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Att: CDM Executive Board

Your ref.:
 CDM Ref 1718

Our ref.:
 MRSA/RAFI

Date:
 25 July 2008

Response to request for review

“Power generation from coking waste heat utilization project at Taiyuan Yingxian Coking & Chemicals Co., Ltd in Shanxi, China” (1718)

Dear Members of the CDM Executive Board,

We refer to the requests for review by three Board members concerning DNV’s request for registration of project activity 1718 “Power generation from coking waste heat utilization project at Taiyuan Yingxian Coking & Chemicals Co., Ltd in Shanxi, China” and would like to provide the following initial response to the issues raised by the requests for review.

Comment 1: Considering that the investment being made is in the power sector, further substantiation that the benchmark reflects the risk profile of this project activity is required.

DNV Response:

As stated in our validation report, the benchmark chosen for the project activity is the benchmark financial IRR for the coking industry as per the *Economic Assessment Method and Parameters for Project Construction* 03 edition (2006), hereafter referred to as “Economic Assessment Methods”.

The “Economic Assessment Methods” states that when a project owner invests in a project with key characteristics of another sector rather than that of its own core business, the sectoral benchmark of its own core business should be applied¹. Although the proposed project is a power generation project, given that the core investment focus of the project owner is the coking industry, the sectoral benchmark of the coking industry should be applied in decision making, which is 12%. This benchmark was considered appropriate by DNV as it is consistent with the applicable regulations in China, even though the sectoral benchmark of the coking industry is higher than the sectoral benchmark of the power industry. Furthermore, it is DNV’s opinion the project owner has little experience in power generation adding significant risk to the investment decision and thus it is reasonable to assume that the project owner would expect at least the same returns as would be expected from an investment in their core business. Since the electricity generation project relies on the coking facility’s production output to be maintained, the proposed project is exposed to very similar risks as of the coking industry and the sectoral benchmark of power industry should not apply.

¹ Methods and Parameters for Economic Assessment of Construction Project (version 3), published by China’s National Development and Reform Commission and Construction Ministry, December 2006, paragraph 2, point 2, page 197.

Comment 2: The DOE shall describe how the reliability of the input values used in the investment analysis has been validated in accordance with the requirements of EB38 paragraph 54(c).

DNV Response:

As now required by para 54 (c) of EB 38 report and again as stated in our validation report, DNV has validated the consistency and appropriateness of the input values during the project investment decision making stage.

As stated in our validation report, the investment analysis is based on the revised feasibility study report of May 2005 developed by Shanxi Diwei Electric Power Design Institute with the exception of the electricity price that is sourced from the “Notice on Adjustment on Electricity Price in Shanxi” issued by the Shanxi Provincial Pricing Bureau in 2004. The agreement of construction for the project activity was signed on 20 August 2005 (starting date of the project) after considering the CDM benefits in the revised FSR report of May 2005. Given this relative short period of time between revised FSR (May 2005) and the decision to proceed with the project activity (August 2005) it is DNV’s opinion that is unlikely in the context of the project that the input values would have materially changed and it is thus reasonable to assume that the revised FSR was the basis of the decision to proceed with the investment in the project.

Comment 3: The DOE is requested to provide explanation for the delay in submitting the project for validation to show that CDM revenues were considered essential in the decision to invest in the project activity. The response should provide a detailed timeline of project implementation with relevant, preferably third-party evidence.

DNV Response:

As stated in our validation report, the environmental impact assessment (EIA) of Power generation from coking heat waste utilization at Taiyuan Yingxian Coking & Chemicals Co., Ltd project was approved by the Environmental Protection Bureau of Shanxi on 25 October 2000. The revised EIA by Shanxi Institute of Chemical Engineering and Design was prepared in February 2001. The feasibility study report (FSR) was approved by Shanxi Development and Reform Committee on 28 February 2001. Initially, Taiyuan Yingxian Coking & Chemicals decided to build the coking plant without the waste heat recovery. A revised FSR was developed in May 2005 covering only the waste heat recovery project. DNV has confirmed this revised FSR considers the CDM revenues for increasing the financial attractiveness of the investment. The agreement of construction for the project activity was signed on 20 August 2005 after considering the CDM in the revised FSR report of May 2005.

DNV has reviewed all these above stated documents during validation. In addition DNV has reviewed a clarification letter from the Shanxi Province Agenda21 Sustainable Development Office (under the Provincial Development and Reform Committee) dated April 2006 confirming that at that time the project had started the CDM application process.

The validation of the project started before April 2007. However, it would be conservative to consider the date of publication, which is April 2007, to be the date of start of validation. Thus, confirming a delay of 20 months in start of validation and the start of the project activity. However, DNV considers this delay to be reasonable due to lengthy development of CDM process in China for the following two reasons:

- (i) the regulatory framework for the CDM in China was still immature at the start of the project activity, and

- (ii) the common market practice in China for CDM projects being to secure an Annex 1 project participant before proceeding with host nation's approval, which can eventually cause delays.

The above mentioned clarification letter from the Shanxi Province Agenda21 Sustainable Development Office of April 2006 also confirms that the CDM application process had started within one year of the start of the project activity. It is DNV's opinion that the delay is justified based, as stated above, on the immature regulatory framework for the CDM and the common Chinese market practice of securing Annex I project participant.

In addition, DNV understands that there were no requirements at the start of project activity which set a time limit between the project starting date and start of validation. However, DNV confirms that the project owner had worked continuously and steadily towards submission of project for registration since start of validation.

Comment 4: Further clarification is required on how the DOE has validated the baseline determination, in particular that the continuation of grid electricity imports is more economically attractive alternative than the project activity undertaken without CDM.

DNV Response:

As stated in our validation report, the proposed project activity without CDM has an IRR of 8.70% and is not economically attractive when compared to the relevant coking industry benchmark of 12%. Therefore, the baseline scenario is that the project owner will continue to buy electricity from the grid and emit waste heat in the atmosphere.

In further confirming the additionality of the project, DNV found that the approach adopted was in line with the "Tool for the demonstration and assessment of additionality" and the EB 39 Report Annex 35 guidelines as further explained below. Following sub-step 2(a) of the tool, since the proposed project generates financial and economic benefits through the sale of electricity other than CDM-related income, the simple cost analysis (Option I) was not applicable. The investment comparison analysis (Option II) should be applicable to the projects where similar investment alternatives are available. However, since the proposed project activity without CDM is not economically attractive, Option II was also excluded and the benchmark analysis (Option III) was chosen to confirm the project's additionality.

It should be noted here that the EB 39 Report Annex 35 "*Guidance on the assessment of investment analysis*" provides further relevant guidance stating that in a situation such as this project activity, an investment comparison analysis is not appropriate as the alternative to the project activity is to make no investment and take the supply of electricity from the grid:

"If the proposed baseline scenario leaves the project participant no other choice than to make an investment to supply the same (or substitute) products or services, a benchmark analysis is not appropriate and an investment comparison analysis shall be used. 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."

DNV understands that since one of the alternative to the project activity is continued import of electricity from the grid, the project developer's decision should be to invest in the project activity or not invest (i.e. the project developer does not require the project activity to provide its limited electricity demand as it can be sourced from the grid). The following elaboration in the aforementioned EB 39 Report Annex 35 is also found relevant by DNV:

“The benchmark approach is therefore suited to circumstances where the baseline does not require investment or is outside the direct control of the project developer, i.e. cases where the choice of the developer is to invest or not to invest.”¹

However, in order to further illustrate succinctly that continuation of grid electricity imports is more economically attractive than the project activity undertaken without CDM, a comparative NPV calculation has been conducted by the project proponent and reviewed by DNV. The comparative calculation adopted here is based on calculation of the NPV between a) *“The project activity undertaken without CDM”* and b) *“Continuation of grid electricity imports”*:

a) *“The project activity undertaken without CDM”*: In the NPV calculation for this alternative scenario all of the coking facility’s electricity production is exported to the grid. The electricity requirement for the coking facility is then purchased back from the grid. The NPV for *“The project activity undertaken without CDM”* has been calculated to be minus 62.15 million RMB.

b) While for the *“Continuation of grid electricity imports”*, the calculation of the NPV is based on the following assumptions:

1. the project owner cannot find an alternative investment which is more economically attractive than the project activity undertaken without CDM, and
2. the project owner’s capital lays dormant.

These assumptions are considered conservative by DNV. The NPV for the *“continuation of grid electricity imports”* based on these conservative assumptions has been calculated to be minus 39.6 million RMB.

The result of the comparative NPV calculation thus indicates that the *“continuation of grid electricity imports”* is more economically attractive than the *“project activity undertaken without CDM”*. This forms the basis for the baseline scenario to be the *“Continuation of equivalent import of electricity from North China Power Grid”* without the use of waste heat for electricity production.

We sincerely hope that the Board accepts our aforementioned explanations.

Yours faithfully
for DET NORSKE VERITAS CERTIFICATION AS



Michael Lehmann
Technical Director
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¹ EB 39 Report Annex 35 “Guidance on the Assessment of Investment Analysis” page 3