VALIDATION REPORT

MONJOLINHO ENERGÉTICA S/A - MONEL

VALIDATION OF THE MONJOLINHO ENERGÉTICA S.A.'S CDM PROJECT

REPORT NO. BRAZIL-VAL/1591/2008

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BUREAU VERITAS CERTIFICATION

VALIDATION REPORT

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Monjolinho Energética S.A. - MONEL	Marcelo Loureiro

Summary:

Bureau Veritas Certification has made the validation of the Monjolinho Energética SA's CDM project of Monjolinho Energética S/A – MONEL located in the municipalities of Faxinalzinho, Nonoai, Benjamin Constant do Sul and Entre Rios do Sul, in Rio Grande do Sul, 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 (May 12/15, 2008); ii) follow-up interviews with project stakeholders (May 15/16, 2008); iii) resolution of outstanding issues and the issuance of the final validation report and opinion (August, 2008). 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 (CR 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 Clean Development Mechanism Project Design Document Form (CDM-PDD) – Version 03.1; the Guidelines for completing the project design document (CDM-PDD), and the proposed new baseline and monitoring methodologies (CDM-NM) – Version 06.2; the Approved consolidated baseline and monitoring methodology ACM0002, "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" - Version 07; the Tool for the demonstration and assessment of additionality – Version 05; Annex 12 Methodological Tool "Tool to calculate the emission factor for an electricity system" – Version 01; and meets the relevant UNFCCC requirements for the CDM and the relevant host country criteria.

Report No.:	Subject Group:
BRAZIL-val/1591/2008	CDM

Project title:
Monjolinho Energética S/A's CDM Project

Work carried out by:
Antonio Daraya – Lead Auditor
Roberval Kaminski – Specialist
Bernardo Aleksandravicius-Financial Specialist

Work verified by:
Sergio Carvalho

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Indexing terms

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Abbreviations	
ACM	Approved Consolidated Methodology
BMS	BVQI Management System
BVC	Bureau Veritas Certification
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reductions
CH_4	Methane
CR	Clarification Request
CO_2	Carbon Dioxide
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
MONEL	Monjolinho Energética S/A
GHG	Green House Gas(es)
I	Interview
FEPAM	Environmental Protection State Foundation – Rio Grande do Sul
IETA	International Emissions Trading Association
IPCC	Intergovernmental Panel on Climate Change
ISO	International Organisation for Standardization
LI	Installation License
LO	Operation License
LP	Preliminary License
MoV	Means of Verification
MP	Monitoring Plan
NGO	Non Government Organisation
OM	Operating Margin
ONS	Operador Nacional do Sistema Elétrico (National Electric System Operator)
PCF	Prototype Carbon Fund
S-SE-CO	South, Southeast,Midwest(Sul, Sudeste,Centrooeste)
UNFCCC	United Nations Framework Convention for Climate Change

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1 INTRODUCTION

Monjolinho Energética S.A. - MONEL has commissioned Bureau Veritas Certification to validate its CDM project Monjolinho Energética S.A.'s CDM Project (hereafter called "Monjolinho project") at Municipalities of Faxinalzinho, Nonoai, Benjamin Constant do Sul and Entre Rios do Sul, State of Rio Grande do Sul, Brasil.

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 GHG Project Description

The project activity consists on the supply of clean hydroelectric energy to the Brazilian National Interconnected System (SIN) through the implantation and operation of Hydro Power Plant (HPP) Monjolinho (Alzir dos Santos Antunes), located in the state of Rio Grande do Sul, Southern

Region of Brazil, with an installed capacity of 67 MW, using a small reservoir, with low environmental impact.

The main objective of the Hydro Power Plant Monjolinho (Alzir dos Santos Antunes) is to help attend the growing demand for energy in Brazil, due to the country's economical and population growth, supplying clean and renewable energy, contributing, thus, to the environmental, social and economical sustainability, by increasing the participation of clean and renewable energy in relation to the country's total consumption of electricity.

The project activity reduces the emissions of green house gases (GHG), avoiding the generation of electricity through sources of fossil fuels with consequent CO2 emissions, which would be produced if the project did not exist. The supply of clean and renewable electricity will bring and important contribution to environmental sustainability, reducing the emissions of carbon dioxide taking place in the absence of this project.

Monjolinho Energética S.A. – MONEL – is a special purpose company, constituted to build and operate the Monjolinho hydroelectric plant as its exclusive owner. According to the first additive term in the contract celebrated along with ANEEL (National Agency of Electrical Energy), the implantation schedule of the HPP Monjolinho (Alzir dos Santos Antunes) is described below:

Beginning of the powerhouse's concretion 01/06/2008
Descent of the 1st turbine's rotor 01/04/2009
Descent of the 1st turbine's rotor 01/04/2009
1st hydrogenerator unit's commercial operation start 01/11/2009
Descent of the 2nd turbine's rotor 01/06/2009
Beginning of the 2nd hydrogenerator unit's commissioning 01/11/2009
2nd hydrogenerator unit's commercial operation start 31/12/2009

Although the first hydro generator unit commercial operation start is expected to happen on November 1st, 2009, Monjolinho Energética S/A. works with the goal of anticipating the commercial generation to July/2009 and, for that, it has been developing an acceleration program for the construction plan.

The validation team had access to the ANEEL's Inspection Report, of April 16, 2008. ANEEL's representatives visited the Plant site on March 25, 2008. The main objective of the inspection was to check the implementation schedule of Hydro Power Plant (HPP) Monjolinho.
The inspection team made the verification of the civil works status, and a document analysis related to the equipment acquisition contracts, connection to the distribution/transmission system and environmental licenses.

The statement of the report was:
The construction is a “turn-Key” modality, for which Monjolinho Energética S/A has contracted Engevix Engenharia S/A. This company is responsible for the design, administration and management of the Construction.
Engevix sub-contracted GE Hydro Inepar do Brasil S/A to supply the main equipment; for the civil works, Toniolo Busnello, JM, and Concrexap/Seta Companies; and for the assembling, Fazermont Company.

All the activities were adherent to the physical schedule, approved by ANEEL in the “Additive to the first term contract for grant of electrical power generation # 018/2002, of April 23, 2002”. The additive was signed on December 13, 2007.

1.4 Validation team

The validation team consists of the following personnel:

Antonio Daraya
Bureau Veritas Certification Team Leader, Climate Change Verifier

Roberval Kaminski
Bureau Veritas Certification, Specialist

Bernardo Aleksandravicius
Bureau Veritas Certification, Financial Specialist

Sérgio Carvalho
Bureau Veritas Certification, Internal reviewer

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 Validation and Verification Manual (IETA/PCF). The protocol shows, in a transparent manner, criteria (requirements), means of verification 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 validation protocol consists of five tables. The different columns in these tables are described in Figure 1.

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

Validation Protocol Table 1: Mandatory Requirements			
Requirement	Reference	Conclusion	Cross reference
The requirements the project must meet.	Gives reference to the legislation or agreement where the requirement is found.	This is either acceptable based on evidence provided (OK), a Corrective Action Request (CAR) or a Clarification Request (CR) of risk or non-compliance with stated requirements. The CAR's and CL's are numbered and presented to the client in the Validation Report.	Used to refer to the relevant protocol questions in Tables 2, 3 and 4 to show how the specific requirement is validated. This is to ensure a transparent validation process.

Validation Protocol Table 2: Requirements checklist				
Checklist Question	Reference	Means of verification (MoV)	Comment	Draft and/or Final Conclusion
The various requirements in Table 1 are linked to checklist questions the project should meet. The checklist is organized in several sections. Each section is then further sub-divided. The lowest level constitutes a checklist question.	Gives reference to documents where the answer to the checklist question or item is found.	Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence provided (OK), or a Corrective Action Request (CAR) due to non-compliance with the checklist question. (See below). Clarification Request (CR) is used when the validation team has identified a need for further clarification.

Validation Protocol Table 3: Baseline and Monitoring Methodologies				
Checklist Question	Reference	Means of verification (MoV)	Comment	Draft and/or Final Conclusion
The various requirements of baseline and monitoring methodologies should be met. The checklist is organized in several sections. Each section is	Gives reference to documents where the answer to the checklist question	Explains how conformance with the checklist question is investigated. Examples of means of verification are document	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is	This is either acceptable based on evidence provided (OK), or a Corrective Action Request (CAR) due to non-compliance with the checklist question. (See below). Clarification

then further sub-divided. The lowest level constitutes a checklist question.	or item is found.	review (DR) or interview (I). N/A means not applicable.	further used to explain the conclusions reached.	Request (CR) is used when the validation team has identified a need for further clarification.

Validation Protocol Table 4: Legal requirements				
Checklist Question	Reference	Means of verification (MoV)	Comment	Draft and/or Final Conclusion
The national legal requirements the project must meet.	Gives reference to documents where the answer to the checklist question or item is found.	Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence provided (OK), or a Corrective Action Request (CAR) due to non-compliance with the checklist question. (See below). Clarification Request (CR) is used when the validation team has identified a need for further clarification.

Validation Protocol Table 5: Resolution of Corrective Action and Clarification Requests			
Report clarifications and corrective action requests	Ref. to checklist question in tables 2/3	Summary of project owner response	Validation conclusion
If the conclusions from the Validation are either a Corrective Action Request or a Clarification Request, these should be listed in this section.	Reference to the checklist question number in Tables 2, 3 and 4 where the Corrective Action Request or Clarification Request is explained.	The responses given by the Client or other project participants during the communications with the validation team should be summarized in this section.	This section should summarize the validation team's responses and final conclusions. The conclusions should also be included in Tables 2, 3 and 4, under "Final Conclusion".

Figure 1 Validation protocol tables

2.1 Review of Documents

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

To address Bureau Veritas Certification corrective action and clarification requests Monjolinho Energética S.A. - MONEL revised the PDD and resubmitted it on 07/August/2008.

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

2.2 Follow-up Interviews

On 15 and 16/05/2008 Bureau Veritas Certification performed interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of Monjolinho Energética S.A. - MONEL were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
MONJOLINHO ENERGÉTICA S.A. - MONEL	►Project description ►Technology used ►Operational aspects ►Contribution towards sustainable development. ►QA/QC procedures ►Internal review / verification mechanism
ENERBIO CONSULTORIA LTDA.	►Project description ►Project category ►Baseline & Additionality ►Monitoring Plan

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.

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

3 VALIDATION FINDINGS

In the following sections, the findings of the validation are stated. The validation findings for each validation subject are presented as follows:

1) The findings from the desk review of the original project design documents and the findings from interviews during the follow up visit are summarized. A more detailed record of these findings can be found in the Validation Protocol in Appendix A.

2) Where Bureau Veritas Certification had identified issues that needed clarification or that represented a risk to the fulfillment of the project objectives, a Clarification or Corrective Action Request, respectively, have been issued. 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. Based on the revision 4 of the PDD, no CARs/CRs have been identified.

3) The conclusions for validation subject are presented.

3.1 Project Design

Bureau Veritas Certification recognizes that Monjolinho Energética S/A. - MONEL Project is helping country fulfill its goals of promoting sustainable development. The project is expected to be in line with host-country specific CDM requirements because:

The project activity consists on the supply of clean hydroelectric energy to the Brazilian National Interconnected System (SIN) through the implantation and operation of Hydro Power Plant (HPP) Monjolinho (Alzir dos Santos Antunes), located in the state of Rio Grande do Sul, Southern Region of Brazil, with an installed capacity of 67 MW, using a small reservoir, with low environmental impact.

The main objective of the Hydro Power Plant Monjolinho (Alzir dos Santos Antunes) is to help attend the growing demand for energy in Brazil, due to the country's economical and population growth, supplying clean and renewable energy, contributing, thus, to the environmental, social and economical sustainability, by increasing the participation of clean and renewable energy in relation to the country's total consumption of electricity.

The project activity reduces the emissions of green house gases (GHG), avoiding the generation of electricity through sources of fossil fuels with consequent CO2 emissions, which would be produced if the project did not exist. The supply of clean and renewable electricity will bring and important contribution to environmental sustainability, reducing the emissions of carbon dioxide taking place in the absence of this project.

Monjolinho Energética S/A. – MONEL – is a special purpose company, constituted to build and operate the Monjolinho hydroelectric plant as its exclusive owner. According to the first additive term in the contract celebrated along with ANEEL (National Agency of Electrical Energy), the implantation schedule of the HPP Monjolinho (Alzir dos Santos Antunes) is described below:

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2nd hydrogenerator unit's commercial operation start 31/12/2009

Although the first hydro generator unit commercial operation start is expected to happen on November 1st, 2009, Monjolinho Energética S/A. works with the goal of anticipating the commercial generation to July/2009 and, for that, it has been developing an acceleration program for the construction plan.

Through the following actions, Monjolinho Project contributes to the sustainable development of its region and country:
(a) Through Monjolinho Project, clean and renewable energy will be dispatched to the Brazilian National Interconnected System, displacing possible entrepreneurships that would generate energy through the burning of fossil fuels, avoiding, thus, the emission of poluent gases to the atmosphere and preserving the environment to future generations.
(b) Through the generation of approximately 900 direct jobs, indirect jobs and through the boosting of economics activities aggregated to the entrepreneurship's implementation, Monjolinho Project promotes the region's economic development, which happens through the generation of income to the community of the municipalities involved and to its collaborators. Furthermore, through the taxes and tributes generated by its activities to the cities involved and to the Union, Monjolinho Project provides financial resources which will be reverted into benefits to the region's population and for the country as a whole.
(c) Besides Monjolinho project presents low environmental impacts, with the formation of a small reservoir and elevated power density, Monjolinho Energética S.A. makes considerable investments in environmental programs and actions. It will be developed 24 environmental programs on the physical, biotic and anthropic environment to mitigate possible project's environmental impacts. We can highlight the reforestation program, which predicts the planting of 250,000 small branches of native species along the ciliar zone and the specific programs of environmental education that will contribute to the awareness of the population in the municipalities involved in the entrepreneurships about environmental and ecological issues.
(d) Since the HPP Monjolinho (Alzir dos Santos Antunes) is located in the rural area of Rio Grande do Sul, the implantation of this kind of project in the region will demand the capacitating of the collaborators to be hired or sub-hired in the region and of the population itself in the municipalities involved. Through a environmental education program, activities along with the scholar community ofthe municipalities within the project's direct

influence will be realized, besides activities to capacitate sub-hired companies, and educational activities with residents of the reservoir's surroundings. Moreover, Engevix S.A. has a human resources politics that aims at the qualification of all the collaborators of the companies in the group, applying also to the collaborators of the HPP Monjolinho (Alzir dos Santos Antunes). Through this action, Monjolinho Energética S.A seeks to capacitate its collaborators to the market and contribute to the growth of knowledge and to the level of education of the municipalitieswhere it acts.
(e) Investments in culture and on social responsibility programs are part of the company's culture and will be also carried out in Monjolinho project. Through Engevix Institute, the group promotes social investments mainly in the area of children education, through social-educative and professionalizing workshops. Furthermore, for over 25 years, Engevix S.A. develops programs to support culture, particularly in arts and music. Continuing the Engevix culture, investments on social-cultural project will also be developed in Monjolinho project, which has a BNDES', National Bank of Economic and Social Development, specific funding line, in amount of R$ 2 million, to invest in social programs that will be developed in the Entrepreneurship's implementation.

Through its performance in several sectors in society and through the investments in the energetic sector, Monjolinho Energetica S.A. seeks to continue contributing to the sustainable development of the cities where it acts, in the region and in the country as a whole.

The Project Scenario is considered additional in comparison to the baseline scenario, and therefore eligible to receive Certified Emissions Reductions (CERs) under the CDM, based on an analysis, presented by the PDD, of investment and common practice analysis.

The project design is sound and the geographical (located in Municipalities of Faxinalzinho, Nonoai, Benjamin Constant do Sul and Entre Rios do Sul, State of Rio Grande do Sul, Southern Region of Brazil), and temporal (40 years) boundaries of the project are clearly defined.

No CARs and CRs applicable to project design have been identified.

3.2 Baseline and Additionality

The Monjolinho Energética S.A. - MONEL project uses the approved methodology ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources", version 07, and "Tool for Demonstration and Assessment of Additionality, version 5.
The ACM0002 consolidated methodology is applicable to grid-connected renewable power generation that involves electricity capacity additions, under the following conditions:
- The project activity is the installation or modification/retrofit of a power plant/unit of one of the following types: hydro power plant/unit (either with

a run-of-river reservoir or an accumulation reservoir), wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit.
- In case of hydro power plants:

- 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 Emission section, is greater than 4 W/m2.
- The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the Project Emissions section, is greater than 4 W/m2.
- The geographic and system boundaries for the relevant electricity grid can be clearly identified and information on characteristics of the grid is available;

The ACM0002 methodology is applicable to Monjolinho Project due to the following aspects:
- HPP Monjolinho (Alzir dos Santos Antunes) is an installation of a new hydro power plant/unit;
- The geographic and system boundaries for the relevant electricity grid can be clearly identified and information on characteristics of the grid is available due to the geographic data and the relevant electricity grid system limits are easily identified, as well as all information about the grid is available in ONS, Operador Nacional do Sistema (National System Operator) and in ANEEL, Agência Nacional de Energia Elétrica (National Agency of Electric Energy).
- HPP Monjolinho (Alzir dos Santos Antunes) is a project activity which result in new reservoirs and the power density of the power plant is greater than 4 W/m2 (and it is also greater than 10 W/m2).
The project activity`s power density, according ACM0002 methodology, is calculated as demonstrated below:

PD = (CapPJ – CapBL)/APJ-ABL

Where:
PD = Power Density of the project activity, in W/m2
CapPJ = Installed capacity of the hydro power plant after the implementation of the project activity (W);
CapBL = Installed capacity of the hydro power plant before of the project activity (W). For new hydro power plants, this value is zero;
APJ = Area of the reservoir measured in the surface of the water, after the implementation of the project activity, when the reservoir is full (m2);
ABL = Area of the reservoir measured in the surface of the water, before the implementation of the project activity, when the reservoir is full (m2). For new reservoirs, this value is zero.

As:
CapPJ = 67,000,000 W
CapBL = 0
APJ = 5,460,000 m2
ABL = 0

PD = 12.27 W/m2

Project boundaries.
The National Interconnected System (from Portuguese Sistema Interligado Nacional - SIN) is managed by ONS, which is responsible for all activities related to the operation's planning. The ONS traditionally subdivides the National Interconnected System into two subsystems interconnected: the South/Southeast/Midwest Subsystem and the North/Northeast Subsystem. These Subsystems are related to the Brazilian geographic regions: South, Southeast, Midwest, North and the Northeast Region.

Due to the offer's real availability and the consumption behavior in each region, ONS establishes interregional energy exchange politics, besides exceptional attitudes to thermal generation dispatch, in case the storage levels of water significantly reduce and tend to violate the security curves. These conditions are permanently monitored and available to the electric industry agents.

According to ACM0002, version 07, the special extension of the project's boundaries includes the project power plant and all power plants physically connected to the electricity system that the CDM project power plant is connected to. The HPP Monjolinho will be connected to the National Interconnected System, more specifically to the South/Southeast/Midwest Subsystem.

In the absence of the project activity, the clean energy generated by Monjolinho Project dispatched to the National Interconnected System (SIN), through the delivery in the South/Southeast/Midwest Subsystem, would have been generated through non-renewable sources from Power Plants connected to the interconnected grid, fostering the emission of greater quantities of green house gases.

According to the methodology ACM0002, if the project activity is the installation of a new renewable grid-connected power generation plant, the baseline scenario is the following:
"The electricity delivered to the grid by the project would have been generated otherwise by the operation of a grid-connected power plant and by the addition of new generating sources, as reflected in the combined margin described in the item B.6.1 of the PDD."

The combined margin emission factor of South/Southeast/Midwest Subsystem will be calculated, according to the "Tool to calculate the

emission factor for an electricity system" approved by the CDM Executive Board and published in the Annex 12 of EB 35 Report.

The CO2 emission factors for power generation in the South/Southeast/Midwest Subsystem, necessary to Combined Margin (CM) calculation, are calculated based on the generation record of plants centrally dispatched by the National Operator of the System (From the Portuguese: Operador Nacional do Sistema - ONS).

It will be, therefore, used the combined margin emission factor for the South/Southeast/Midwest Subsystem to calculate the emission reduction of the project.

This baseline is perfectly applicable to HPP Monjolinho (Alzir dos Santos Antunes).

As an additional information, it can be noticed, through the projection established by the Ministry of Mines and Energy (MME), in the Decennial Plan of Electrical Energy Expansion for the period of 2006-2015, that other activities and technologies that propitiate a higher emission of green house gases would occur in the absence of this project.
From the additional electricity generation needs in that period, 10,486 MW will be generated by thermoelectric plants, from which, 1,769 MW will be generated in the South Region of Brazil, being 1050 MW generated utilizing Mineral Coal.
Additionality

Based on the "Tool for the demonstration and assessment of additionality", version 5, it was utilized the step-wise approach to demonstrate and assess the project`s additionality:

Step 1: Identification of alternatives to the project activity according to current laws and Regulations.

Sub-step 1a: Define alternatives to the project:
The alternatives considered to the project activity include:
- The continuity of the present scenario, with electricity generation happening according to the current generation composition of the National Interconnected System, more specifically of the South/Southeast/Midwest Subsystem;
- The construction of a new mineral coal thermoelectric power plant, with similar installed capacity to the HPP Monjolinho (Alzir dos Santos Antunes);
- The project activity undertaken without being registered as a CDM Project Activity.

Sub-step 1b: Compliment with the applicable laws and norms:

Both the project activity and the alternative scenarios are in accordance to the applicable laws and regulations. As exposed in item B.4 of the PDD, it is in the South Region where the only thermoelectric mineral coal plants of the country are located. Particularly, approximately 38% of thermo electrical coal plants of the country are located in Rio Grande do Sul. Moreover, according to the Brazil's Atlas of Electric Energy, 90% of the national reservations of mineral coal are concentrated in Rio Grande do Sul, where Monjolinho Project is located.

It is also remarkable that according to what was exposed in item B.4 of the PDD, the Ministry of Mines and Energy projects a growth in the offer of energy generation from mineral coal thermoelectric centrals and that this projection indicates that, until 2015, the capacity to generate energy of the entrepreneurships that dispatch energy from mineral coal in the South Region will grow approximately 74%.

It is important to clarify that the Brazilian Institutional New Model of the Electric Sector allows the private and public agents to decide the amount of energy to be hired and the investments to be realized from the participation in auctions of power plants and systems of transmission.

According to MME, "it is the agents of distribution that decide and compromise themselves to pay, through contracts resulting from auctions, amounts of electrical energy coming from new installations of electric energy generation to be delivered. With the distributors' information, the generators may then decide which new entrepreneurships of generation they wish to build, presenting in the auctions proposals of selling prices of their electric energy, competing for contracts of energy purchase from distributors. Additionally, the generators may also hire direct and freely with free consumers".

This way, it can be noticed that there are no restrictions in the applicable laws and regulations to the implantation of the alternative scenarios to CDM's activity project. Furthermore, we can also verify that through the MME's projection mentioned before there is even a tendency with great probabilities of occurrence of the alternative scenarios in the absence of projects similar to Monjolinho Project.
It is further noticeable that the Brazilian Institutional New Model of the Electric Sector provides autonomy to the economic agents about the investments to be realized in the Brazilian electric sector, not existing, therefore, restrictions nor impositions to the project activity and to its alternatives.
Thus, both the activity project and the alternative scenarios fulfill all the Brazilian norms and regulations, being also plausible according to the tendencies in the country's electrical sector.

Step 2: Investment Analysis
Determine whether the proposed project activity is not:

(a) The most economically attractive; or
(b) Economically or financially feasible, without the revenue from the sale of certified emission reductions (CERs).
Sub-step 2a. Determine appropriate analysis method
As the project generates financial and economical benefits, other than CDM related income, it will be used the benchmark analysis as the analysis method.

Sub-step 2b – Option III. Apply benchmark analysis
It will be used the project internal rate of return (IRR) as the project financial indicator, because it is the most commonly and appropriate indicator used for infrastructure project investment analysis. As a benchmark, it will be used the Weighted Average Capital Cost – WACC - of the project.

The Weighted Average Capital Cost is calculated through the composition of costs and the participation percentage of each source of capital in the company's capital structure. The Monjolinho Energética S.A's Weighted Average Capital Cost was calculated according the equation below:

WACC= E/V*Re + D/V*Rd*(1-Tc)

Where:

E/V = Percentage of Equity in Company's Capital Structure;
Re = Cost of Equity;
D/V = Percentage of Debt in Company's Capital Structure;
Rd = Cost of Debt
Tc = Income Tax in Brazil

To calculate the cost of equity it was used the CAPM Model (Capital Assets Price Model), using the following equation:

$Re = Rf + \beta i\ (ERP)$

Where:

Re = Cost of Equity;
Rf = Rate of Return of a Risk Free Asset;
βi = Beta Coefficient;
ERP = Equity Risk Premium;

Sub-step 2c. Calculation and comparison of financial indicators

As Monjolinho Energética S.A. considers the project's cash flow a confidential information, it was presented to and validated by the Designated Operational Entity responsible for the Validation.

Table 10 of the PDD shows the assumptions used to prepare Monjolinho Project's cash flow.

The project internal rate of return resulting from the cash flow, calculated according to the above mentioned assumptions is 9.27% per year.
To calculate the weighted average capital cost, the following assumptions were used:
Re = Cost of Equity;
R*f* = Rate of Return of U.S. Treasure (T-Bond) of 30 years + Median of Brazilian Risk
between 2001 and 2006 + Average of Adjustment between U.S Inflation and Brazilian
Inflation of the years 2004, 2005 and 2006.

Sub-step 2c of the PDD shows the assumptions made to calculate β*i* = Beta Coefficient and table 11 of the PDD shows the values used to calculate the Cost of Equity.
ERP = Equity Risk Premium in Brazil, calculated by Aswath Damodaran, according to Standard & Poors data.
Therefore, according to the calculations, Cost of Equity is 23.94% per year.

The cost of debt is based on the cost of lending's contract. The Monjolinho project's funding was signed with BNDES, according to conditions described on table 10 of the PDD. For financial and economic modeling effects, TJLP was considered uniform during all lending period, with a value of 6.25% per year. The cost of debt is composed by TJLP plus 2.1% per year, as banking spread, constituting a total cost of 8.35% per year.

The project's capital structure is composed by 28.07% of equity and 71.93% of debt, as described in table 10 of the PDD. Considering a cost of equity of 23.94%, a cost of debt of 8.35%, an Income Tax + Social Contribution of 34% and applying the equation below,

WACC= E/V*Re + D/V*Rd*(1-Tc)
WACC = 10.68%
As Project IRR = 9.27% < WACC = 10.68%
CDM Project Activity cannot be considered as financially attractive.

Sub-step 2d. Sensitivity analysis
The three variables that might affect the project's finance are (i) the electricity price, (ii) the total amount of investment and (iii) the O&M Cost. The sensitivity analysis considers just the scenarios which contribute to increase the project's financial and economical attractiveness with the objective to confirm how solid the sub-step 2b and 2c's analysis is. Table 13 of the PDD presents the results for the main parameters variation which can affect project's cash flow. It can be seen that the total amount

of investment is the main item which can affect project's cash flow. The investment's projection is based on macroeconomic, climatic and technologic scenarios that show uncertainties which might burden the investment and to cause a total amount increase. Therefore, the total amount of investment reduction scenario, presented in Sensitivity analysis, is difficult to occur.

The electricity price was changed just until 2011, because, in this period, the company does not have Contracts of Power Purchase Agreement, called PPA, already signed. For the remainder concession period, Monjolinho Energética S.A. has PPAs, where the electricity price was negotiated to a value of R$ 124.52/MWh.

The sensitivity analysis demonstrates that the Monjolinho Project is not financially attractive once the entrepreneurship's internal rate of return is lower than the reference indicators in all scenarios analyzed.
The tool for demonstration an assessment of additionality says that:
"If after the sensitivity analysis is concluded that the proposed CDM project activity is unlike to be the most financially attractive, or is unlikely to be financially attractive, then proceed to Step 4 (Common practice analysis)."

Therefore, as the sensitivity analysis has shown that the proposed activity is not attractive in the financial point of view, and step 3, Barrier analysis was not considered in the project, we should proceed to the fourth step, common practice analysis.

Step 4. Common practice analysis
Sub-step 4a. Analyze other activities similar to the proposed project activity,
It is observed that there are in the South Region of the Country, region where HPP Monjolinho (Alzir dos Santos Antunes) is located, entrepreneurships with activities similar to those of the project being proposed.
It follows a summary of the number of electricity generation entrepreneurships in operation in the Country's South Region, according to information available in ANEEL's website:
Number of Entrepreneurships in Operation

		Region South of Brasil
Type	Quantity	%
CGH	87	29.2
EOL	7	2.3
PCH	87	29.2
UHE	38	12.8
UTE	79	26.5
Total	**298**	**100**

CGH: Hydro Power Plant Central Generation (Installed Capacity smaller than 1 MW)
EOL: Wind Power Plant
PCH: Small Hydro Power Plant (Installed Capacity Greater than 1 MW and Smaller than 30 MW)
UHE: Hydro Power Plant (Installed Capacity Greater than 30 MW)
UTE: Thermal Power Plant

The table presented above shows that 12.8% of electricity generation entrepreneurships in the southern region of the country are similar to Monjolinho Project. The greatest part of these entrepreneurships has been implanted by state companies or organs, within the national energy development politics, when the sector was still centrally ruled. At that time, environmental legislation was softer and there was, according to Atlas of Electric Energy in Brazil, the option of forming great reservoirs and for the inundation of big flooded areas in the construction of hydroelectric power plants in the country, with little consideration to the environmental aspects of the projects.

As examples of hydroelectric power plants similar to Project Monjolinho, implanted in the South Region, it can be cited HPP Passo Fundo, whose operation started in 1973, with an installed capacity of 220 MW and flooded area of 229.02 km² and the HPP Passo Real, with an installed capacity of 220 MW and a flooded area of 153.5 km², whose operation also started in 1973. Both entrepreneurships were developed by state companies.

Sub-step 4b. Discuss similar options that are occurring
In spite of the existence of projects similar to Monjolinho Project in operation in the south region of the country, it is necessary to establish peculiar characteristics of these entrepreneurships that do not allow them to be configured as a common business scenario in the country.
According to the Atlas of Electric Energy in Brazil, the hydroelectric energy generation in Brazil is constituted essentially by major entrepreneurships. According to this study, the 23 hydroelectric power centrals of the country with a generation capacity of over 1,000 MW correspond to 71.4% of its installed capacity. Entrepreneurships of this magnitude present, for their generation capacity and consequent capacity of revenues, a great economic viability.

Still according to ANEEL, in the study mentioned above, the use of hydraulic potentials in Brazil for the generation of electric energy has historically demanded the formation of great reservoirs and inundation of big flooded areas. These constructions have used, in the majority of the cases, water accumulation reservoirs and regulations of water flow that provoked alterations in the regimen of water and the formation of microclimates, favoring, damaging or even extinguishing certain species.

Other fact that must be highlighted is that, analyzing the history of Brazilian electrical sector, it is verified that in the past the country's legislation did not incorporate the environmental variable in 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 demands 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.

HPP Monjolinho (Alzir dos Santos Antunes) is an entrepreneurship that possesses 67 MW of installed capacity and 43.1 MW of assured energy, being different, therefore, of the great national hydro electrical sites and not having the enormous potential of revenues of this kind of entrepreneurship. Moreover, HPP Monjolinho (Alzir dos Santos Antunes) is a run-of-the-river power plant that has a power density of 12.27 MW/km², with a flooded area of 5.46 km², presenting low environmental impacts and that considers in its planning a series of investments in programs and environmental actions that did not exist when there was the implantation of the greatest part of hydroelectric power plants in the Southern Region. This way, the implantation of this project does not count on large revenues from the great Brazilian hydroelectric entrepreneurships and has minimal environmental impacts that demand investment and, for these characteristics, its cash flow presents return rates below the market references and the revenue from selling certified emission reduction becomes important to make the project possible.

It is also interesting to notice that as mentioned in sub-step 4.a, the number of hydroelectric power plants in the southern region of the country corresponds to only 12.8% of the entrepreneurships of its energetic matrix, presenting a greater concentration of small hydroelectric power plants and thermoelectric power plants. This greater quantity of small hydroelectric power plants in operation is directly associated to economical and tax benefits conceded by the Federal Government and to the creation, through the law nº 10,438, in April 26, 2002, of the Program PROINFA. The massive presence of thermoelectric power plants in the region is closely related to the fact that the region detains 90% of the country's natural coal reserves, favoring thermoelectric power plants implantation. With this, we perceive that the reduced number of hydroelectric centrals is responsible for a great part of the country's installed capacity and that the hydroelectric power plants are not the main component in terms of number of entrepreneurships of the energetic matrix in the southern region of Brazil.

Furthermore, it is possible to see that part of the hydroelectric entrepreneurships built in Brazil in the past had a high installed capacity,

not respecting or establishing as a priority environmental questions, as it will happen in Monjolinho Project. These characteristics make Monjolinho Project singular among the other entrepreneurships.

As all the steps have been satisfactorily satisfied, the Project is ADDITIONAL.

It is important to confirm that, during the visit to the Florianópolis Office, the project participants presented evidences that, to undertake the entrepeneurship CDM.has been considered in the investment decision.

No CARs and CRs applicable to Baseline and Additionality have been identified.

3.3 Monitoring Plan

The project uses the approved consolidated baseline and monitoring methodology ACM0002 “Consolidated baseline methodology for grid-connected electricity generation from renewable sources”, version 07 of November 30, 2007.

The ACM0002 methodology is applicable to Monjolinho Project due to the following aspects:
• HPP Monjolinho (Alzir dos Santos Antunes) is an installation of a new hydro power plant/unit;
• The geographic and system boundaries for the relevant electricity grid can be clearly identified and information on characteristics of the grid is available due to the geographic data and the relevant electricity grid system limits are easily identified, as well as all information about the grid is available in ONS, Operador Nacional do Sistema (National System Operator), and in ANEEL, Agência Nacional de Energia Elétrica (National Agency of Electric Energy).
• HPP Monjolinho (Alzir dos Santos Antunes) is a project activity which results in new reservoirs and the power density of the power plant is greater than 4 W/m2 (and it is also greater than 10 W/m2), as described in the table 6 of the PDD.

The consolidated baseline methodology for grid-connected electricity generation from renewable sources, version 07, must be applied together with the monitoring methodology present into that methodology.
Based on the applied methodology and on what was described on the item B.6.1 of the PDD, there are neither leakage nor project emissions to be monitored. Therefore, the parameters to be monitored are just the project’s installed capacity, the electricity generation by the project and the project activity’s power plants reservoirs area.

All data collected as part of monitoring will be archived and be kept at least for 2 years after the end of the last crediting period. All

measurements will be conducted with calibrated measurement equipment according to Brazilian industry standards.

During the verification audits, the calibration of the energy measurement equipment must be checked.

No CARs and CRs applicable to Monitoring Plan have been identified.

3.4 Calculation of GHG Emissions

According to ACM0002 methodology (version 07), the emission reduction are calculated as follows:

ERy = BEy – PEy – LEy

Where:
ERy = Emission Reduction in year y (t CO2e/yr)
BEy = Baseline emissions in year y (t CO2e/yr)
PEy = Project emissions in year y (t CO2e/yr)
LEy = Leakage emissions in year y (t CO2e/yr)

The baseline methodology ACM0002 establishes that baseline emissions include only CO2 emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity.
Based on the applied methodology and on what was described on the item B.6.1 of the PDD, there are neither leakage nor project emissions to be monitored.
The baseline emission is calculated as follows:

BEy = (EGy – EGbaseline) * EFgrid,CM,y

BEy = Baseline Emission in year y (t CO2e/year)
EGy = Electricity supplied by the project activity to the grid (MWh)
EGbaseline = Baseline electricity supplied to the grid in case of modified or retrofit facilities (MWh).
For new power plants this value is taken as zero.
EFgrid,CM,y = Combined margin CO2 emission factor for grid connected power generation in year y calculated using the latest version of the “Tool to calculate the emission factor for an electricity system”.

For the ex-ante estimation, it was considered for the variable EGy the HPP Monjolinho (Alzir dos Santos Antunes)’ s assured electricity. During the crediting period, EGy will be the net electricity delivered to the Grid by the project activity.
The HPP Monjolinho is a new power plant to be connected to the interconnected grid, therefore, the EGbaseline is 0 (zero).

The combined margin emission factor is calculated as follows:

EFgrid, CM,y = EFgrid, OM,y x WOM + EFgrid, BM,y x WBM

Where:
EFgrid, BM,y = Build margin CO2 emission factor in year y (tCO2e/ MWh)
EFgrid, OM,y = Operating Margin CO2 emission in year y (tCO2e/ MWh)
WOM = Weighting of operating margin emissions factor (%)
WBM = Weighting of build margin emissions factor (%)
According to the "Tool to calculate the emission factor for an electricity system" approved by the CDM Executive Board and published in the Annex 12 of EB 35 Report, OM = 0.5 and WBM = 0.5 for the first crediting period, and WOM = 0.25 and WBM = 0.75 for the second and third crediting period, unless otherwise specified in the approved methodology which refers to this tool.

For Monjolinho Project, for the first crediting period it was adopted the following weights: WOM = 0.50 and WBM = 0.50.
The calculation of the operating margin emission factor (EFgrid,OM,y) is based on the Simple Adjusted OM method.

The project utilized an ex ante option, using a 3-year generation-weighted average for the years 2005 to 2007, that were the most recent data available at the time of submission of the CDM-PDD to the DOE for validation.

The Simple Adjusted OM can be applied because the low-cost/must run resources constitutes more than 50% of total grid generation. The detailed data to use this option were supplied by ONS (System National Operator, from the Portuguese Operador Nacional do Sistema).
Section B.6.1 of the PDD explains the detailed calculation of the ex ante Emission Factor of the Grid.

EFgrid,CM,y = 0.2654 tCO2e/MWh.

The estimated annual average of approximately 98,262 tCO2e of emission reductions over the crediting period represents a reasonable estimation, using the assumptions given by the project.

No CARs and CRs applicable to the Calculation of GHG emissions have been identified.

3.5 Sustainable Development Impacts

The growing global concern on sustainable resources is leading to a requirement for more sensitive environmental management practices. This is increasingly reflected in legislation and policies around the world. In Brazil, the situation is not different. The licensing policies and environmental rules are very demanding, just as the best international practices.

In Brazil, it is required to the sponsor of any project that involves construction, installation, expansion or operation of any polluting or potentially pollutant activity or any other activity that may cause environmental decay, a series of licenses from the pertinent environmental agency (federal and/or local, depending on the project).

To obtain all the environmental licenses, every hydroelectric project must mitigate, when it exists, the following impacts:
- Inundation of indigenous lands and slave historic areas – authorization for that depends on the National Congress resolution;
- Inundation of environmental preservation areas, legally defined as National Parks and Conserve Units;
- Inundation of urban areas or rural communities;
- Reservoirs where future urban expansion will occur;
- Elimination of natural patrimony;
- Expressive losses for other uses of water;
- Inundation of protected historic areas;
- Inundation of cemeteries and other sacred locations.

The process begins with an environmental impact study (EIA) undertaken by the entrepreneur and it follows with the previous analysis (preliminary studies) made by the local environmental department.

Afterwards, if the project is considered environmentally feasible, the sponsors have to prepare an environmental assessment, which is basically composed of the following information:
- Reasons to implement the project;
- Project Description, including information related to the reservoir;
- Preliminary Environmental Diagnosis, mentioning the main physical, biotic and anthropological aspects;
- Preliminary estimation of the project impacts; and
- Possible mitigating measures and environmental programs.

The result of these evaluations is the Preliminary License (LP), which reflects the positive understanding of the local environmental agency on the project environmental concepts.
To obtain the installation license (LI), it is necessary to present (a) additional information about the previous assessment; (b) a new simplified assessment; or (c) the Environmental Basic Project (PBA) according to the resolution of the environmental agency informed on the LP.

The operation license (LO) is requested during the final phase of the construction and it is obtained after the entrepreneur proves that all exigencies made by the local environmental agency were fulfilled.

The HPP Monjolinho (Alzir dos Santos Antunes)'s historical licences, which were provided to the Designated Operational Entity in the validation stage are:

- Prior License (LP) - # 1065/2005 – DL
Signed on 19/12/2005 and valid until 19/12/2007
- Installation License (LI) - # 190/2007 – DL
Signed on 26/03/2007 and valid until 23/03/2010.

No CARs and CRs applicable to Sustainable Development Impacts have been identified.

3.6 Comments by Local Stakeholders

According to Resolution nº 1 of Brazilian DNA, local stakeholder must be invited to comment the Monjolinho CDM Project.
A list of the stakeholders that received the letter is available in item E.1 of the PDD.

The letters were sent before the validation process and a 30 days term was given for the local stakeholders to make pronunciation and give opinions about Monjolinho Project. Besides the letters sent to local stakeholders, the PDD was available to public comments for the local stakeholders at the website www.enerbio-rs.com.br.

There was only one comment, made by the Secretary of Agriculture and Environment of Faxinalzinho city. She said she is optimistic about the project and asked that, in the moment of production and supply of native seedlings to be planted in the outskirts of the dam and of the reservoir, some seedlings should be passed to the Secretary with the objective of donating them to farmers of some localities in the interior of the municipality. Through this action, the Secretary of Agriculture and Environment of Faxinalzinho seeks to promote the forestation and reforestation, increasing the area of native forests in all locations of the city.

MONEL incorporated the comment and the request made by the Secretary of Agriculture and Environment of Faxinalzinho in the Reforestation Program of HPP Monjolinho (Alzir dos Santos Antunes).

No CARs and CRs applicable to Comments by local stakeholders have been identified

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

According to the modalities for the Validation of CDM projects, the DOE shall make publicly available the project design document and receive, within 30 days, comments from Parties, stakeholders and UNFCCC accredited non-governmental organizations and make them publicly available.

Bureau Veritas Certification published the project documents on the UNFCCC CDM website (http://cdm.unfccc.int) on 11/04/2008 and invited

comments within 10/05/2008 by Parties, stakeholders and non-governmental organizations.

No comments have been received.

5 VALIDATION OPINION

Bureau Veritas Certification has performed a validation of the Monjolinho Energética S.A.'s CDM Project in Brazil. The validation was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

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

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

The project activity consists on the supply of clean hydroelectric energy to the Brazilian National Interconnected System (SIN) through the implantation and operation of Hydro Power Plant (HPP) Monjolinho (Alzir dos Santos Antunes), located in the state of Rio Grande do Sul, Southern Region of Brazil, with an installed capacity of 67 MW, using a small reservoir, with low environmental impact.
The main objective of the Hydro Power Plant Monjolinho (Alzir dos Santos Antunes) is to help attend the growing demand for energy in Brazil, due to the country's economical and populational growth, supplying clean and renewable energy, contributing, thus, to the environmental, social and economical sustainability, by increasing the participation of clean and renewable energy in relation to the country's total consumption of electricity.

The project activity reduces the emissions of green house gases (GHG), avoiding the generation of electricity through sources of fossil fuels with consequent CO2 emissions, which would be produced if the project did not exist. The supply of clean and renewable electricity will bring and important contribution to environmental sustainability, reducing the emissions of carbon dioxide taking place in the absence of this project.
Investment analysis and common practice analysis demonstrate 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, of August 07, 2008 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 the Clean Development Mechanism Project Design Document Form (CDM-PDD) – Version 03.1; the Guidelines for completing the project design document (CDM-PDD), and the proposed new baseline and monitoring methodologies (CDM-NM) – Version 06.2; the Approved consolidated baseline and monitoring methodology ACM0002, "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" - Version 07; the Tool for the demonstration and assessment of additionality – Version 05; the Annex 12 Methodological Tool "Tool to calculate the emission factor for an electricity system" – Version 01; and meets the relevant UNFCCC requirements for the CDM and the relevant host country criteria.

The validation is based on the information made available to us and the engagement conditions detailed in this report.

6 REFERENCES

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

/1/ Clean development mechanism – Project design document (CDM-PDD) – Monjolinho Energética S/A's CDM Project, Version 1, of March 28, 2008.

/2/ Clean development mechanism – Project design document (CDM-PDD) – Monjolinho Energética S/A's CDM Project, Version 2, of May 20, 2008.

/3/ Clean development mechanism – Project design document (CDM-PDD) – Monjolinho Energética S/A's CDM Project, Version 3, of July 28, 2008.

/4/ Clean development mechanism – Project design document (CDM-PDD) – Monjolinho Energética S/A's CDM Project, Version 1, of August 07, 2008.

Category 2 Documents:

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

/1/ Resolução Interministerial 01. Comissão Interministerial de Mudança Global do Clima, Sep, 2003.

/2/ Resolução Interministerial 02. Comissão Interministerial de Mudança Global do Clima, Aug 2005.

/3/ Resolução Interministerial 05. Comissão Interministerial de Mudança Global do Clima, April 2007.

/4/ Resolução Interministerial 06. Comissão Interministerial de Mudança Global do Clima, June 2006.

/5/ Resolução Interministerial 07. Comissão Interministerial de Mudança Global do Clima, March 2008

/6/ Clean Development Mechanism Project Design Document Form (CDM-PDD) – Version 03.1

/7/ Guidelines for completing the project design document (CDM-PDD), and the proposed new baseline and monitoring methodologies (CDM-NM) – Version 06.2

/8/ Approved consolidated baseline and monitoring methodology ACM0002, "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" - Version 07.

/9/ Tool for the demonstration and assessment of additionality – Version 05

/10/ Annex 12 Methodological Tool "Tool to calculate the emission factor for an electricity system" – Version 01

/11/ Kyoto Protocol to the United Nations Framework Convention on Climate Change, United Nations, Dec. 1997

Climate Change. United Nations, Dec, 1997

/12/ Clarifications on validation requirements to be checked by a Designated Operational Entity. UNFCCC/CCNUCC, Sep, 2004

/13/ IETA/PCF – Validation and Verification Manual (v. 3.3, Mar 2004)

/14/ ISO/ 14064-3 - Greenhouse gases — Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions

/15/ ISO/ 14064-2 - Greenhouse gases — Part 2: Specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancements

/16/ Prior License (LP) # 1065/2005 – DL - Signed on 19/12/2005 and valid until 19/12/2007

/17/ Installation License (LI) # 190/2007 – DL - Signed on 26/03/2007 and valid until 23/03/2010

/18/ ANEEL Dispatch number 18/2002, from April 23, 2002 – Giving authorization to AHE Monjolinho to generate electrical energy as an Independent Electrical Energy Producer, with installed capacity of 67 MW.

/19/ Contract Additive to ANEEL Dispatch number 18/2002, from December 13, 2007 – Giving authorization to change AHE Monjolinho timetable to generate electrical energy as an Independent Electrical Energy Producer, with installed capacity of 67 MW.

/20/ Contract CCEAR # 4036/2006 – 22661S, for Electrical Energy Commercialization, celebrated between Monel and Copel Distribution Company - March 12,2006.

/21/ ANEEL's Inspection Report, of April 16, 2008, relative to the inspection visit made to the plant site, on March 25,2008.

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/ Monjolinho Energética S/A – MONEL
Ronaldo de Carvalho Bordinhão
Marcelo Luís Loureiro dos Santos
Simone Pugues
Antenor Zimmermann
Leonardo do Bem Silva
Marcelo Oselame
Márcio Zanotto

/2/ Enerbio Consultoria Ltda. Eduardo Baltar de Souza Leão
Luiz Antonio Leão

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MONJOLINHO ENERGÉTICA S/A' S CDM PROJECT

ACM0002 – "CONSOLIDATED BASELINE METHODOLOGY FOR GRID CONNECTED ELECTRICITY GENERATION FROM RENEWABLE SOURCES"

APPENDIX A: VALIDATION PROTOCOL

Table 1 Mandatory Requirements for Clean Development Mechanism (CDM) Project Activities

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
1. The project shall assist Parties included in Annex I in achieving compliance with part of their emission reduction commitment under Art. 3	Kyoto Protocol Art.12.2	The project will result in fewer GHG emissions than the baseline scenario.	Table 2, Section E.4.1
2. The project shall assist non-Annex I Parties in achieving sustainable development and shall have obtained confirmation by the host country thereof	Kyoto Protocol Art. 12.2, Marrakesh Accords, CDM Modalities §40a	The final decision from the DNA will be available only after its first meeting, after the receiving of all the documents necessary for evaluation, including this validation report, according to Article 6th of Resolução Interministerial 01/03.	Table 4, Section 1.4
3. The project shall assist non-Annex I Parties in contributing to the ultimate objective of the UNFCCC	Kyoto Protocol Art.12.2.	The project will result in fewer GHG emissions than the baseline scenario.	Table 2, Section E.4.1
4. The project shall have the written approval of voluntary participation from the designated national authorities of each party involved, including confirmation by the host party that the project activity assists it in achieving sustainable development	Kyoto Protocol Art. 12.5a, Marrakesh Accords, CDM	Prior to the submission of the Project Design Document and the Validation Report to the CDM Executive Board, the Project will have to receive the written approval of voluntary	Table 4, Section 1.4

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
	Modalities §40a, §28	participation from the DNA of Brazil, including the confirmation that the Project assists the country in achieving sustainable development	
5. The emission reductions shall be real, measurable and give long-term benefits related to the mitigation of climate change	Kyoto Protocol Art. 12.5b	The project will result in fewer GHG emissions than the baseline scenario.	Table 2, Section E.4.1
6. Reduction in GHG emissions shall be additional to any that would occur in absence of the project activity, i.e. a CDM project activity is additional if anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the registered CDM project activity	Kyoto Protocol Art. 12.5c, Marrakesh Accords, CDM Modalities §43 and 44	The reduction in GHG emissions is additional to any that would occur in the absence of the project.	Table 2, Section B.3
7. Potential public funding for the project from Parties in Annex I shall not be a diversion of official development assistance	Marrakech Accords	There is no public funding involved. See annex 2 of PDD.	Table 2, Section A.4.5
8. Parties participating in the CDM shall designate a national authority for the CDM	Marrakech Accords, CDM Modalities §29	Comissão Interministerial de Mudança Global do Clima	-
9. The host country shall be a Party to the Kyoto Protocol	Marrakech Accords,	The host country is a Party to the Kyoto	-

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
	CDM Modalities §30	Protocol.	
10. Comments by local stakeholders shall be invited, a summary of these provided and how due account was taken of any comments received	Marrakech Accords, CDM Modalities §37b	There are evidences that stakeholders have been consulted. Only one comment has been received.	Table 2, Section G
11. Documentation on the analysis of the environmental impacts of the project activity, including transboundary impacts, shall be submitted, and, if those impacts are considered significant by the project participants or the Host Party, an environmental impact assessment in accordance with procedures as required by the Host Party shall be carried out.	Marrakech Accords, CDM Modalities §37c	The environmental impact of the project activity is considered small. The Monjolinho Project presents little necessity of reservoir's flooded area and satisfies the several demands of the state's environment legislation and of the Brazilian electric system, having the necessary licenses for its implantation.	Table 2, Section F.
12. Baseline and monitoring methodology shall be previously approved by the CDM Methodology Panel	Marrakech Accords, CDM Modalities §37e	ACM0002, version 7 - Consolidated baseline methodology for grid-connected electricity generation from renewable sources.	Table 2, Section B.1.1 and D.1.1

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
13. Provisions for monitoring, verification and reporting shall be in accordance with the modalities described in the Marrakech Accords and relevant decisions of the COP/MOP	Marrakech Accords, CDM Modalities §37f	There are provisions for monitoring, verification and reporting. Authority and Responsibilities for the project management are defined.	Table 2, Section D.4
14. Parties, stakeholders and UNFCCC accredited NGOs shall have been invited to comment on the validation requirements for minimum 30 days, and the project design document and comments have been made publicly available	Marrakech Accords, CDM Modalities, §40	Yes, all the parties, stakeholders and UNFCCC accredited NGOs have been invited to comment the project activity. Only one comment has been received from stakeholders.	Table 2, Section G.
15. A baseline shall be established on a project-specific basis, in a transparent manner and taking into account relevant national and/or sectoral policies and circumstances	Marrakech Accords, CDM Modalities, §45 b, c, e	Baseline methodology has been established.	Table 2, Section B.1
16. The baseline methodology shall exclude to earn CERs for decreases in activity levels outside the project activity or due to force majeure	Marrakech Accords, CDM Modalities, §47	OK.	Table 2, Section B.2

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
17. The project design document shall be in conformance with the UNFCCC CDM-PDD format and fulfilled according to the guidelines for completing CDM-PDD, CDM-NMB, and CDM-NMM	Marrakech Accords, CDM Modalities, Appendix B, EB Decisions	OK	-

Table 2 Requirements Checklist

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
A. General Description of Project Activity **The project design is assessed.**					
A.1. Title of the project activity, version number and date of the document	-	DR	Monjolinho Energética S.A.'s CDM Project . Version: 4. Date: August 07, 2008.	OK	OK
A.2. Description of the project activity					

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
A.2.1. Is the purpose of the project activity included?	-	DR	The project activity consists on the supply of clean hydroelectric energy to the Brazilian National Interconnected System (SIN) through the implantation and operation of Hydro Power Plant (HPP) Monjolinho (Alzir dos Santos Antunes), located in the state of Rio Grande do Sul, Southern Region of Brazil, with an installed capacity of 67 MW, using a small reservoir, with low environmental impact. The main objective of the Hydro Power Plant Monjolinho (Alzir dos Santos Antunes) is to help attend the growing demand for energy in Brazil, due to the country's economical and population growth, supplying clean and renewable energy, contributing, thus, to the environmental, social and economical sustainability, by increasing the participation of clean and renewable energy in relation to the country's total consumption of electricity. The project activity reduces the emissions of green house gases (GHG), avoiding the generation of electricity through sources of fossil fuels with consequent CO_2 emissions, which would be produced if the project did not exist. The supply of clean and renewable electricity will bring an important contribution to environmental	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			sustainability, reducing the emissions of carbon dioxide taking place in the absence of this project.		
A.2.2. Is the view of the project participants on the contribution of the project activity to sustainable development included?	-	DR	Yes. Please, see item A.2 of PDD.	OK	OK
A.2.3. Will the project create other environmental or social benefits than GHG emission reductions?	-	DR	Yes. Please, see item A.2 (a, b, c, d and e) of PDD.	OK	OK
A.3. Project participants					
A.3.1. Are Party(ies) and private and/or public entities involved in the project activity listed?	-	DR	Yes. Please, see item A.3 of PDD.	OK	OK
A.3.2. Is the contact information provided in annex 1 of the PDD?	-	DR	Yes.	OK	OK
A.3.3. Is this information indicated using the tabular format?	-	DR	Yes.	OK	OK
A.4. Technical description of the project activity					
A.4.1. Location of the project activity					
A.4.1.1. Host country Party(ies)	-	DR	Brazil.	OK	OK
A.4.1.2. Region/State/Province etc.	-	DR	Rio Grande do Sul.	OK	OK
A.4.1.3. City/Town/Community etc.	-	DR	Yes. Municipalities of Faxinalzinho, Nonoai, Benjamin Constant do Sul and Entre Rios do Sul.	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
A.4.1.4. Detailed description of the physical location, including information allowing the unique identification of this project activity.	-	DR	The powerhouse of HPP Monjolinho (Alzir dos Santos Antunes) is located on Passo Fundo River, sub basin 71, Uruguai River Basin, in the municipalities of Faxinalzinho and Nonoai, State of Rio Grande do Sul, South Region of Brazil, on coordinates 27°20'44" South Latitude and 52°43'52 West Longitude.	OK	OK
A.4.2. Category of the project activity					
A.4.2.1. Is the category of the project activity specified?	-	DR	Yes. Sectorial Scope 1 – Energy Industries (Renewable Source).	OK	OK
A.4.2.2. Is it justified how the proposed project activity conforms to the project category selected?	-	DR	Yes. Category: Renewable electricity generation for a grid (energy generation, supply, transmission and distribution).	OK	OK
A.4.3. Technology to be employed Validation of project technology focuses on the project engineering, choice of technology and competence/ maintenance needs. The validator should ensure that environmentally safe and sound technology and know-how is used.					
A.4.3.1. Does the project design engineering reflect current good practices?	-	DR I	Yes.	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
A.4.3.2. Does the project use state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country?	-	DRI	Yes.	OK	OK
A.4.3.3. Is the project technology likely to be substituted by other or more efficient technologies within the project period?	-	DRI	No.	OK	OK
A.4.3.4. Does the project require extensive initial training and maintenance efforts in order to work as presumed during the project period?	-	DRI	Yes.	OK	OK
A.4.3.5. Does the project make provisions for meeting training and maintenance needs?	-	DRI	There is an Operation and Maintenance Board responsible for all the activities related to the plant's operation and maintenance. It is responsible for supplying the operational and maintenance training needs, according to Engevix policy. Engevix is the controlling company of Monjolinho Energética S/A – Monel, that is the project owner.	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
A.4.4. Brief statement of how anthropogenic emissions of GHG by sources are to be reduced by the proposed CDM project activity					
A.4.4. Is it stated how anthropogenic GHG emission reductions are to be achieved?	-	DR	The project will result in GHG emission reductions by displacing electricity generation from fossil-fuel thermal plants that would have otherwise been dispatched to the grid. This electricity displacement will occur at the system's margin, i.e., this CDM project will displace electricity that is produced by marginal sources (mainly fossil fuelled thermal plants) which have higher electricity dispatching costs and are solicited only over the hours that baseload sources (low-cost or must-run sources) cannot supply the grid (due to higher marginal dispatching costs or fuel storage, in case of hydro sources-constraints).	OK	OK
A.4.4.1. Is the estimate of total anticipated reductions of tons of CO_2 equivalent provided? Is this information indicated using the tabular format?	-	DR	A total reduction of 687,834 tonnes of CO2 equivalent is estimated for the first 7 year crediting period, or an average of 98,262 tonnes of CO2 equivalent per year. This information is indicated using the tabular format.	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
A.4.5. Public funding of the project activity					
A.4.5.1. Is it indicated whether public funding from Parties included in Annex I is involved in the proposed project activity?	-	DR	There is no public funding from Parties included in Annex I involved in the proposed project. See annex 2 of PDD.	OK	OK
A.4.5.2. If public funding is involved, is information on sources of public funding for the project activity provided in Annex 2, including an affirmation that such funding does not result on a diversion of official development assistance and is separate from and is not counted towards the financial obligations of those Parties?	-	DR	N.A.	-	-

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
B. Project Baseline The validation of the project baseline establishes whether the selected baseline methodology is appropriate and whether the selected baseline represents a likely baseline scenario.					
B.1. Baseline Methodology It is assessed whether the project applies an appropriate baseline methodology.					

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
B.1.1. Are the title and the reference of the baseline methodology applicable to the project activity defined? Does the proposed project activity meet the applicability conditions of the methodology?	-	DRI	Approved consolidated baseline and monitoring methodology ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources", version 07 of November 30, 2007. The ACM0002 methodology can be applicable to Monjolinho Project due to the following aspects: • HPP Monjolinho (Alzir dos Santos Antunes) is an installation of a new hydro power plant/unit; • The geographic and system boundaries for the relevant electricity grid can be clearly identified and information on characteristics of the grid is available due to the geographic data and the relevant electricity grid system limits are easily identified, as well as all information about the grid is available in ONS, Operador Nacional do Sistema (National System Operator), and in ANEEL, Agência Nacional de Energia Elétrica (National Agency of Electric Energy). • HPP Monjolinho (Alzir dos Santos Antunes) is a project activity which result in new reservoirs and the power density of the power plant is greater than 4 W/m2 (and it is also greater than 10 W/m2), as described in the table 6 of the PDD.	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
B.2. Description of how the methodology is applied in the context of the project activity					

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
B.2.1. Is the baseline methodology the one deemed most applicable for this project and is the appropriateness justified?	-	DR	In the absence of the project activity, the clean energy generated by Monjolinho Project dispatched to the National Interconnected System (SIN), through the delivery in the South/Southeast/ Midwest Subsystem, would have been generated through non-renewable sources from Power Plants connected to the interconnected grid, fostering the emission of greater quantities of green house gases. According to the methodology ACM0002, if the project activity is the installation of a new renewable grid-connected power generation plant, the baseline scenario is the following: " The electricity delivered to the grid by the project would have been generated otherwise by the operation of a grid-connected power plant and by the addition of new generating sources, as reflected in the combined margin" as described in the item B.6.1 of the PDD." The combined margin emission factor of South/Southeast/Midwest Subsystem will be calculated, according to the "Tool to calculate the emission factor for an electricity system" approved by the CDM Executive Board and published in the Annex 12 of EB 35 Report.	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
	-	DR	The CO2 emission factors for power generation in the South/Southeast/Midwest Subsystem, necessary to Combined Margin (CM) calculation, are calculated based on the generation record of plants centrally dispatched by the National Operator of the System (From the Portuguese: Operador Nacional do Sistema - ONS). It will be, therefore, used the combined margin emission factor for the South/Southeast/Midwest Subsystem to calculate the emission reduction of the project. This baseline is perfectly applicable to HPP Monjolinho (Alzir dos Santos Antunes).		

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
B.3. Description of how the anthropogenic GHG emissions by sources are reduced below those that would have occurred in the absence of the proposed project activity					

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
B.3.1. Is the proposed project activity additional?	-	DR	This item is elaborated based on "Tool for the demonstration an assessment of additionality", version 5. This tool describes some steps to be followed to demonstrate and assess the additionality of the project. The following requirements are necessary to demonstrate and assess the additionality of the Monjolinho Project: Step 1. Identification of alternatives to the project activity according to current laws and regulation Sub-step 1a. Define alternatives to the project: 1. The realistic alternatives to the project activity are: - The continuity of the present scenario, with electricity generation happening according to the current generation composition of the National Interconnected System, more specifically of the South /Southeast/Midwest Subsystem; - The construction of a new mineral coal thermoelectric power plant, with similar installed capacity to the HPP Monjolinho (Alzir dos Santos Antunes); - The project activity undertaken without being registered as a CDM Project Activity.	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			Sub-step 1b. Compliment with the applicable laws and norms: Both the project activity and the alternative scenarios are in accordance to the applicable laws and regulamentations. As exposed in item B.4 of the PDD, it is in the South Region where the only thermoelectric mineral coal plants of the country are located. Particularly, approximately 38% of thermo electrical coal plants of the country are located in Rio Grande do Sul. Moreover, according to the Brazil's Atlas of Electric Energy, 90% of the national reservations of mineral coal are concentrated in Rio Grande do Sul, where Monjolinho Project is located. Step 2. Investment analysis Determine whether the proposed project activity is not: (a) The most economically attractive; or (b) Economically or financially feasible, without the revenue from the sale of certified emission reductions (CERs); To conduct the investment analysis, it must be used the following steps: Sub-step 2a. Determine appropriate analysis method The project generates financial and economical		

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			benefits other than CDM related income, then, it will be used the benchmark analysis to analyse the project activity of Monjolinho Project. Sub-step 2b – Option III. Apply benchmark analysis It will be used the project internal rate of return (IRR) as a project financial indicator, due to it is the most commonly and appropriate indicator used for infrastructure projects` investment analysis. As a benchmark, it will be used Weighted Average Capital Cost – WACC - of the project. Sub-step 2c. Calculation and comparison of financial indicators Monjolinho Energética S.A. considers the project's cash flow a confidential information and, thus, it will be presented entirely to the Designated Operational Entity which will perform the validation and to any entity linked to the CDM that asks it for the purpose of proving the project's additionality. However, it will not be available in the PDD. Project's financial indicator and the benchmark are: Project IRR = 9.27% and WACC = 10.68%		

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			The benchmark analysis was used (Option III) and it showed that project's indicator is less favourable than benchmark. Then, it can be said that the CDM Project Activity cannot be considered as financially attractive. Sub-step 2d. Sensitivity analysis The three variables that might affect the project's finance are (i) the electricity price, (ii) the total amount of investment and (iii) the O&M Cost. The sensitivity analysis considers just the scenarios which contribute to increase the project's financial and economic attractiveness with the objective to confirm how solid the sub-steps 2b and 2c analysis are. The table 13 of the PDD presents the results for the main parameters variation which can affect project's cash flow. The total amount of investment is the main item which can affect project's cash flow. The investment projection is based on macroeconomic, climatic and technologic scenario that shows uncertainties which might burden the investment and to cause a total amount increase. Therefore, the total amount of investment reduction scenario, presented on Sensitivity analysis, is difficult to occur.		

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			The electricity price was changed just until 2011, because, in this period, the company does not have Contracts of Power Purchase Agreement, called PPA, still signed. For the remainder concession period, Monjolinho Energética S.A. has PPAs, where the electricity price was negotiated to a value of R$ 124.52/MWh. The sensitivity analysis demonstrates that the Monjolinho Project is not financially attractive once the entrepreneurship's internal rate of return is lower than the reference indicators in all scenarios analyzed. The tool for demonstration and assessment of additionality says that: "If after the sensitivity analysis it is concluded that the proposed CDM project activity is unlikely to be the most financially/economically attractive or is unlikely to be financially/economically attractive, then proceed to Step 4 (Common practice analysis)". Step 3. Barrier analysis This step will not be considered. Step 4. Common practice analysis Sub-step 4a. Analyze other activities similar to the proposed project activity		

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			It is observed that there are in the South Region of the Country, region where HPP Monjolinho (Alzir dos Santos Antunes) is located, entrepreneurships with activities similar to those of the project being proposed. It follows a summary of the numbers of electricity generation's entrepreneurships in operation in the Country's South Region, according to information available in ANEEL's website: - 87 CGH (29.2% of total) - Hydro Power Plant Central Generation (Installed Capacity smaller than 1 MW). - 7 EOL (2.3% of total) - Wind Power Plant - 87 PCH (29.2% of total) - Small Hydro Power Plant (Installed Capacity Greater than 1 MW and Smaller than 30 MW) - 38 UHE (12.8% of total) - Hydro Power Plant (Installed Capacity Greater than 30 MW) - 79 UTE (26.5% of total) - Thermal Power Plant We can conclude that 12.8% of the electricity generation entrepreneurships in the southern region of the country are similar to the project Monjolinho's activities.		

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			The greatest part of these entrepreneurships has been implanted by state companies or organs, within the national energy development politics, when the sector was still centrally ruled. At that time, environmental legislation was softer and there was, according to Atlas of Electric Energy in Brazil, the option of forming great reservoirs and for the inundation of big flooded areas in the construction of hydroelectric power plants in the country, with little consideration to the environmental aspects of the projects. As examples of hydroelectric power plants similar to Project Monjolinho, implanted in the South Region, it can be cited HPP Passo Fundo, whose operation started in 1973, with an installed capacity of 220 MW and flooded area of 229.02 km² and the HPP Passo Real, with an installed capacity of 220 MW and a flooded area of 153.5 km², whose operation also started in 1973. Both entrepreneurships were developed by state companies. Sub-step 4b. Discuss similar options that are occurring: In spite of the existence of projects similar to Monjolinho Project's project activity in operation in the south region of the country, it is necessary to		

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			establish peculiar characteristics of these entrepreneurships that do not allow them to be configured as a common business scenario in the country. According to the Atlas of Electric Energy in Brazil, the hydroelectric energy generation in Brazil is constituted essentially by major entrepreneurships. According to this study, the 23 hydroelectric power centrals of the country with a generation capacity of over 1,000 MW correspond to 71.4% of its installed capacity. Entrepreneurships of this magnitude present, due to their generation capacity and consequent capacity of revenues, a great economic viability. Still according to ANEEL, in the study mentioned above, the use of hydraulic potentials in Brazil to the generation of electric energy has historically demanded the formation of great reservoirs and inundation of big flooded areas. These constructions have used, in the majority of the cases, water accumulation reservoirs and regulations of water flow that provoked alterations in the regimen of water and the formation of microclimates, favoring, damaging or even extinguishing certain species.		

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			Other fact that must be highlighted is that, analyzing the history of Brazilian electrical sector, it is verified that in the past the country's legislation did not incorporate the environmental variable in 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 demands 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. HPP Monjolinho (Alzir dos Santos Antunes) is an entrepreneurship that possesses 67 MW of installed capacity and 43.1 MW of assured energy, being different, therefore, of the great national hydro electrical sites and not having the enormous potential of revenues of this kind of entrepreneurship. The river power plant has a power density of 12.27 MW/km², with a flooded area of 5.46 km², presenting low environmental impacts and considers in its planning a series of investments in programs and environmental		

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			actions that did not exist when there was the implantation of the greatest part of hydroelectric power plants in the Southern Region. This way, the implantation of this project does not count on large revenues from the great Brazilian hydroelectric entrepreneurships and has minimal environmental impacts that demand investment and, for these characteristics, its cash flow presents return rates below the market references and the revenue from selling certified emission reduction becomes important to make the project possible. It is also interesting to notice that as mentioned in sub-step 4.a, the number of hydroelectric power plants in the southern region of the country corresponds to only 12.8% of the entrepreneurships of its energetic matrix, presenting a greater concentration of small hydroelectric power plants and thermoelectric power plants. This greater quantity of small hydroelectric power plants in operation is directly associated to economical and tax benefits conceded by the Federal Government and to the creation, through the law nº 10,438, on April 26, 2002, of the Program PROINFA. The massive presence of thermoelectric power plants in the region is because it detains 90% of the country's		

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			natural coal reserves, favoring thermoelectric power plants implantation. With this, we perceive that the reduced number of hydroelectric centrals is responsible for a great part of the country's installed capacity and that the hydroelectric power plants are not the main component in terms of number of entrepreneurships of the energetic matrix in the southern region of Brazil. Furthermore, it is possible to see that part of the hydroelectric entrepreneurships built in Brazil in the past had a high installed capacity, not respecting or establishing as a priority environmental questions, as it will happen in Monjolinho Project. These characteristics make Monjolinho Project singular among the other entrepreneurships. As all the additionality conditions are satisfied, the project can be considered additional.		
B.3.2. Are national policies and circumstances relevant to the baseline of the proposed project activity summarised?	-	I	.Yes	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
B.4. Description of the project boundary for the project activity					

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
B.4.1. Are the project's spatial (geographical) boundaries clearly defined?	-	DR	The National Interconnected System (from Portuguese Sistema Interligado Nacional - SIN) is managed by ONS, which is responsible for all activities related to the operation's planning. The ONS traditionally subdivides the National Interconnected System into two subsystems interconnected: the South/Southeast/Midwest Subsystem and the North/Northeast Subsystem. These Subsystems are related to the Brazilian geographic regions: South, Southeast, Midwest, North and the Northeast Region. Due to the offer's real availability and the consumption behavior in each region, ONS establishes interregional energy exchange politics, besides exceptional attitudes to thermal generation dispatch, in case the storage levels of water significantly reduce and tend to violate the security curves. These conditions are permanently monitored and available to the electric industry agents. According to ACM0002, version 07, the spatial extension of the project's boundaries includes the project power plant and all power plants physically connected to the electricity system that the CDM project power plant is connected to. The HPP Monjolinho is connected to National Interconnected .	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			System, more specifically to the South/ Southeast/Midwest Subsystem.		
B.4.2. Are the project's system (components and facilities used to mitigate GHGs) boundaries clearly defined?	-	DR	The project boundaries are defined by the emissions targeted or directly affected by project activities, construction and operation. It encompasses the physical, geographical site of the Hydroelectric Plant and the Energy Grid to which the power plant is connected to.	OK	OK
B.5. Details of the baseline and its development					
B.5.1. Is the date of completion provided?	-	DR	Yes. August 07, 2008.	OK	OK
B.5.2. Is contact information provided?	-	DR	Yes. The baseline study and monitoring methodology for the project activity were elaborated by Enerbio Consultoria, which is also a project participant. Contact information is provided in Annex I.	OK	OK
C. Duration of the Project/ Crediting Period It is assessed whether the temporary boundaries of the project are clearly defined.					
C.1.1. Are the project's starting date and operational lifetime clearly defined and reasonable?	-	DR	Starting date is July 16, 2007. Operational lifetime is 40 years.	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
C.1.2. Is the assumed crediting time clearly defined and reasonable (renewable crediting period of max. two x 7 years or fixed crediting period of max. 10 years)?	-	DR	The project activity will use a 7 year crediting period, that can be renewed at most two times 7 years.	OK	OK
D. Monitoring Plan The monitoring plan review aims to establish whether all relevant project aspects deemed necessary to monitor and report reliable emission reductions are properly addressed.					
D.1. Monitoring Methodology It is assessed whether the project applies an appropriate baseline methodology.					
D.1.1. Did the CDM Methodology Panel previously approve the monitoring methodology?	-	DR	Yes. Approved consolidated baseline and monitoring methodology ACM0002 – "Consolidated baseline methodology for grid - connected electricity generation from renewable sources. Version 07.	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
D.1.2. Is the monitoring methodology applicable for this project and is the appropriateness justified?	-	DR	Approved consolidated baseline and monitoring methodology ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources", version 07 of November 30, 2007. The ACM0002 methodology can be applicable to Monjolinho Project due to the following aspects: • HPP Monjolinho (Alzir dos Santos Antunes) is an installation of a new hydro power plant/unit; • The geographic and system boundaries for the relevant electricity grid can be clearly identified and information on characteristics of the grid is available due to the geographic data and the relevant electricity grid system limits are easily identified, as well as all information about the grid is available in ONS, Operador Nacional do Sistema (National System Operator), and in ANEEL, Agência Nacional de Energia Elétrica (National Agency of Electric Energy); • HPP Monjolinho (Alzir dos Santos Antunes) is a project activity which result in new reservoirs and the power density of the power plant is greater than 4 W/m2 (and it is also greater than 10 W/m2), as described in the table 6 of the PDD.	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
D.2. Monitoring of Project Emissions It is established whether the monitoring plan provides for reliable and complete project emission data over time.					
D.2.1. Is ACM0002, version 07, the Monitoring methodology for the project?	-	DR	Yes. ACM0002, version 07 is the monitoring methodology for the project.	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
D.2.2. Which are the relevant data necessary for determining the baseline of anthropologic emissions by sources of GHG within the project boundary and how such data will be collected and archived?	-	DR	Based on the applied methodology and on what was described on the item B.6.1 of the PDD, there are neither leakage nor project emissions to be monitored. Therefore, the parameters to be monitored are just the project's installed capacity, the electricity generation by the project and the project activity's power plant reservoir area. This energy measurement is essential to verify and monitor the GHGs emission reduction. It is necessary, therefore, to use meter equipment to register and check the electricity generated by the unit. The Monitoring Plan (item B.7.2 of the PDD) allows the calculation of GHG emissions generated by the project activity in a direct manner, applying the baseline emissions factor.	OK	OK
D.2.3. Is the formulae to be used to estimate baseline emissions defined?	-	DR	Yes. Equation 5 of Section B.6.1 of the PDD defines the formulae to estimate baseline emissions and all the variables involved.	OK	OK
D.2.4. Is the description used to estimate emission reductions for the project activity defined?	-	DR	Yes. Equation 4 of Section B.6.1 of the PDD.	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
D.3. Quality Control (QC) and Quality Assurance (QA) Quality Control (QC) and Quality Assurance (QA) procedures undertaken for data monitored					
D.3.1. Does the monitoring plan provide information related to uncertainty level of data and the procedures planned for these data, or why such procedures are not necessary?	-	DR	Yes. See table of Item B.7.1 of PDD, containing all the data and parameters to be monitored and their uncertainty level.	OK	OK
D.4. Operational and management structure It is checked 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					
D.4.1. Is the authority and responsibility of project management clearly described?	-	DRI	Item B.7.2 of PDD clearly describes authority and responsibility for project management.	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
D.4.2. Is the authority and responsibility for registration, monitoring, measurement and reporting clearly described?	-	DRI	Operation and Maintenance Board: responsible for activities related to the plant's operation and maintenance. Special Measurement Area, linked to Operation and Maintenance Board: responsible for collecting information directly from the HPP Monjolinho (Alzir dos Santos Antunes)'s meters and for sending it to Electric Power Commercialization Chamber (CCEE). The Special Measurement Area is also responsible for the consolidation and analysis of monthly generation spreadsheets and for System of Energy Data Collection (SCDE), through the collected data consistence analysis and software operation monitoring. Measurement Outsourced Agent: Part of the Special Measurement Area's responsibility can be outsourced with a Measurement Agent's hiring. In this case, the Special Measurement Area is responsible for supervising the work performed by the Measurement Outsourced Agent. Electric Power Commercialization Chamber (CCEE): it is responsible for implantation, operation, and SCDE, to enable the collection of electric energy's data for the use of Accounting and Settlement System (SCL), aiming at assuring	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			the accuracy of the amounts measured, as well as the meeting of the required deadlines.		
D.4.3. Are procedures identified for training of monitoring personnel?	-	I	There is an Operation and Maintenance Board responsible for all the activities related to the plant's operation and maintenance. It is responsible for supplying the operational and maintenance training needs, according to Engevix policy. Engevix is the controlling company of Monjolinho Energética S/A – Monel, that is the project owner.	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
D.4.4. Are procedures identified for calibration of monitoring equipment?		I	Calibration of Meters (measuring tools): The calibration of meters will follow what was described in the document elaborated by ONS – Sub module 12.3 - Maintenance of the measurement system for billing, which establishes that: (a) The periodicity for the responsible agent's preventive maintenance for Measurement System for Billing (SMF) is of 2 (two) years at the most. That periodicity can be altered in function of the occurrence history observed for all facilities. (b) The preventive maintenance can be postponed by the period of up to 2 (two) years, in the case of happening inspection in the measurement point. The postponement of that maintenance starts to apply from the inspection date.	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
D.4.5. Are procedures identified for maintenance of monitoring equipment and installations?	-	I	There is an Operation and Maintenance Board responsible for all the activities related to the plant's operation and maintenance. It is responsible for supplying the operational and maintenance training needs, according to Engevix policy. Engevix is the controlling company of Monjolinho Energética S/A – Monel, that is the project owner.	OK	OK
D.5. Monitoring methodology					
Is it defined and indicated the person/entity responsible for determining the monitoring methodology?	-	DR	The entity responsible for determining the monitoring methodology is Enerbio Consultoria Ltda, which is the developer of this project.	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
E. Calculation of GHG Emissions by Source It is assessed whether all material GHG emission sources are addressed and how sensitivities and data uncertainties have been addressed to arrive at conservative estimates of projected emission reductions.					
E.1. Predicted Project GHG Emissions The validation of predicted project GHG emissions focuses on transparency and completeness of calculations.					
E.1.1. Are all aspects related to direct and indirect GHG emissions, including leakage, captured in the project design?	-	DR	Yes.	OK	OK
E.1.2. Are the GHG calculations documented in a complete and transparent manner?	-	DR	Yes.	OK	OK
E.1.3. Have conservative assumptions been used to calculate project GHG emissions?	-	DR	Yes.	OK	OK
E.1.4. Are uncertainties in the GHG emissions estimates properly addressed in the documentation?	-	DR	Yes	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
E.1.5. Have all relevant greenhouse gases and source categories listed in Kyoto Protocol Annex A been evaluated?	-	DR	Yes.	OK	OK
E.1.6. Are uncertainties of external data sources for emission reductions estimated?	-	DR	Yes.	OK	OK
E.2. Leakage It is assessed whether there leakage effects, i.e. change of emissions which occurs outside the project boundary and which are measurable and attributable to the project, have been properly assessed.					
E.2.1. Are potential leakage effects beyond the chosen project boundaries properly identified?	-	DR	According to the applicable Methodology ACM0002, version 07, project participants do not need to consider leakages.	OK	OK
E.2.2. Have these leakage effects been properly accounted for in calculations?	-	DR	Please, see item E.2.1.	OK	OK
E.2.3. Does the methodology for calculating leakage comply with existing good practice?	-	DR	Please, see item E.2.1.	OK	OK
E.2.4. Are the calculations documented in a complete and transparent manner?	-	DR	Please, see item E.2.1.	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
E.2.5. Have conservative assumptions been used when calculating leakage?	-	DR	Please, see item E.2.1.	OK	OK
E.2.6. Are uncertainties in the leakage estimates properly addressed?	-	DR	Please, see item E.2.1.	OK	OK
E.3. Baseline Emissions The validation of predicted baseline GHG emissions focuses on transparency and completeness of calculations.					
E.3.1. Are the baseline boundaries clearly defined and do they sufficiently cover sources and sinks for baseline emissions?	-	DR	Yes.	OK	OK
E.3.2. Are the GHG calculations documented in a complete and transparent manner?	-	DR	Yes.	OK	OK
E.3.3. Have conservative assumptions been used when calculating baseline emissions?	-	DR	According to the applicable Methodology ACM0002, version 07 and as described in the table 6 on the item B.2 of the PDD, the power density of HPP Monjolinho (Alzir dos Santos Antunes) is higher than 10 W/m2. Therefore, for Monjolinho Project, PEy = 0.	OK	OK
E.3.4. Are uncertainties in the GHG emission estimates properly addressed in the documentation?	-	DR	Yes.	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
E.3.5. Have the project baseline(s) and the project emissions been determined using the same appropriate methodology and conservative assumptions?	-	DR	Methodology ACM0002, version 07, November 30, 2007.	OK	OK
E.4. Emission Reductions Validation of baseline GHG emissions will focus on methodology transparency and completeness in emission estimations.					
E.4.1. Will the project result in fewer GHG emissions than the baseline scenario?	-	DR	Yes.	OK	OK
F. Environmental and Social Impacts Documentation on the analysis of the environmental and social impacts will be assessed, and if deemed significant, an EIA should be provided to the validator.					
F.1.1. Has an analysis of the environmental and social impacts of the project activity been sufficiently described?	-	DR	Yes. Environmental impacts are presented in section D.1 of the PDD. The social impacts are described in items b, c, d and e of section A.2. of the PDD.	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
F.1.2. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is an EIA approved?	-	DR	Yes. EIA was submitted and approved by FEPAM to issue the Preliminary License (LP), which reflects the positive understanding of the local environmental agency on the project environmental concepts. LP - nº 1065/2005 – DL, Signed on 19/12/2005 and Valid until 19/12/2007. To obtain the installation license (LI), it is necessary to present: (a) additional information about the previous assessment; (b) a new simplified assessment; or (c) the Environmental Basic Project (PBA), according to the resolution of the environmental agency informed in the LP. LI - nº 190/2007 – DL, Signed on 26/03/2007 and Valid until 23/03/2010. The operation license (LO) is requested during the final phase of the construction and it is obtained after the entrepreneur proves that all exigencies made by the local environmental agency were fulfilled.	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
F.1.3. Will the project create any adverse environmental or social effects?	-	DRI	The environmental impact of the project activity is considered small. The Monjolinho Project presents little necessity of reservoir's flooded area and satisfies the several demands of the state's environment legislation and of the Brazilian electric system, having the necessary licenses for its implantation. Please, see section D.2 of the PDD. There are not adverse social impacts caused by the project.	OK	OK
F.1.4. Are transboundary environmental and social impacts considered in the analysis?	-	DRI	There will be no transboundary impacts resulting from Monjolinho Project. All the relevant impacts occur within Brazilian borders and have been mitigated to comply with the environmental requirements for project implementation. Therefore Monjolinho Project will not affect by any means any country surrounding Brazil.	OK	OK
F.1.5. Have identified environmental and social impacts been addressed in the project design?	-	DRI	Environmental impacts have been addressed in section D.2 of the PDD and social impacts, in items b, d and e of section A.2 of the PDD.	OK	OK
F.1.6. Does the project comply with environmental legislation in the host country?	-	I	Yes, the project complies with the environmental legislation in the host country.	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
G. Stakeholder Comments The validator should ensure that a stakeholder comments have been invited and that due account has been taken of any comments received.					
G.1.1. Have relevant stakeholders been consulted?	-	DR	Yes. According to Resolution nº 1 of Brazilian DNA, local stakeholder must be invited to comment the CDM Project. Therefore, the project proponents sent letters to the relevant local stakeholders. Table 19 of section E.1 of the PDD shows the list of local stakeholders consulted. The letters were sent before the validation process and a 30 days term was given for the local stakeholders to make some pronunciation and giving opinions about Monjolinho Project. Besides the letters sent to local stakeholders, the PDD was available to public comments for the local stakeholders at the website www.enerbio-rs.com.br. The Validation Team had access to the evidences that all the relevant stakeholders listed in table 19 of the section E.1 of the PDD have been consulted.	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
G.1.2. Have appropriate media been used to invite comments by local stakeholders?	-	DR	Yes. Please, see item G.1.1 of this Protocol.	OK	OK
G.1.3. If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws?	-	DR	Yes. Please, see item G.1.1 of this Protocol.	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
G.1.4. Is a summary of the stakeholder comments received provided?	-	DR	Yes. Item E.2 of the PDD gives a summary of the comments received. There was just one comment, sent from the Secretary of Agriculture and Environment of Faxinalzinho city. He said that he is optimistic about the project and asked that, in the moment of production and supply of native seedlings to be planted in the outskirts of the dam and of the reservoir, some seedlings should be passed to the Secretary with the objective of donating to farmers of some localities in the interior of the municipality. Through this action, the Secretary of Agriculture and Environment of Faxinalzinho city seeks to promote the forestation and reforestation, increasing the area of native forests in all locations of the city.	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
G.1.5. Has due account been taken of any stakeholder comments received?	-	DR	Item E.3 of the PDD reports on how due account was taken of the only comment received. MONEL incorporated the comment and the request made by the Secretary of Agriculture and Environment of Faxinalzinho in the Reforestation Program of HPP Monjolinho (Alzir dos Santos Antunes), establishing that, in the moment of production and supply of native seedlings to be planted in the area of the entrepreneurship's direct influence, the Secretary of Agriculture and Environment will receive native seedlings to be supplied to farmers in the interior of the city.	OK	OK

Table 3 Approved Consolidated Baseline and Monitoring Methodologies ACM0002

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
1. Baseline Methodology					
1.1. Applicability					
Is the project activity a grid-connected electricity generation from renewable sources?	-	DR	Yes	OK	OK
Does the project activity apply to electricity capacity additions from run-of-river hydro power plants; hydro power projects with existing reservoirs where the volume of the reservoir is not increased?	-	DR	No.	OK	OK
Does the project activity apply to electricity capacity additions from new hydro electric power projects with reservoirs having power densities (installed power generation capacity divided by the surface area at full reservoir level) greater than 4 W/m2?	-	DR	Yes	OK	OK
Does the project activity apply to electricity capacity additions from Wind sources?	-	DR	No	OK	OK
Does the project activity apply to electricity capacity additions from Geothermal sources?	-	DR	No	OK	OK
Does the project activity apply to electricity capacity additions from Wave and tidal sources?	-	DR	No	OK	OK
Does the project activity apply to electricity capacity additions from Project activities that involve switching from fossil fuels to renewable energy at the site of the project activity, since	-	DR	No	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
in this case the baseline may be the continued use of fossil fuels at the site?					
Does the project activity apply to electricity capacity additions for which the geographic and system boundaries for the relevant electricity grid can be clearly identified and information on the characteristics of the grid available?	-	DR	Yes	OK	OK
Does the project activity apply to grid connected electricity generation from landfill gas capture to the extent that it is combined with the approved "Consolidated baseline methodology for landfill gas project activities" (ACM0001)?	-	DR	No	OK	OK
1.2.Identification of the baseline scenario					
Did the project participants identify the most plausible baseline scenario among all realistic and credible alternatives(s)?	-	DR	Yes	OK	OK
Do the project type and the baseline scenario conform to one of those described on applicability of Baseline Methodology ACM0002?	-	DR	Yes. It corresponds to New hydro electricity power projects with reservoirs having power densities greater than 4 W/m2.	OK	OK
1.3. Project boundary					
Did the project participants include the physical site of the plant as well as the reservoir area?	-	DR	Yes	OK	OK
Does the spatial extent of the project boundary	-	DR	Yes. The Monjolinho Project is connected	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
include the project site and all the power plants connected physically to the electricity system that the CDM project power plant is connected to?			to the SIN - National Interconnected System in Brazil.		
1.4. Emissions reductions					
Is the emission reduction determined according to the following formula: ERy = BEy – PEy – Ly?	-	DR	Yes. This formula is defined in equation 4 of item B.6.1 of PDD.	OK	OK
Are all values chosen in a conservative manner and is the choice justified?	-	DR	Yes.	OK	OK
1.5. Project emissions					
Does the project emissions include emissions from the Monjolinho reservoir?	-	DR	No. As described in the table 6 of the item B.2 of PDD, the power density of HPP Monjolinho (Alzir dos Santos Antunes) is higher than 10 W/m2. Therefore, for Monjolinho Project PEy = 0.	OK	OK
1.6. Emissions reductions due to displacement of electricity					
Are the emission reductions calculated by multiplying the net quantity of electricity generated from renewable sources as a result of the project activity (EGy) with the CO_2 baseline emission factor for the electricity displaced due to the project (EFgrid,CM,y)?	-	DR	Yes. Please, see item B.6.1 of PDD.	OK	OK
Does the emission factor for the displacement of electricity (EFgrid,CM,y) correspond to the combined margin CO2 emission factor	-	DR	Yes. Please, see item B.6.1 of PDD. EFgrid,CM,y = Combined margin CO2 emission factor for grid connected power	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
(EFgrid,CM,y)?			generation in year y calculated using the latest version of the "Tool to calculate the emission factor for an electricity system"		
Is the grid emission factor (EFgrid,CM,y) calculated as a combined margin (CM)?	-	DR	Yes. Please, see item B.6.1 of PDD.	OK	OK
In determining the net quantities of electricity generation or the net efficiency of electricity generation, did the project participants subtract the quantity of electricity required for the operation of the power plant (in both the baseline and project cases)?	-	DR	Yes. According to item B.7.1 of the PDD, HPP Monjolinho (Alzir dos Santos Antunes)'s assured energy was used, with a value of 43.1 MW,energy , according to the Concession Contract, for the purpose of calculating baseline emission reductions in section B.6.3 of PDD. For determining the net electricity generation in project case, the electricity supplied to the grid is measured directly at the entrance of the grid.	OK	OK
1.7. Emissions reductions or increases due to displacement of heat					
Did the project participants determine the emission reductions or increases due to displacement of heat (ERheat,y)?	-	DR	There is not displacement of heat.	OK	OK
1.8. Baseline emissions due to natural decay or uncontrolled burning of anthropogenic sources of biomass					
Were the baseline emissions due to natural decay or uncontrolled burning of anthropogenic	-	DR	Biomass decay was non-existent.	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
sources of biomass considered null?					
1.9. Additionality					
Was the additionality of the project activity demonstrated and using the latest version of the "Tool for the demonstration and assessment of additionality"?	-	DR	Yes. It was used version 05 of the "Tool for the demonstration and assessment of additionality".	OK	OK
1.10. Leakage					
Were the leakage effects addressed?	-	DR	According to the ACM0002 methodology, project participants do not need to consider leakage effects.	OK	OK
2. Monitoring Methodology					
2.1. Applicability					
Is the project activity a grid-connected renewable power generation project?	-	DR	Yes	OK	OK
Is the electricity capacity addition from a run-of-river power plant; hydro power projects with existing reservoirs where the volume of the reservoir is not increased?	-	DR	No	OK	OK
Is the electricity capacity addition from a new hydro electric power project with reservoirs having power densities (installed power generation capacity divided by the surface area at full reservoir level) greater than 4 W/m2?	-	DR	Yes.	OK	OK
Is the electricity capacity addition from Wind	-	DR	No.	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
sources?					
Is the electricity capacity addition from Geothermal sources?	-	DR	No.	OK	OK
Is the electricity capacity addition from Solar sources?	-	DR	No.	OK	OK
Does the project activity involve switching from fossil fuels to renewable energy at the site of the project activity, since in this case the baseline may be the continued use of fossil fuels at the site?	-	DR	No.	OK	OK
Can the geographic and system boundaries for the relevant electricity grid be clearly identified and information on the characteristics of the grid is available?	-	DR	Yes.	OK	OK
Is it applied to grid connected electricity generation from landfill gas capture to the extent that it is combined with the approved "Consolidated baseline methodology for landfill gas project activities?	-	DR	No.	OK	OK
2.2. Monitoring Methodology					
Will the electricity generation from the proposed project activity be monitored?	-	DR	Yes. The Electricity supplied to the grid by the project will be monitored	OK	OK
Will the data needed to recalculate the operating margin emission factor, if needed, based on the choice of the method to determine the operating margin (OM), consistent with "Consolidated baseline methodology for grid-connected electricity	-	DR	Yes.	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
generation from renewable sources" (ACM0002) be monitored?					
Will the data needed to recalculate the build margin emission factor, if needed, consistent with "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" (ACM0002) be monitored?	-	DR	Yes	OK	OK
Will the data needed to calculate fugitive carbon dioxide and methane emissions and carbon dioxide emissions from combustion of fossil fuels required to operate the geothermal plant be monitored?	-	DR	No. This is not a geothermal power project.	OK	OK
Will the surface area of reservoir at the full reservoir level be monitored?	-	DR	Yes. This is a new hydro electric power project.	OK	OK
2.3. Project emissions parameters					
Does the project emissions include emissions from the reservoir?	-	DR	No. As described in the table 6 of the item B.2 of PDD, the power density of HPP Monjolinho (Alzir dos Santos Antunes) is higher than 10 W/m2. Therefore, for Monjolinho Project PEy = 0.	-	-
Do the reservoirs have power densities (installed power generation capacity divided by the surface area at full reservoir level) greater than 4 W/m2 and less or equal to 10 W/m2?	-	DR	As described in the table 6 of the item B.2 of PDD, the power density of HPP Monjolinho (Alzir dos Santos Antunes) is greater than 10 W/m2.	OK	OK
Do the reservoirs have power densities (installed power generation capacity divided by the surface area at full reservoir level) greater than 10 W/m2?	-	DR	The power density of HPP Monjolinho's reservoir is greater than 10 W/m2.	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
Are the project emissions of Monjolinho Project being considered as null?	-	DR	Yes. PEy of HPP Monjolinho are considered as null.	OK	OK
Are there: a) Fugitive carbon dioxide and methane emissions due to the release of non-condensable gases from the produced steam? or b) Carbon dioxide emissions from fossil fuel combustion?	-	DR	No. This is not a Geothermal project activity.	OK	OK
2.4. Baseline emission parameters					
Will the net quantity of electricity generated in the project plant during the year y be monitored?	-	DR	Yes. The electricity supplied to the grid by the project will be monitored by measurement with calibrated equipment	OK	OK
Will the EFy CO2 emission factor be calculated in tCO2e/MWh, at the validation?	-	DR	The EFy CO2 emission factor will be calculated ex-ante, in tCO2e/MWh, at the validation, and in the baseline renewal, after the first crediting period. Estimated emission reductions were calculated considering, for the variable EGy, the HPP Monjolinho (Alzir dos Santos Antunes)'s assured electricity. During the crediting period, EGy will be the net electricity delivered to the Grid by the project activity.	OK	OK
Will the EFom,y CO2 operating margin emission factor be calculated, in tCO2e/MWh, at the validation?	-	DR	Yes. It will be calculated in tCO2/MWh at the validation and in the baseline renewal, after the first crediting period, utilizing information from ONS, the Brazilian electricity system manager	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
Will the EFbm,y CO2 build margin emission factor be calculated, in tCO2e/MWh, at the validation?	-	DR	Yes. It will be calculated in tCO2/MWh at the validation and in the baseline renewal, after the first crediting period, utilizing information from ONS, the Brazilian electricity system manager	OK	OK
Will the surface area at full reservoir level be measured?	-	DR	Yes. It will be measured at the start of the project.	OK	OK
Will the fraction of time λy, during which low-cost/ must-run sources are on the margin be calculated?	-	DR	Yes. It will be calculated at the validation and in the baseline renewal, after the first crediting period, utilizing information from ONS, the Brazilian electricity system manager.	OK	OK
2.5. Leakage					
Were the leakage effects addressed?	-	DR	According to the ACM0002 methodology, project participants do not need to consider leakage effects.	OK	OK
2.6. Quality Control (QC) and Quality Assurance (QA) procedures					
Will all measurements use calibrated measurement equipment that is maintained regularly and checked for its functioning?	-	I	According to item B.7.2 of PDD: The calibration of meters will follow what was described on the document elaborated by ONS – Sub module 12.3 - Maintenance of the measurement system for billing, which establishes that: (a) The periodicity for the responsible	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			agent's preventive maintenance for Measurement System for Billing (SMF) is of 2 (two) years at the most. That periodicity can be altered in function of the occurrence history observed for all facilities. (b) The preventive maintenance can be postponed by the period of up to 2 (two) years, in the case of happening inspection in the measurement point. The postponement of that maintenance starts to apply from the inspection date.		

Table 4 Legal requirements

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
1. Legal requirements					
1.1. Is the project in line with relevant legislation and plans in the host country?	-	DRI	There are evidences that the project is in line with all the relevant legislation and plans of the Host Country.	OK	OK
1.2.Is the project activity environmentally licensed by the competent authority?	-	DRI	HPP Monjolinho (Alzir dos Santos Antunes)'s licences are: - Prior License (LP) # 1065/2005–DL Signed on19/12/2005, valid until 19/12/2007 - Installation License (IL) # 190/2007–DL Signed on: 26/03/2007, valid until: 23/03/2010. ANEEL's Concession Contract # 18/2002.	OK	OK
1.3. Are the conditions of the environmental licenses being met?	-	DRI	Yes.	OK	OK
1.4 Are the conditions of the Designated National Authority being met?	-	DR	According to Article 6 or Resolução Interministerial # 6, the final decision from the DNA will be available only after its first meeting, after the receiving of all the necessary documents for evaluation, including this validation report.	-	-

Table 5 Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in Tables 2/3/4	Summary of project owner response	Validation team conclusion

OBSERVATION: NO CARs/CRs HAVE BEEN IDENTIFIED DURING THE VALIDATION.

APPENDIX B – VERIFIERS CV´s

Bureau Veritas Certification Team Leader, Climate Change Verifier
Antonio Daraya – is graduated in Chemical Engineering with a very large experience in Industrial and Environmental management in several industrial fields. He is ISO 9001:2000, ISO 14001:2004 and OHSAS 18001 Lead Auditor and has also experience in the implementation of Quality and Environmental Management Systems. Antonio is qualified as Lead Verifier GHG – Green House Gases.

Bureau Veritas Certification - Electrical Specialist
Roberval Kaminski is an electrical engineer, with more than 20 years working in activities related to generation, transmission and distribution of electricity. His main specialization are : management and control of technical and commercial electric loss in power systems; establishing of guidelines, criteria and procedures of grid connection to be used by cogenerators and power systems of electric energy distribution; analysis and implementation of energetical efficiency practices in the industrial and commercial sectors; tariff analysis; analysis of power quality of clients and suppliers of electrical energy; management of the quality of services, including commercial services of electric energy distributor.

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

Bureau Veritas Certification, Internal reviewer
Sergio Carvalho – is graduated in Physics with MsC in materials sciences. Has a big experience in the implementation of quality management systems in several industrial fields. He has been working for Bureau Veritas Certification for a long period developing certification schemes related to environment. Sergio is qualified as quality and environment lead auditor and as lead verifier GHG – Green House Gases.