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Att: CDM Executive Board

Your ref.:

Our ref.:

Date:

CDM Ref 2666

anzu/ofla

6 November 2009

## **Response to request for review of project activity 2666 “Jiangxi Fengcheng CMM Distribution Project”**

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 2666 “Jiangxi Fengcheng CMM Distribution Project” and would like to provide the following responses to the issues raised:

1. *The DOE is requested to justify the project start date as per the ‘CDM glossary of terms’ as it is not clear why the supply/distribution contract (21 October 2005) is not considered as the earliest commitment for the project implementation.*

### **DNV Response:**

The supply distribution contract from 21 October 2005 is between Fengcheng government and Jiangxi Fengcheng Mining Bureau (coal mine owner). The contract of 21 October 2005 relates to an early planning stage of the Project, Fengcheng Pipeline Gas Co. Ltd (the Project Owner, referred to as PO from now on) has been appointed for the construction and implementation of the Project.

The contract is signed between the Jiangxi Fengcheng Mining Bureau and the Fengcheng government, and does not affect Fengcheng Pipeline Gas Co. Ltd (i.e. the PO) and does not set any obligation for the PO. Thus it is not related to the project activity directly and the contract doesn't cover the project participant.

The contract is mainly intended to secure CMM to the planned residential area of Fengcheng city prior to the project development by including requirements on gas volumes, CH<sub>4</sub> concentration and an indication on gas price.

It is clear that the PO has not committed to any expenditure related to the implementation or related to the construction of the project activity following directly from this contract. Therefore, the contract signed on 21 October 2005 cannot be considered as suitable evidence in support of the starting date of the Project as per “CDM Glossary terms”.

2. *The DOE is requested to justify why: (a) the supply/distribution contract (21 October 2005) remains if ownership changed; (b) the CMM purchase price raised; and (c) the original FSR completed in January 2006 was approved on 9 October 2006 while its financial analysis was revised on 17*

*February 2006.*

**DNV Response:**

- a) The supply/distribution contract of 21 October 2005 is still effective for the government (Fengcheng City Government) and the coal mine owner (Jiangxi Fengcheng Mining Bureau). In this contract between the government and the coal mine owner, it is stated that the government body can pass its operation responsibility on to an entity that has the efficient capacity to operate. Following from such an organisation it is accepted in the contract that a price change according to market conditions would occur. As the government has no capacity to operate the gas supply activity (including the facilities), Fengcheng City Government contracted Fengcheng Pipeline Gas Co. Ltd (PO). The governmental administrating body will therefore not be the direct operator but will follow up to ensure that gas is supplied to the citizens.

The October 2005 contract remains a first step of the contractual negotiation on gas supply/distribution that eventually ended with gas purchase agreement between Jiangxi Shangzhuang Coal Industry Co. Ltd.(Jiangxi Fengcheng Mining Bureau owned four sub-company and this is one of them) and PO (29 September 2006). This contract fixed the final terms of the gas transaction.

- b) The reason for the contract between PO and Jiangxi Shangzhuang Coal Industry Co. Ltd is described above. The first price setting (contract from 21 October 2005) was calculated based on the costs for transporting originally vented CMM gas only. Storage equipment investments was considered by the government in the contract from 21 October 2005 as a “gas supply method as party A supplied CMM gas to the gas storage of party B through tunnel and party B supplies CMM to households through pressure increase technology”. In the second contract (29 September 2006) the conditions were changed and additional investment costs were transferred to Jiangxi Fengcheng Mining Bureau as the coal mine owner. These additional investments (e.g. construction of 10,000 m<sup>3</sup> storage tank, installation of pump station and filter equipment and regular maintenance) led to an increase in the price for CMM sold from the coal mine owner to the PO both because of the direct increase in costs and , because the coal mine owner could guarantee a stable, high-quality gas supply to the Project. The additional investments described above was not included directly in the financial analysis of the Project as the equipment is not owned by PO) instead these costs are indirectly included in the financial analysis as it was reflected in the purchase gas price for the PO.

The final CMM purchase price is given as 0.44 RMB/m<sup>3</sup>. According to the article of “Comprehensive utilization of coal-bed methane for development of circular economy in Jiangxi Fengcheng City” issued by People's Daily (A news titled “Comprehensive utilization of coal-bed methane for development of circular economy in Jiangxi Fengcheng” issued by People's Daily (A news titled “Comprehensive utilization of coal-bed methane for development of circular economy in Jiangxi Fengcheng” issued by People's Daily, [http://www.gov.cn/jrzg/2007-05/12/content\\_611908.htm](http://www.gov.cn/jrzg/2007-05/12/content_611908.htm)) the CMM purchase price in Fengcheng City is 0.5 RMB/m<sup>3</sup>, which is higher than the price considered by the proposed project. Therefore, we consider the CMM purchase price of 0.44 RMB/ m<sup>3</sup> used by the Project is applicable and in line with standard levels in the area.

The Guidelines for CMM Extracting project Investment was used, where the price for extracted CMM in 1996 (ten years before the project starting date) has been calculated as 0.3 RMB/m<sup>3</sup>. For next details about the cross – checking please see below point 3.

- c) To ensure clarity on the different versions and content of FSRs for this project a chronological review follows below. The process ended with the approved FSR of 28 March 2007: The following evidences have also been assessed during this task:

1. Government meeting report 20 February 2006 by Fengcheng government
2. Board meeting 21 February 2006
3. Contract with New Resources Investment Management Co.,Ltd on 28 February 2006

#### **Timeline of FSR development:**

##### **January 2006 – FSR Completed**

The FSR has been developed upon request of the local government. Since government had no money to conduct Fengcheng CMM project, appointed Fengcheng pipeline gas Co. Ltd to its development. Upon receipt of the FSR, PO complained the use of outdated parameters in the financial analysis calculation and express concerns about the financial attractiveness of the project. Subsequently, the PO requested Jiangxi Light Industry Design Institute to provide comment about the financial situation of the project.

##### **17 February 2006 - Comment form design institute on FSR financial analysis**

Preliminary results of the analysis have been reported to the PO on 17 February 2006 showing lack of financial attractiveness for the Project. The feedback is based on a draft recalculation.. It served to the PO for negotiation with the government and as basis for the CDM decision. CDM benefit was suggested as a good option to overcome the economy barrier in this draft revised financial analysis performed by Jiangxi Light Industry Design Institute,.

##### **20 February 2006 – Meeting between local government and PO**

The PO discussed the lack of financial attractiveness of the Project as commented by the design institute, and the government suggested the CDM development to overcome the financial constraints. The local government stressed the commencement of the project in absence of approvals.

##### **19 May 2006 – request of EIA development**

##### **August 2006 – EIA completed**

##### **19 September 2006 – EIA approved**

##### **25 September 2006 – Request for FSR approval**

According to local practices, the FSR approval can be given provided that EIA is completed and approved by the competent authority. Therefore, the PO requested the approval only in September after the EIA approval has been issued.

##### **9 October 2006 – FSR approval**

Note: This FSR was without information included in draft evaluation of financial analysis mentioned provided 17 February 2006.

##### **8 November 2006 – Request for finalization of the financial analysis**

##### **20 January 2007 – Final revised financial analysis**

##### **8 February 2007 – Request for approval of revised financial analysis**

### 28 March 2007 – Approval of the revised financial analysis

This financial analysis and their data were used in the project PDD and IRR calculation as input. Updated financial data (17 February 2006) were integrated in the approved FSR of 28 March 2007.

Based on the information listed above DNV hopes that issue 2 c, raised for the request for review has been sufficiently clarified.

**3. The DOE is requested to further justify how it has validated the input values according to its sectoral expertise as per VVM version 1, paragraph 111 c.**

(VVM 111 c, On the basis of its specific local and sectoral expertise, confirmation is provided, by cross-checking or other appropriate manner, that the input values from the FSR are valid and applicable at the time of the investment decision).

#### DNV Response:

–The revised FSR financial analysis was approved on 28 March 2007 by an independent third party actor less than a year prior to contracting DNV for the validation (3 March 2008). On this basis the input data from the FSR is considered valid and applicable. Major information was cross-checked as follow:

The annual O&M cost was compared with two similar projects with utilization of CMM for households from other provinces as there are no other similar projects in the relevant province. Next comparison was performed with other CMM utilization projects (utilize CMM for electricity generation) as is demonstrated below, where only one project is unfortunately in the relevant province (No.1135).

The annual O&M cost in the financial analysis (CMM purchase cost not included) is estimated to be 6,283,700 RMB, which is equivalent to 11.4% of the total investment. Fengcheng CMM project is one of the first CDM projects that use CMM only for city gas supply. The two similar projects used for the gas supply have an O&M ratio lower than 11.4%, however, the major part of gas supply for those projects are to industrial boilers or industry technology. Hence a wide gas grid construction cost and maintenance cost are much smaller than Fengcheng project. Less workers and maintenance are needed.

Project Ref	Name	O&M/I	IRR (%)	CMM concentracion (%)
1880	Tiefa Coal Industry Group CMM Utilization Project	6.3% *	11.47%	41%
1929	Nantong Coalmine Methane	3.7%	4%	> 30%
<b>2666</b>	<b>Jiangxi Fengcheng CMM Distribution Project</b>	<b>11.4%**</b>	<b>7,14%</b>	<b>33%</b>

\* the OM costs are calculated as average of all years because the cost included real costs from previous 4 years (2003 – 2006) and they are variable (increasing) for next years.

\*\* without CMM purchase price – other companies have own gas thus the purchase price is zero

When comparing with other CMM utilization CDM projects (electricity generation), the O&M costs are demonstrated below:

Project Ref	Name	O&M/I	IRR (%)	CMM concentracion (%)
1135	Jiangxi Fengcheng Mining Administration CMM Utilization Project	16.5%	7,07%	> 30%
1319	Shanxi Coal Transport Market Co., Ltd. Yangquan Branch CMM Utilization Project	22.8%	2.18%	> 30%
1250	Shanxi Yangcheng Coal Mine Methane Utilization Project	22.2%	7.8%	> 30%
1230	Shanxi Liulin Coal Mine Methane Utilization Project	23.2%	6.16%	> 30%
1918	Jiaozuo Coal Mine Methane (CMM) Power Generation Project of Jiaozuo Coal Industrial Group Co. Ltd., Jiaozuo City, Henan Province	12%	6.69%	6 ~ 12%
1801	Shanxi Datuhe Coal Mine Methane Utilization Project	20.3%	6.93%	
1928	Jincheng Fengrun CMM Utilisation from Nine Mines in Jincheng City Shanxi Province China	13.1%	6.19%	52.5%

The comparison with these projects shows that the O&M cost for the proposed project is below the ratio of O&M costs for CMM utilisation projects with electricity generation.

These two comparisons underpin that the project has reasonable O&M costs .

The CMM purchase costs are justified in answer 2.b). The price is sourced from the contract between Jiangxi Shangzhuang Coal Industry Co. Ltd. and PO. The purchase price includes investment cost for part of storage equipment and pumps, which is not directly included in the financial analysis.

The price of CMM in mentioned Nantong CMM project (No. 1929) is 0.4 RBM/m<sup>3</sup> for stakeholders, who finally utilize the CMM. There are owner of coal mines, who is project owner, in this project. Thus mean that this price is comparable with CMM purchase price.

Tiefa Coal Industry Group CMM Utilization Project (No. 1880) has 0.37 RBM/m<sup>3</sup> for industrial end-users of the CMM. These examples show that the purchase price for the proposed project is in the range of other CMM utilisation projects in China (even if from different provinces), given the few projects to compare with it is concluded that the used price is reasonable.

In addition it could be mentioned that the CMM price calculated in Guidelines for CMM Extracting Project Investment issued by Jiangxi Fengcheng Mining Bureau in 1996, i.e. 10 years before the Project establishing, was 0.3 RMB/m<sup>3</sup>. This indicates also that 0.4 RMB/m<sup>3</sup> in 2006 should be considered a reasonable price.

The CMM sale price, which is final price for householders, is commented below in the point 4.

4. *The DOE is requested to further justify the appropriateness of applying a fixed CMM gas sale price (0.9 RMB/m<sup>3</sup>) in the IRR and sensitivity analyses. In doing so, include relevant evidence.*

**DNV Response:**

The CMM sale price is determined by the Fengcheng Price Administration Bureau and fixed at 0.9 RMB/m<sup>3</sup> (Ref: Fengcheng Price files (2006) 010 issued at 4 April 2006). Therefore under current conditions, the PO can not foresee any changes of the price and need to rely on the given price to evaluate this project. DNV considers that 0.9 RMB/m<sup>3</sup> is a reasonable price given the above. Comparison with other projects is not obvious as there is only one similar project from a different province. That is the mentioned Tiefa Coal Industry Group CMM Utilization Project (No. 1880). Nor can the CMM prices be directly compared across provinces given the provincial price setting regime.

5. *The DOE is requested to further validate the baseline conditions and the elimination of the baseline alternatives, especially to justify why the project activity is not the baseline scenario if the PDD states (p15) that the project needed to be implemented due to (a) high demand of gas for cooking and heating and (b) closure, in 2006, of a nearby coke plant supplying Fengcheng households with coal gas.*

#### **DNV Response:**

Question related to (a) high demand of gas for cooking and heating and (b) closure, in 2006, of a nearby coke plant supplying Fengcheng households with coal gas was included in scenarios evaluations. It is not possible to realise the project scenario as a baseline, because of the financial barrier. IRR (7.14% ) is below the benchmark. Evaluation of individual parameters, which have influence to its calculation are deeply described in points 3 and 4 above.

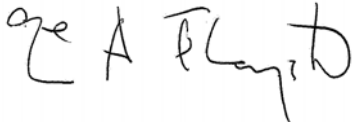
The mentioned information is used as arguments why it is not possible to realized scenario iv – “Use CMM for additional grid power generation” on page 15 of the PDD. However the project activity is required as ecologic and clean scenario for the region, this alternative is denied by the financial analysis, which confirmed that the project is not financial attractive without CDM benefits. The situation is confirmed by reality, when government try to implement the project, but it could not finish this activity, because of the bad financial results/condition Project was transferred to a private company for the realization as a project under the CDM schema. (see point 2.c). This situation was verified by several information/evidences:

- the Government meeting report on 20 February 2006 by Fengcheng government, where was discussed CMM gas supply and distribution project, its construction and CDM application for economic viability;
- by Board meeting 21 February 2006 report, where PO decided about serious consideration of CDM revenues for the project;
- and finally by the Contract for CDM cooperation intent with New Resources Investment Management Co, Ltd on 28 February 2006.

As explained in the “Description regarding the status of Civil Coal Bed Methane of Fengcheng” by Development & Reform Commission of Fengcheng (18 October 2009) the proposed project is the first case of civil coal bed methane project in the Fengcheng area. There is no other civil coal bed methane project before. Therefore, the civil use of Coal Bed Methane is not the baseline scenario of the proposed project.

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

Yours faithfully  
for DET NORSKE VERITAS CERTIFICATION AS

A handwritten signature in black ink, appearing to read 'Ole A Flagstad'.

Ole Andreas Flagstad  
*Principal Project Manager*  
Climate Change Services

Zuzana Andrtova  
*Project manager*