## DET NORSKE VERITAS



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Att: CDM Executive Board

Your ref.:Our ref.:CDM Ref 1374MLEH

#### **Response to request for review** "Chile: Hornitos Hydroelectric Project" (1374)

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 "Chile: Hornitos Hydroelectric Project" (1374), and we would like to provide the following response to the issues raised by the requests for review.

Date:

19 March 2008

## Comment 1:

"Further clarification is required on how the DOE has validated that the input values used in the investment analysis reflect the actual economic situation of the underlying project activity"

## **DNV Response:**

The input values used in the investment analysis were validated using two main sources:

- All the project costs were confirmed in the detailed budget presented in the Environmental Impact Study of the project dated March 2003. The 2003 cost was corrected to 2007/2008 by the discount rate of 10% used in the investment analysis. The investment costs and operating and maintenance costs (both relative to investment and MW) are considered realistic compared to other hydropower projects validated by DNV;
- The alternative approach of step 2 of the additionality tool for AM0026 was used: Comparison of net present cost of the energy supply with and without the project. The optimization model used by the electricity regulatory authority of Chile to identify the capacity expansion plan was used. The costs of generation and unserved energy from the grid was confirmed by checking the calculus from the expansion plan from the CNE (National Energy Commission) and the correspondent original data of generation and unserved energy costs (http://www.cne.cl/). The costs calculation model and the input data used are used for approvals for additions to generation capacity in Chile. The model and the input data are thus from an official and recognized source and form the basis for decision making. DNV has thus not further validated the model and the input data used.
- The discount rate of 10% is the official discount rate by CNE.

## Comment 2:

"DOE should provide an opinion on how the natural gas restriction from Argentina has affected the investment decision in the project activity as claimed in the PDD."

#### **DNV Response:**

The gas restriction from Argentina did not affect the investment decision, since the consequences of this restriction occurred after the decision to proceed with the project activity. The information on the gas supply for Argentina is presented in the PDD simply to show that the introduction of natural gas from Argentina in 1996 caused a reduction in the energy price that result in the project not being financially viable. DNV could confirm from the CNE price report of October 2004 that the price was still approximately USD 42/MWh, and the natural gas restrictions from Argentina did not affect the project decision taken on 3 May 2005. The prices increased in late 2005 only.

# DET NORSKE VERITAS

Today, after the construction period and nearly one year of operation in the system, the actual system scenario has changed, where natural gas restrictions have been intensified along with other system conditions such as higher project development costs, longer development time, higher fuel prices etc. However, all these changes did not affect the investment decision at the time the project was considered by the board in May 2005.

## Comment 3:

"Section A.4.3 of the PDD indicates that the project includes .a 178,000  $m^3$  peak hour regulating reservoir. Therefore the treatment of project emissions in accordance with the methodology require further justification."

## **DNV Response:**

DNV could confirm that the reservoir surface is approximately 34 344  $\text{m}^2$ . Considering the plant capacity of 55 MW, the power density is 1 601 W/m<sup>2</sup>. According to AM0026, project emissions should only be considered if the power density is less than 10 W/m<sup>2</sup>. Hence no project emissions need to be considered.

We sincerely hope that the Board accepts our above explanations.

Yours faithfully. for DET NORSKE VERITAS CERTIFICATION AS

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