with UNFCCC that this situation is possible.as it THIRD PP RESPONSE: Calculation of Equity IRR considering R$ 140.00 as energy price is presented in PDD V04. The principal of debt was already taken into account in the equity IRR calculation and this analysis made by DOE was not correct. Sensitivity analysis with correction of the price is presented with PDD Version 04.	FIRST DOE ANALYSIS: The DOE need the determination of the date of investment decision to validated the input values. THIS CL IS STILL OPEN SECOND DOE ANALYSIS: Second answer 26/04/2011 1 – Two mistakes were found in the calculation of the equity IRR: - The financial spreadsheet has been using R$144.00/MW as energy price instead of R$140.00/MW. - The principal of debt repayment has not been taken into account in the calculation of the equity IRR. The sensitivity analysis needs to be corrected as well. CL BQA 01 is open. Third answer (09/06/2011) The PDD and the economic assessment have been corrected. CL BQA 01 is closed.

CL BQA 2 - Both project IRR and equity IRR calculations shall as a preference reflect the period of expected operation of the underlying project activity (technical lifetime), please clarify the period of expected operation of the underlying project activity.	VVM 113	The authorization/concession period for small hydropower plants in Brazil is 30 years. The construction period was estimated in 1.5 years and the period of expected operation used was 28.5 years. The authorization period can be evidenced by other small hydropower plants in Brazil (some authorization is supplied to the DOE). Project owner has not contracted any equipment to evidence the technical lifetime.	The answer was accepted, because the DOE validated the concession period. CL BQA 2 was closed
CL BQA 3 – The used benchmark is an internal benchmark or is a national approved benchmark? Explain the reasons to use the respect benchmark.	VVM 113	PDD version 02 presents the reasons to use the respect benchmark.	The reasons were accepted. CL BQA 3 was closed.
CL BQA 4 – Please 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 113	PDD version 02 presents the explanation about how the parameters used in the sensitivity analysis are the most critical and that the ranges of variations are appropriate.	The PP included a detailed explanation about how the parameters used in the sensitivity analysis are the most critical and that the ranges of variations are appropriate. CL BQA 4 was closed.
CL BQA 5 – Why the load factor is not included in the investment analysis and in the sensitivity analysis?	VVM 113	PDD version 02 presents the variation in the Plant Load Factor in the sensitivity analysis.	The PP included the plant load factor in the PDD. CL BQA 5 was closed.