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Att: CDM Executive Board

Your ref.:	Our ref.:	Date:
CDM Ref 1227	MRSA/MLEH	24 October 2007

Response to request for review

"Yuyao Electricity Generation Project using Natural Gas" (1227)

Dear Members of the CDM Executive Board,

We refer to the requests for review raised by three Board members concerning DNV's request for registration of the project activity entitled "Yuyao Electricity Generation Project using Natural Gas" (1227) and we would like to provide the following response to the issues raised by these requests for review.

Comment 1:

"The PP shall further demonstrate the additionality of the project activity."

DNV Response:

Since the comment does not indicate the specific issues for which further information is needed, we summarise below the main points how the additionality was demonstrated and assessed by DNV. Moreover, we refer to our response to the comments which were on specific issues related to the demonstration and assessment of the additionality of the project.

It is DNV's opinion that the additionality of the project has been sufficiently demonstrated through the three steps established in the methodology AM0029 version 01. It has been demonstrated that the project is not financially attractive, it does not represent the common practice and that the CDM benefits increase the attractiveness of the project. Additional information is provided in the project developers' response and DNV's response to the other issues related to the additionality of the project raised in the requests for review as outlined below.

Comment 2:

"The East China Sea Chunxiao gas field production capacity will be 2-2.5Gm^3/a from 2007 onwards. Expected consumption of the project activity of approximately 0.570 Gm^3/a., represents about 22.8 to 28.5% of the total production of the gas field. Further clarification is required regarding how much of the field production will be used for power generation besides the amount used in the proposed project activity. If a significant amount of the gas produced in the field (more than 50%) will be supplied for power generation, the project activity is part of a much bigger regional power initiative that necessarily includes the development of the gas field (and natural gas was made available in the region or country because of the project activity). In addition, it is required to include in the common practice analysis an appraisal of the last 2-3 Zhejiang Provincial electric power 5-year expansion plans (see reference 9 at validation report) to check the assumptions made for power generation with natural gas."

DNV Response:

DNV acknowledges that the larger context of the project should have been considered, in particular if the project is part of the development of the natural gas field. DNV has further investigated this issue, but due to the time constraint of only having two weeks to submit a response to the issues raised in the review requests, no final conclusion on these investigations can be provided. Nonetheless, the interim results of our investigations indicate the following:

1) The ownership of the gas field and the natural gas plant has been demonstrated to be different. (Refer to the project developers' response)

2) The gas price paid by Yuyao natural gas plant is the market price for natural gas. As per the documentation issued by Zhejiang Provincial Price Bureau, the average price of natural gas from Chunxiao gas field is 1.86RMB/Nm^3, which is very close to what is paid by the project (1.85RMB/Nm^3). Hence, even if further investigations would show that the project is part of the of the development of the natural gas field, the project could still be considered not financially attractive.

3) It is known that the development of the Chunxiao gas field was a key step in the China's national strategy for energy security. The decision to develop the gas field was thus not likely to be linked to the natural gas power plant development.

It should be noted that given the special circumstances of the Chunxiao gas field and the disputes with other countries for its ownership, all documents related to the development of the gas field are considered extremely sensitive and thus, DNV could not access them during the validation process (e.g. the feasibility study report of the gas filed)

DNV assessed the Zhejiang Provincial electric power 5-year expansion plans (reference 9 of the validation report) as part of the validation process for confirming the data provided by the project developers regarding the common practice. DNV concluded that the project activity cannot be considered common practice as i) other similar projects in Zhejiang province are all applying for CDM registration, except in one case; ii) the natural

gas source for those projects is not the Chunxiao gas field but the so called "transferring western gas to the east" project[*].

Comment 3:

"The IRR analysis should consider issues related to higher levelised cost of electricity for power plants operating with natural gas, as the plant will operate as peak and medium load power. Because it is known that peak load power plants do not operate with high capacity factor, it is very common to pay availability tariffs to the plants during stand-by periods. It is also very common to have different feed-in tariffs for peak/medium load power plants (usually higher than base load plants)."

DNV Response:

The electricity price approved[†] by Zhejiang Provincial Price bureau for the project activity is 0.464RMB/KWh. The approval document does not include any other payment of the type of availability tariffs. The document was assessed by DNV as part of the validation process.

Comment 4:

"Additionality is demonstrated primarily using benchmark analysis. Assumed benchmark for the sector: IRR = 8%. IRR of the project without CERs = 6.69%. The mentioned source for all the data used in the IRR calculation is the feasibility study report of the proposed project. The PP shall further clarify the assumptions and data sources for that internal document as it is the core of the additionality demonstration and the DOE shall further clarify how they have validated the benchmark analysis."

DNV Response:

A feasibility study report in China is required to be developed by a third party which is accredited for this task directly by the government. An approval letter of the feasibility study report (FSR) is issued by the government only after it passes the public assessment of the sector experts designated by the government. A feasibility study report can in our opinion thus be regarded as an accurate and trustworthy report coming from a recognized entity once it has the approval letter from the government. The feasibility study report for the "Yuyao Electricity Generation Project using Natural Gas" project was finished in May 2004 by Zhejiang Provincial Electric Power Design Institute. This institution is accredited (Rated as "A" degree) for developing feasibility study reports by the Chinese government. The feasibility study report was approved by the National Development and Reform Committee in December 2004.

DNV confirmed that the project is being implemented as indicated in the feasibility study report with regard to the installed capacity and location.

Comment 5:

"The assumed efficiency in the power plant is 43.2% (based on the NG consumption and electricity generated) while Board decisions already used as a conservative proxy 50%

[*] "*Transferring western gas to the east project*", is China's west to east gas pipeline project, which starts from Tarim Basin gas field, Shanganning gas field and Chadamu Basin gas field, spans eight provinces and autonomous regions and travels finally to Shanghai.

[†] Notice from Zhejiang Price Provincial Bureau, No[2006].1, December 31,2005

efficiency for CCGT power plants. Using the Board efficiency and the assumed consumption of NG (570,024,000Nm^3/a, very likely under a long term contract) the project would be able to generate 15.8% more electricity and the IRR would be very different."

DNV Response:

Please refer to the project developers' response, which justify that the IRR analysis is indeed based on a 51% efficiency.

Comment 6:

"Further sensitivity analysis against more appropriate parameters is required to demonstrate that the project IRR cannot achieve the benchmark IRR."

DNV Response:

The project's developers have included in their response a sensitive analysis with respect to the natural gas price and the feed-in-tariff. DNV has assessed the calculations and they are found to be correct. Under certain circumstances the variation of these parameters increases the project's IRR above the benchmark (an increase of 5% of the electricity tariff or a decrease of 5% of the natural gas price). Taking into account the Chinese regulations for establishing and modifying the electricity tariff for these kind of facilities and the market evolution of the natural gas prices, it is DNV's opinion that is unlikely that the variation of those parameters during the project life would increase the project's IRR to a level where the project could be considered economically viable.

Issue 7:

"Information is required on incentives available to a similar project being developed by a multinational corporation without CDM."

DNV Response:

Please refer to the project developers' response.

Issue 8:

"Further information on evidence of CDM consideration prior to the start of the project activity is required."

DNV Response:

As stated in the validation report, page 12, *"Evidence that the incentives from CDM has been seriously considered before the project start is the letter of loan decision making by the Enterprise Bureau of China Development Bank of March 2004, which states that the bank will provide a loan on condition that the project is developed as a CDM project /13/*".

At the time of the project submission for registration, the clarification by the Executive Board (EB33) on the correct interpretation of the starting date of a project activity was not available. The staring date of the project activity is proposed to be modified to the date of approval of the feasibility study report on 9 December 2004. It is DNV's opinion that this date adequately represents the earliest of the dates at which the implementation or construction or real action of the project activity commenced.

Issue 9:

"Specific investment barriers faced by the project activity without CDM should be identified and documented."

DNV Response:

Please refer to the project developers' response. As per the methodology AM0029, there is no requirement for a barriers analysis.

We sincerely hope that the Board accepts our above explanations.

Yours faithfully

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