

DET NORSKE VERITAS CERTIFICATION AS

Fax: +47-6757 9911 http://www.dnv.com NO 945 748 931 MVA

Veritasveien 1 NO-1322 Høvik Norway Tel: +47-6757 9900

International Climate Change Services

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

Att: CDM Executive Board

Your ref.: CDM Ref 1711 Our ref.: DENGCP/PETMO/MLEH Date: 29 August 2008

Response to request for review of the project "Shanxi Taigang Stainless Steel Co., Ltd. Waste Saturated Steam Recovery and Generation Project" (1711)

Dear Members of the CDM Executive Board,

We refer to the issue raised by the requests for review by four Board members regarding project activity "Shanxi Taigang Stainless Steel Co., Ltd. Waste Saturated Steam Recovery and Generation Project" (UNFCCC reference number 1711) and would like to provide following initial responses to the issue raised.

Comment 1:

Further clarification is requested on the standard industrial practice for power generation using steam from waste heat in China and why the PP opted for the use of saturated steam.

DNV Response:

The description of the technology used in the proposed project is from the Feasibility Study Report (FSR), which was developed by the Taiyuan Iron&steel Group Design Institute in October 2006 and approved by the Economy and Trade Commission of Shanxi Province on 9 July 2007. DNV was able to confirm from the FSR that the selection of saturated steam for electricity generation was based on the characteristics of the existing technology which is the discontinuous operation process of industrial facilities in iron & steel sector and the special requirements of this technique. Therefore, only the saturated steam which is wasted and released into the atmosphere prior to the proposed project can be generated in this process. Furthermore, during interviews, the sectoral expert has stated that the super heater can not be installed in this system due to the discontinuous operation process. Therefore, the PP opted for the use of saturated steam to power generation in this project which is an unique option.

Comment 2:

Further clarification is required on how the DOE has validated the suitability of the input values to the investment analysis, as per the guidance of EB 38 paragraph 54(c).

DNV Response:

According to the guidance of EB38 paragraph 54, DNV has validated the input parameters used in the investment analyses and the procedures are as following:

Step 1: Assess the sources of the input parameters

All input parameters used in the financial analysis in this project's PDD are taken from the feasibility study report (FSR) developed by the Taiyuan Iron&Steel Group Design Institute in October 2006 and approved by the Economy and Trade Commission of Shanxi Province on 9 July 2007. The input parameters used in the financial analysis can thus be considered information provided by an independent and recognised source.

Step 2: Confirm that the values used in the PDD are fully consistent with the FSR

DNV compared the input parameters for the financial analysis included in the PDD with the parameters stated in FSR and was able to confirm that the values applied are consistent with the value stated in the FSR.

Step 3: Assess the period of time between the finalization of the FSR and the investment decision

The FSR was carried out in October 2006, was submitted to the Economy and Trade Commission of Shanxi Province on 23 November 2006 enabling the project to legally start from this date, after that the approval letter was received on 9 July 2007. The decision to proceed with the project activity was taken on 1 March 2007¹, only four months after the submission of the FSR. Given this relative short period of time, it is unlikely in the context of the project that the input values would have materially changed and that it is thus reasonable to assume that the FSR has been the basis of the decision to proceed with the investment in the project.

Step 4: Cross-check the parameters used in the financial analysis with the parameters used by other similar projects

The input parameters used in the financial analysis were compared with the data reported for other similar proposed CDM projects in the North China Power Grid, by comparing investment costs per MW, electricity tariff, percentage of O&M costs relative to total investment costs, etc. By in addition applying our sectoral competence, DNV was able to confirm that the input parameters used in the financial analysis are reasonable and adequately represent the economic situation of the project.

Comment 3:

Further clarification is required on how the DOE has validated the baseline determination, in particular, that the continuation of grid electricity imports is a more economically attractive alternative than the project activity undertaken without CDM.

DNV Response:

As shown in our validation report, it has been demonstrated that the proposed project activity not undertaken as a CDM project activity and the continuation of the current situation, i.e. the import of electricity from NCPG grid, are the possible realistic baseline alternatives.

For comparison of these two alternative scenarios, an appropriate analysis method has been determined. The "Guidance on the assessment of investment analysis" version 1, paragraph 14 states that "if the alternative to the project activity is the supply of electricity from a grid, this is not to be considered an investment and a benchmark approach is considered appropriate". Hence, the benchmark analysis (Option III) was selected to prove that the project can not be considered financially attractive in absence of CDM revenues.

¹ Evidenced by the construction permit issued by the engineering surveillance company of the project on 1 March 2007.

DNV has confirmed that the power generated from this proposed project will be used in the iron and steel production process of STSS (project owner). The tariff assumed in the financial analysis has been the tariff the project owner pays for purchasing electricity from the grid, as verified from the contract and invoices between the project owner and the grid. The project thus reduces the STSS costs associated with its electricity consumption and these costs savings have been considered in the investment analysis included in the PDD. The investment analysis thus represents an analysis of the investment, incremental costs and savings of the project vs. the continuation of grid electricity imports.

There are no requirements in ACM0004 version 2, neither in the baseline section nor in the additionality section, for the use of any specific financial indicator. Furthermore, no such requirements are given in the "Tool for the demonstration and assessment of additionality" version 3 or "Guidance on the assessment of investment analysis" version 1. Therefore an IRR analysis to prove the investment barrier is deemed a correct approach by DNV.

For alternative scenario 1, as shown in our validation report, the equity IRR without CDM revenue is 7.83%, which, including reasonable variation of the key parameters, is below the equity benchmark of 13%. Therefore, DNV was able to conclude that the project can not be considered financially attractive without CDM revenues. The baseline is confirmed to be continuation of current practice and the project is additional compared to this baseline.

As part of the answer to the request for review, the project participants have proven the investment parameter with other financial indicators as well. However, we would like to emphasize that the NPV and IRR are mathematically connected in such a way that the project will pass the IRR benchmark at the same time as the incremental NPV (the difference between the NPV of the project and NPV of the alternative scenario) passes zero when the discount rate of the NPV calculation is set at the benchmark value of the IRR calculation. No different conclusions can be drawn from NPV and IRR benchmark analyses when the same assumptions have been done.

The incremental NPV between the project and continued import from the grid was verified to be - 34 923 697 RMB.

A third financial indicator, levelised cost of electricity, was also provided by the project participants. DNV was not able to verify the tax calculations presented by the project participants. However by using the cash flow and the net electricity generation from the IRR calculations submitted for registration (and validated by DNV) and the IRR benchmark as the discount from rate, DNV was able to confirm that the levelised cost of electricity is more than 15% higher for the project than for continuation of electricity import.

Hence all the financial indicators IRR, NPV and levelized cost of electricity clearly show that the project faces an investment barrier, that the baseline is continuation of import of electricity from the grid and that the emission reductions for the project are additional to what would have happened without CDM.

We sincerely hope that the Board accepts our aforementioned explanations.

Yours faithfully for DET NORSKE VERITAS CERTIFICATION AS

Cuiping Dang

Ms. Cuiping Deng

Michael Cehman

Michael Lehmann

Project Manager

Technical Director Climate Change Services