UNFCCC Secretariat
Martin-Luther-King-Strasse 8
D-53153 Bonn
Germany

Att: CDM Executive Board

DET NORSKE VERITAS
CERTIFICATION AS
Veritasveien 1
1322 Høvik
Norway
Tel: +47 6757 9900
Fax: +47 6757 9911
http://www.dnv.com

Your ref.:	Our ref.:	Date:
CDM Ref 1526	MLEH/LFAT	6 November 2008

Response to review of the project activity
"Saldanha Small Hydroelectric Project (1526)

Dear Members of the CDM Executive Board,

We refer to the requests for review raised by three Board members concerning DNV's request for registration of the project activity entitled " Saldanha Small Hydroelectric Project (1526)", and we would like to provide the following response to the issues raised by the requests for review.

Comment 1:

Further clarification is required on how the DOE has validated the input values, the benchmark, and the sensitivity analysis (in particular, the unlikely increase in grid tariff). The investment analysis spreadsheet should also be provided.

DNV Response:

In order to validate the investment analysis DNV compared the input parameters for the financial analysis included in the PDD with the parameters stated in the sources as follow:

Parameter	Source
Investment costs	SHP Saldanha Feasibility Study*. The investment costs were crossed checked with the Resolution ANEEL 349 (see below) and hydro power equipments purchase receipts.
Electricity tariff	SHP Saldanha Feasibility Study. The electricity tariff was based on sale receipt #0023 of Cabixi II hydropower plant issued December 2003 to CERON. This hydropower plant is installed in the same grid and the date correspond the starting date of project activity
O&M costs	SHP Saldanha Feasibility Study. The O&M costs were crossed checked to be up to date according to Hidroluz Centrais Eletricas Ltda/Saldanha 2006 financial balance.

* Feasibility study report prepared by Hidroluz Centrais Eletricas Ltda.

Subsidy	ANEEL resolution No. 349 (5 October 2004) based on preliminary investment studies. The resolution considers the subsidy (R$ 13 790 010) as 75% of the investment cost. However, 51.5 km grid connection power lines between the project and Rolim da Moura substation was not included in the analysis, reducing the subsidy to 49% of the total investment.

The benchmark considered was the Brazilian Bond SELLIC[†] rate. This lending rate reached in 2003 23% per annum as a consequence of incertitude related to the government change around the Lula president election, with a maximum of 26.35% in March 2003. The project considers a benchmark of 16.56%, calculated as the average between the maximum value and the minimum value over the past three years, reduced by one standard deviation for conservativeness. DNV assesses this benchmark as adequate and conservative, as there is a more than 80% probability that the benchmark is lower than the actual SELIC rate.

In the sensitivity analysis, the PP showed the variation of the most important parameters needed in order to reach the benchmark. The maximum variations likely to happen were then compared with this. To reach the benchmark by increasing the electricity generation, a 147% is needed. When increasing the electricity generation by 36.9%, the actual capacity of the power plant is reached. This results in an IRR of 8.44%, still below the benchmark. In order to reach the benchmark by varying the electricity tariff, an increase of more than 110% must occur. In the sensitivity analysis, the PP show when using the highest value applicable to the project region[‡], the IRR is still only 6.38%. An increase of 110% is considered not realistic by DNV, given the yearly inflation in Brazil of 3.8%.

Even when reducing the O&M costs‡ by 100%, the IRR increases to 8.13% which is below the benchmark. By increasing the total investment costs by 51.21%, the IRR will reach the benchmark. However, given the annual inflation of 3.8% in Brazil, an increase of more than 50% is not likely to happen.

Comment 2*. The PP/DOE should provide evidence of action taken to secure CDM status before the start of the validation.*

DNV Response:

The Saldanha Small Hydroelectric Project was developed by Hidroluz Centrais Eletricas Ltda. with CDM consultancy support from Incomex – Indústria, Comércio e Exportação Ltda, project participant of the project "Incomex Hydroelectric Project" (0968), according letter sent by Hydroluz to Incomex on 26 February 2003 and the answer on 12 March 2003. The first version of Saldanha PDD was published on 5 Feb 2007 on the DNV's Climate Change web site. The following timeline shows the development of the project:

[†] http://www.receita.fazenda.gov.br/Pagamentos/jrselic.htm

[‡] DNV used the following documents for cross-checking the variations of the electricity tariff and the investments: Tolmasquim, M. T., 2004. Alternativas energéticas sustentáveis no Brasil. Rio de Janeiro: Relume Dumará: COPPE: CENERGIA, 2004; Thomé, Alexandre Domingues, 2007. Avaliação dos Custos de Construção de Pequenas Centrais Hidrelétricas. PCH Noticias & SHP News nº35

Date	Issue
26 Feb 2003	Negotiation between Incomex Indústria, Comércio e Exportação Ltda. And Hidroluz Centrais Elétricas Ltda. (the owner of the Saldanha Small Hydroelectric Project) to provide CDM consultancy services.
26 Nov 2003	Purchase equipment
5 Oct 2004	Construction (Resolution 349 ANEEL[§]) including 51.5 km electrify link
22 Jul 2004	Operation test unit 1 (Resolution ANEEL 895)
23 Jun 2005	ERPA signed between EcoSecurities and Incomex for the project 0968.
9 Oct 2005	Operation test unit 2 (Resolution ANEEL 1161)
10 Mar 2006	Commercial permit operation (Resolution ANEEL 487)
10 Feb 2006	ERPA signed between EcoSecurities and Hidroluz Centrais Eletricas Ltda. for the project 1526.
5 Feb 2007	Submission PDD to web hosting
10 Feb 2007	PDD published

The documents have been provided by the PP and verified by DNV.

Comment 3*. The PP/DOE should clarify the share of the low-cost/must-run resources of the grid.*

DNV Response:

The spreadsheet "2003-2005 Rondônia-Acre 2006 12 01.xls" was provided to DNV by the PP as evidence for the composition of the Rondônia-Acre isolated electricity grid. The used sources are included in the spreadsheet and have been verified by DNV. The spreadsheet shows that the percentages of electricity generation from hydropower are 64%, 49%, 45%, 38% and 34% for the years 2001-2005 respectively, with an average of 44%. The thermal power production connected to the grid consists of power plants and generators fuelled by oil and diesel, and are not considered low cost/must run.

Comment 4*. The PP/DOE should provide details on the monitoring plan.*

DNV Response:

The main parameter to monitor will be the net electricity generated and supplied to the grid, to be obtained from the meter installed at the link of Saldanha Power plant with Rondônia electricity grid, which will be read by the project developer as well as by CERON, the supplier and the buyer of the electricity. Please refer to the PP's response for further details that are included in revised PDD.

We sincerely hope that the Board accepts our above explanations.

§ http://www3.aneel.gov.br/netacgi/cobaia.exe?s4=hidroluz&s5=LEGISLA%C7%C3O&l=20&SECT1=IMAGE&SECT4=e&SECT6=HITOFF&SECT3=PLURON&SECT2=THESON&SECT5=BIBL01&d=BIBL&p=1&u=http%3A%2F%2Fwww3.aneel.gov.br%2Fbiblioteca%5Cpesquisafa.htm&r=0&f=S

Yours faithfully
for DET NORSKE VERITAS CERTIFICATION AS

Michael Lehmann

Technical Director
International Climate Change Service