

DET NORSKE VERITAS CERTIFICATION AS Climate Change Services Veritasveien 1 NO-1322 Høvik Norway Tel: +47-6757 9900 Fax: +47-6757 9911 http://www.dnv.com NO 945 748 931 MVA

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

Att: CDM Executive Board

Your ref.: Our ref.: CDM Ref 1614 MLEH

Date: 10 June 2008

Response to requests for review Pingdingshan Coal (Group) Co., Ltd. Methane Utilization Project, Henan Province, China (1614)

Dear Members of the CDM Executive Board,

We refer to the issues raised by the requests for review by three Board members regarding project activity 1614 "Pingdingshan Coal (Group) Co., Ltd. Methane Utilization Project, Henan Province, China" and would like to herewith provide our initial response to the issues raised.

Comment 1:

1. The DOE shall describe how the reliability of the input values used in the investment analysis have been validated, taking note of the guidance in EB38 paragraph 54.

DNV Response:

In assessing the input values used in the investment, DNV has followed a 4-step approach:

Step 1: Assessment of the sources of the input parameters used in the investment analyses:

a) All the input parameters used in the financial analysis except for those mentioned in the following paragraph b) are taken from the feasibility study report (FSR), which was developed by the Zhengzhou Design and Research Institute of the Ministry of Coal Industry, and approved by the Henan Provincial Development and Reform Commission on 12 June 2006. The input parameters used in the financial analysis can thus be considered information provided by an independent and recognized source.

b) Input parameters taken from other sources than the FSR include:

- Input values to calculate electricity and heat generation from Shengdong engines. These came from the equipment supplier instead of the FSR, and reflect more accurately the equipment operation as they are based on the actual operating results from equipment provided by the supplier.
- Input values for Vocsidizer's heat generation, investment and operational costs. These data values came from the equipment supplier, and DNV was able to confirm that they reflect more accurately the equipment operation as they are based on the purchase proposal by Megtec Systems AB, and consultation with the supplier.

c) All the above input parameters were available at the time when the decision to proceed with the project was made.

Step 2: Confirmation that the values used in the PDD and investment analysis are fully consistent with the FSR and the data provided by the equipment suppliers:

DNV compared the input parameters for the financial analysis included in the PDD and investment analysis with the parameters stated in the FSR, the actual operating results, the purchase proposal, and by the suppliers themselves, and was able to confirm that the values applied are fully consistent with the sources.

Step 3: Assessment of the period of time between the finalization of the FSR, the purchase proposal and the investment decision:

The FSR was approved on 12 June 2006, and the full project implementation began in July 2006. The project starting date was defined as 1 September 2005, at which point in time two engines out of a total of 38 sets for the whole project were installed. However, it should be noted that in the case of the proposed project activity 1614, the project starting date corresponds to the start date of construction rather than the date of making the final decision to fully implement the project. The rationale for the early installation of the two engines was that the project consists of an engine technology never before used by the project participant. Therefore the project participant wanted to test the technology before the final investment decision, which was made upon approval of the FSR.

The purchase proposal was issued by Megtec Systems and dated 15 May 2006, and was revised by mail 16 May 2006. DNV has verified the document.

Given the short period of time between approval of the FSR and the final decision to proceed with the project activity 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 of the parameters used in the financial analysis with the parameters used by other similar projects

The input parameters used in the financial analyses were compared with the data reported for other similar proposed CDM projects in the region, i.e. two other ventilation air methane destruction and coal mine methane power projects in Henan province, by comparing investment costs per MW (kcal), electricity tariff, and percentage of O&M costs relative to total investment costs, to find out that the input parameters used in this project are within the similar ranges compared with those two projects. By additionally 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 at the time of the final investment decision.

Comment 2:

The DOE should describe how the start date of the project activity has been validated. Further clarification is required on how the DOE has validated that the CDM was considered necessary to overcome the barriers for the development of this project activity.

DNV Response:

<u>Validation of the project starting date</u>: The starting date of the project was defined as 1 September 2005, the date of installation of the first two sets of gas engines. In accordance with EB 28

guidance, this date was defined as the starting date of the project, as it was assumed to be the earliest date of implementation. As the project participants had no prior experience with the engine technology, they wanted to test the technology before the final decision to fully implement the project. DNV was able to confirm 1 September 2005 as the starting date of the project as explained above, also by checking the contract for engine installation provided by the project participant.

<u>Clarification on how DNV has validated that the CDM was considered necessary to overcome the barriers for the development of this project activity:</u>

As explained in the project participant's response to the requests for review, the VAM utilization technology is completely new in China, and trained personnel is not available. The engine technology to utilize low or medium concentration methane is also very new; hence, extensive training was needed before the project could go ahead. Due to the CDM process and the CER buyer, technical expertise could be brought in to improve project participant's technical competency, and to enhance the possibility of successful implementation of the new technology. Also, according to the CDM project agreement between Pingdingshan Coal (Group) Co., Ltd. and ECO-CARBONE of 5 July 2005, which was referenced in the DNV's validation report and verified by DNV, ECO-CARBONE is responsible for bringing those needed expertise to ensure the successful implementation of the project. Thus, DNV was able to confirm that CDM was seriously considered in the decision to proceed with the project activity.

Comment 3:

Further explanation for the delay in submitting the project for validation is required. DOE should provide a detailed timeline of project implementation and evidence of actions taken to register the project as CDM.

DNV Response:

Reference is made to the project participants' response to the requests for review. The project started to consider CDM seriously on 5 July 2005, and the first publication of the PDD was in November 2006; implying a sixteen-month delay. It must also be pointed out that the first version of ACM0008 was available as of 28 November 2005 only. By checking the detailed timeline and the relevant evidences including the CDM agreement dated 5 July 2005, the installation contract dated 28 July 2005, the FSR and its approval dated separately April and June 2006 to support the events. DNV was able to confirm that the delay in submitting the project for validation is reasonable.

Comment 4:

Individual monitoring and QA/QC procedures for each site should be presented in the PDD.

DNV Response:

The monitoring plan and QA/QC procedures have been added in the revised PDD. By reviewing the revised part of the PDD, DNV was able to confirm that these monitoring and QA/QC procedures are appropriate to reflect the practice at each site and to ensure the monitoring processes and emission reductions reliable.

Comment 5:

Given the technology to be employed, the DOE should clarify how it can be assured that the efficiency of methane oxidation in vocsidizer (EffHEAT) will be maintained at the manufacturer's specifications throughout the crediting period.

DNV Response:

It must be noted that DNV has assessed the project based on version 03 of methodology ACM0008. This version does not give any detailed guidance on how to assure the efficiency of the methane destruction of the ventilation air methane. DNV acknowledges that version 04 of ACM0008 is more detailed with respect to assessing and monitoring the efficiency of methane oxidation of VAM.

DNV's assessment of the efficiency of methane oxidation in vocsidizer is based on test reports for existing installations of the equipment. The test reports show that the oxidation efficiency remains within the range of 97.4% - 98.5% throughout eight years test results. The trends in these reports indicate that the efficiency of methane oxidation in vocsidizer (EffHEAT) (97%) will be maintained throughout the crediting period when the operations follow the manufacturer's specifications. DNV was also able to confirm that the test results were representative and the design principle was reliable. DNV acknowledges that monitoring of selected operational parameters as suggested by the equipment manufacturer would further assure that the efficiency of the methane oxidation is maintained.

We sincerely hope that the Board finds our elaboration on the above satisfactory, and is able to proceed with registration of the project.

Yours faithfully for Det Norske Veritas Certification AS

Michael Cehman

Michael Lehmann *Technical Director* Climate Change Services