SGS

CDM Executive Board
UNFCCC Secretariat
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11th June 2009

Re: Request for review for request for registration of "Angelina Small Hydro Power Plant Project – A Brascan Energética S/A Project Activity (2393).

Dear CDM Executive Board Members

SGS has been informed that the request for registration of the proposed CDM project activity "Angelina Small Hydro Power Plant Project – A Brascan Energética S/A Project Activity (2393) is under consideration for review because three requests for review have been received from members of the Board.

The requests for review are based on the reasons outlined below. SGS would like to provide an initial response to the issues raised by the request for review:

Request for Review 1-3, Issue 1:

Further clarification is requested on the validation of the method/procedure followed to determine the benchmark and the suitability of the benchmark as compared to other similar CDM projects in Brazil.

SGS' Response to Issue 1:

The benchmark selected for the analysis was the WACC - weighted average cost of capital, which is in accordance with the "Guidance of investment analysis", paragraph 12 *("Internal company benchmarks/expected returns (including those used as the expected return on equity in the calculation of a weighted average cost of capital - WACC), should only be applied in cases where there is only one possible project developer and should be demonstrated to have been used for similar projects with similar risks, developed by the same company or, if the company is brand new, would have been used for similar projects in the same sector in the country/region*").

The detailed calculation of WACC (calculated as 15.63%) was verified during the validation process. Assumptions, values and equations were checked and documented copies were provided to the DOE and mentioned in the reference list of the validation report (ref. 9 of the validation report). The validation team verified the assumptions and calculation of each component of the equation (provided in Annex 1).

WACC calculation requires the calculation of Cost of Equity and Cost of Debt:

Cost of Equity (Ke):

Cost of Equity = (1) + [(5) *(2)] + (4)} = 17.8%

Where:

(1) Risk-free Rate = 5.9% (USA Treasury Bonds Index - 10-year U.S. Treasury Coupon Bond Yield; Source: Bloomberg)
(2) Equity Risk Premium = 5.1% (Calculated considering the energy market main companies financial information and betas. Source: Companies Information / Economática)
(3) Consumer Price Index = 6.4% (Calculated considering the difference between the average earnings of SP&500 versus 10-year T.Bond Yield . Source: Damodaran NYU)
(4) Country Risk Premium = 6.8% (Average of the EMBI + Brazil ; Source: JP Morgan)
(5) Levered Beta = 1.00 (Levered Debt Premium related to the TJLP (Long Term Interest Rate))

Target Equity/Total Capital = 30.0%

Cost of Debt (Kd):
Pre-tax cost of debt = (8) + (6) = 9.8%
Cost of Debt = 9.8% * 1 – (7) = 9.8%

Where:

(6) Levered Debt Premium = 3.5% (Brazilian Inflation - Source: Central Bank)
(7) Marginal Tax Rate = 0.0% (The Target Debt/Equity considered by the energy market companies)
(8) BNDES Loans = 6.3% (BNDES Loans cost (TJLP))

WACC = (9.8% * 70%) + (17.8% * 30%) + Brazil/US inflation differential (Project Related)

WACC = 12.17% + 3.46%

WACC = 15.63%

The calculation of WACC was provided in detail and transparent in a spreadsheet (Annex 1).
The following links related to values applied were verified by the auditor:

http://www.bndes.gov.br/produtos/custos/juros/tjlp.asp;
http://www4.bcb.gov.br/?FOCUSERIES;
http://www.bloomberg.com/markets/commodities/cfutures.html;
http://pages.stern.nyu.edu/~adamodar/;
http://inflationdata.com/inflation/Consumer_Price_Index/CurrentCPI.asp).

Brascan considered the return of 16% (ROA – Return of Assets) to invest in new projects. To evidence the expected return of 16% copy of the Brascan presentation (Corporate profile ref. 12 of the validation report). The ROA in the range of 16% adjusted to the risk profile of the investment. The ROA is used as a reference value.

The Benchmark value used in the project is the WACC and was calculated based in parameters observed in global financial markets, as described above. These assumptions, the cost of capital in Brazil is close to a global cost of capital adjusted for local inflation and capital structure. Cost of Debt considers risk free rate, levered debt premium, pre-tax cost of debt and consumer price index. Cost of Equity considers risk free rate, equity risk premium, estimated country risk premium, adjusted industry beta and consumer price index. These parameters are based on available data that was confirmed by the validation team (BNDES quotations, cumulative inflation, emerging markets bond index).

The use of the WACC as a benchmark is considered suitable to CDM projects in Brazil. The weighted average costs of capital of 15.63% are considered appropriate benchmark for this kind of project.

Several approaches are being used in CDM projects in Brazil, and the WACC being the most commonly used in recent projects. Recent similar CDM projects in Brazil were analyzed through the Brazilian DNA website (http://www.mct.gov.br/index.php/content/view/57967.html) and among eight hydro power plant projects with LoA issued by the Brazilian DNA in 2008 -2009, six projects used WACC as a benchmark, with values varying from 11.14% to 21.6%.

Request for Review 1- 3, Issue 2:

The DOE is requested to clarify further how it has validated that all the input values to the investment analysis are appropriate for the underlying project activity, in particular the investment cost and the electricity tariff. In doing so, DOE shall validate and cross check, based on reliable and credible evidence, the appropriateness of the input values and the application of sensitivity analysis on the plant load factor and the electricity generations from the project.

SGS' Response to Issue 2:

The financial analysis were verified and all assumption used were confirmed. It was possible to re-do the calculation presented and the results were considered correct. As mentioned in the validation report:

- The investment cost was verified through the document submitted to BNDES bank, dated 05/09/2007 (ref. 8 in Portuguese, mentioned in the validation report).

Transcription in English of ref. 8 of the validation report:

Intended letter for BNDES, dated 05/09/2007. In this letter, Brascan Energética, through its company Lumbrás Energética S.A., presents Brascan Energética S.A., description of Angelina project, environmental programs which would be implemented by the project, guarantees and requests financing for its construction.

The estimated investments will be realized part with own resources from Brascan Energética S.A (R$34.4 million) and other part with resources from the financing with BNDES bank (R$89.3 million)

The electricity tariff was confirmed through the financial spreadsheet (ref. 9 of the validation report) and the energy price established in the projects PPA (Power Purchase Agreements).

Transcription in English of the documents used to confirm the conservativeness of energy tariff used:

Considering the Energy Auctions realized in 18/06/2007 and 30/09/2007 the maximum tariff is R$145.00 (Energy Auction realized by the Commercialization Chamber (CCEE) according to rules of the Ministério de Minas e Energia and regulated by Agência Nacional de Energia Elétrica).

The tariff is considered conservative, the value applied in the investment analysis was R$150.93 (higher value was used than the Energy Auctions).

The input values used in the investment analysis were considered appropriate and confirmed through documented evidences listed in the validation report (ref. 8, 9, 12, 13, and 19 of the validation report).

The Project conducted the sensitivity analysis applying a range of variation of 10% increasing project's revenues and reducing project's costs (it was applied only the variation that affects positively in the internal rate of return). The increase of 10% in revenues would be a result of an increase of electricity generation or an increase of electricity price. Also the decrease of 10% in the project cost that affects positively the project result in an IRR lower than the benchmark.

The application of the sensitivity analysis on the plant load factor and the electricity generation are not reasonable situations. The electricity generation is limited to the installed capacity and the amount delivered to the grid is defined by the licenses issued by governmental agencies (ref. 5 of the validation report).

The assessment team verified the spreadsheet with calculation to confirm the data applied. It was justified that besides of the values and range of variation of parameters, increase in project revenue or reduction in running costs are not expected to occur.

With the explanation provided above, we hope that all concerns of the EB have been addressed. Fabian Gonçalves (+55 11 3883 8887) will be the contact person for the review process and is available to address questions from the Board during the consideration of the review in case the Executive Board wishes.

Yours sincerely,

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Encl.:

Annex 1: Ref. 9 – WACC_ Angelina_2008 11 24.xls