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Att: CDM Executive Board

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Response to requests for review for project activity 1922
"Daning Coal Mine Methane Power Generation Project in Jincheng City Shanxi Province, China"

Dear Members of the CDM Executive Board,

We refer to the issue raised by the requests for review by three Board members regarding project activity 1922 "Daning Coal Mine Methane Power Generation Project in Jincheng City Shanxi Province, China" and would like to herewith provide our initial response to the issues raised.

Question 1: The DOE should clarify how the prior consideration of the CDM was validated in line with EB 41, Annex 46, para. 5 (a) and (b).

DNV Response:

By checking the construction contract signed between the project owner and the construction company for this project (Henan Jiaxing Construction Municipal Engineering Co., Ltd.) dated 11 December 2005, DNV was able to confirm that the starting date of the project was properly defined as 11 December 2005.

DNV was also able to confirm that the CDM was considered prior to the project start date by checking the following evidences:

- The project proponent's correspondence with Jincheng Municipal CMM and Natural Gas Utilisation Development Committee regarding the CDM development plan for the proposed project dated 10 January 2005; in this correspondence, the project owner had consulted Jincheng Municipal CMM and Natural Gas Utilisation Development Committee regarding its CDM development plan, with the Committee providing supportive opinion on the CDM project development.
- The feasibility study for a capacity of 16.3 MW dated February 2005, including CDM consideration to make this project economical viable, as well as the approvals by Jincheng Development Planning Committee dated 07 June 2005.
- The correspondence between the project owner and the Agenda 21 Management Centre dated March to April 2005, regarding CDM advisory service.

By checking the following documented evidence, DNV was further able to confirm that continuing and real actions were taken to secure CDM status for the project activity in parallel with its implementation:

- Correspondence between the project owner and the CDM advisory agency on 10 January 2005 prior to the project start date;
- Non-disclosure agreement signed on 12 July 2006 between the project owner and the CER buyer;
- Term sheet signed between the project owner and Trading Emissions Plc dated 8 January 2007;
- PDD for the project published for global shareholders comment on 23 May 2007. At this stage the project owner considered to develop the project in a larger scale (25 MW). The published PDD was prepared on the FSR from 2004; this FSR did not get the approval needed and the PP abandoned the idea of a larger scale project and continued developing the 16.3 MW project as described in the FSR approved in June 2005;

Question 2: The DOE should clarify how it has validated the appropriateness of the input values to the investment analysis, including the: (a) CMM price, considering that it was vented into the atmosphere in the baseline; (b) electricity tariff assumed and why it was considered as fixed throughout the project's lifetime; and (c) the O&M costs, which is about 17% of the total investment excluding the CMM cost.

DNV Response:

All the input values for the investment analysis are derived from the FSR and a document issued by the Jincheng City Government Price Administration Bureau, which are considered independent and recognized sources. The FSR was approved reasonably short time before the implementation of the project, so that it can be considered as the valid information available at the time of decision making. The document by the Jincheng City Government Price Administration Bureau was the latest version available at the time of decision making.

DNV was also able to confirm the appropriateness for the following parameters used in the investment analysis:

a) CMM price: For assessing the price of 0.15 RMB/m^3 for the purchased CMM, DNV assessed the following documented evidences:

- *Notice on CMM Price*, issued by the Jincheng City Government Price Administration Bureau, dated 24 November 2003. By checking the document, DNV was able to confirm that in China the price administration bureau has the authority to issue price regulating documents, and the price listed for CMM in this document was 0.15 RMB/m^3;
- *CMM purchase and supply agreements*, signed between project owner and the coal mine company providing the gas dated 3 December 2008. By checking this document, DNV was able to confirm that a price of 0.15 RMB/m^3 was defined in the agreement according to the *Notice on CMM Price*.
- For the coal mine owner, the CMM was vented into the atmosphere in the baseline, as evidenced during the on-site visit. This is also the general CMM utilization status in China as confirmed in DNV's final validation report. The project owner was found to be independent from the coal mine owner as described in DNV's validation report. The CMM utilisation incurs additional costs (compared to direct venting into the atmosphere) for the coal mine owner to provide stable CMM delivery to the project owner. Given that a CMM price was set by Jincheng City Government Price Administration Bureau and the same CMM price was agreed in the purchase agreement,

it was deemed reasonable to assume that every party wanting to utilize the CMM would need to pay 0.15 RMB/m^3 regardless of the actual price for CMM recovery.

b) The electricity tariff assumed and why it was considered as fixed throughout the project's lifetime:

- The electricity tariff (including VAT) was properly determined as 0.2754 RMB/kWh, as evidenced by the approved FSR and the tariff approval issued to the project by the Shanxi Provincial Pricing Bureau on 24 August 2006.
- The electricity tariff is under strict control by the central government in China, and will not be significantly changed without permission by the central government. In order to ensure price stability for the whole country, the central government controls basic prices, such as electricity tariffs and commodity prices. Adjustment of electricity tariffs results from negotiations by several government departments and may even need to be approved by the CPC Central Committee.
- The periodic electricity price increases could be implemented should thermal coal price increase 5% or more in the preceding 6 months for coal-fuelled power companies, according to the Government announced the Coal-Electricity Price Linking Mechanism; but, this mechanism is not applied to the proposed project as this project uses CMM to generate electricity.
- It is standard practice in China using fixed electricity tariff throughout the project's lifetime to assess a project's economic attractiveness. If variations in the tariff should be estimated in financial analyses, variations of the O&M costs such as salary, material costs, etc. should be considered accordingly. As this is difficult to do accurately, and the inflation in China is considerably higher than the tariff escalations, thereby tending to cancel out the escalation in the tariffs, a fixed tariff is commonly adopted in the investment analyses in China.

c) the O&M costs, which is about 17% of the total investment excluding the CMM cost

- All the values used for O&M were taken from the approved FSR, considered as an independent and recognized source.
- DNV was able to further confirm the appropriateness of the O&M costs for this project by comparing with the O&M costs for other similar CDM projects, as demonstrated following:
  - ✓ CDM projects numbered 1250, 1230, 0770 and 1887 have O&M costs that are from 21% to 25% of their total investments.
  - ✓ CDM projects numbered 0892, 0840, 1613, 1614, 1603 and 1468 have O&M costs that are lower than 17% off their total investments. However, these projects have very high investment per unit, which is 3 to 4 times higher than the project activity.
  - ✓ The proposed project, employs generator sets of 600kW and 2MW, which are new models manufactured by a new producer (Zhibo) in the industry. These new models with higher capacity are less capital intensive but they are perceived to be more risky than the standard 500kW model (which is more widely used in the industry). Higher maintenance is expected.
- DNV was able to confirm the O&M cost is sufficiently justified, and the project is deemed to have conservative estimates on total investment and O&M cost.

Question 3: The PP/DOE should clarify the suitability of the 10% benchmark to the power sector.

DNV Response:

DNV was able to confirm the suitability of the 10% benchmark (equity IRR) to the power sector as assessed in DNV's final validation report. As the project developer is different from the coal mine owner, it is correct to use a benchmark for the power sector and not a benchmark for coal production.

The 10% benchmark for equity IRR is stipulated by the Economical Assessment and Parameters for Project Development (2006), which was published by the National Development and Reform Committee (NRDC) and Department of Construction. In accordance with the EB's Guidance on the Assessment of Investment Analysis this benchmark represents a benchmark supplied by relevant authorities and is applicable to the project activity and the type of IRR calculation presented. Hence, an equity IRR benchmark of 10% (after tax) is deemed reasonable.

Question 4: The PP/DOE should justify: a) why other fuels were not considered as baseline alternatives for power generation (e.g., renewable energy); and b) the elimination of baseline alternative 7 (project activity implemented by the coalmine, without CDM revenues).

DNV Response:

a) DNV was able to confirm that the utilization of renewable energy resources is rare in the Shanxi Province by checking the *China Electric Power Year Book 2007*. This makes the alternative (power generation by renewable energy) not realistic and creditable.

b) The elimination of baseline alternative 7 (project activity implemented by the coalmine, without CDM revenues) was appropriate as assessed in the following:

- The core business of the coal mine owners is coal production, which has a minimum investment return benchmark of 15% compared to only 10% in the electricity sector, as evidenced by *Economical Assessment and Parameters for Project Development (2006)*. Thus, coal mine owners typically consider it more economically attractive to invest in their core business and expand production rather than invest in ancillary businesses such as small scale power production.
- Power generation is not the expertise of the coal producers. Developing projects in a different sector imposes technical risk. Therefore, the alternative (project activity implemented by the coalmine, without CDM revenues) was able to be eliminated as not economically attractive and with facing technological barrier.
- The fact that no CMM power generation project in Shanxi has been identified where the coal mine owner owns the CMM utilisation project without CDM benefit, as assessed in DNV's final validation report was able to further confirm the elimination of the alternative 7.

We sincerely hope that the Board find our elaboration on the above satisfactory.

Yours faithfully
for DET NORSKE VERITAS CERTIFICATION AS

Michael Lehmann
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Climate Change Services