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Att: CDM Executive Board

Your ref.:
 CDM Ref. 1789

Our ref.:
 MLEH/HP

Date:
 21 August 2008

Response to request for review “Shandong Tuoji Island Windfarm Project” (1789)

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 project activity 1789 “Shandong Tuoji Island Windfarm Project” and would like to provide the below initial response to the issues raised in the requests.

Comment: The DOE is requested to explain further how it has validated that the range of variations of the parameters in the sensitivity analysis are reasonable, following the guidance from EB41, Annex 45, paragraph 17.

According to the guidance on the assessment of investment analysis from EB41, Annex 45, paragraph 17, “as a general point of departure variations in the sensitivity analysis should at least cover a range of +10% and -10%, unless this is not deemed appropriated in the context of the specific circumstances”. DNV’s opinion is that in the specific circumstances of the proposed project it is difficult to establish and validate a realistic range of assumptions for the input parameters of the financial analysis, and +/- 10% does thus not necessarily reflect a realistic range. Hence, an alternative approach is applied for each input parameter to:

- i) Determine the value at which the IRR will be equal to the benchmark and
- ii) Assess the likelihood of the parameter having this value to confirm that it is not likely that the IRR will become equal to the benchmark.

The sensitivity analysis shows that the IRR for the project equals the benchmark, when the values of the static total investment, annual O&M costs, grid tariff and electricity output vary by -6%, -22%, +6% and +6%, respectively.

- For the wind farm project, the cost of the turbine purchase, engineering construction and related accessories constitute the main costs. Prices including those for the main equipments and raw materials have been increasing in recent years¹. DNV has checked the Audit Report of the proposed project by Shandong Tongsheng CPA on 18 June 2008, in which it is clearly announced that actual investment of the proposed project is higher (102.56 million RMB) than the cost estimated (99.85 million RMB) in the FSR².

¹ The Development of Wind Power, webpage : <http://energy.people.com.cn/GB/5720709.html>

² The Audit Report of Shandong Tuoji Island Wind Farm dated on June 18 2008 issued by Shandong Tongsheng CPA.

Therefore, it is unlikely that the static total investment will decrease by 6%, such that the project IRR reaches the benchmark.

- DNV has reviewed the FSR³ of the proposed project and was able to confirm that since the proposed project is located on an island, it is expected to have higher costs during the construction phase as well as during the operation and maintenance phase. Furthermore, the price of accessories is increasing¹. Therefore, it's not realistic that the annual O&M cost decrease by 22%, instead the costs are more likely to increase.
- Comparing with wind farms in the Shandong Province, DNV was able to confirm that the grid tariffs have been decreasing over the last few years⁴. The tariff suggested in the FSR is optimistic and still needs to be further negotiated with the related department. The fact is that the tariff for wind farms in the Shandong Province has gradually decreased. The National Development and Reform Committee on 23 July 2008⁵ regulated the tariff of the proposed project to 0.61 Yuan/kWh. So assuming a 6% of tariff increase is unrealistic.
- The annual electricity output is determined by a third party design institute in the feasibility study report¹ based on weather statistic data for 31 years (from 1972 to 2002) provided by the local weather station and wind resource measurements. The evidences for this study have been reviewed by DNV. It is unlikely that the electricity output can increase by 6% to make the project IRR reach the benchmark.

DNV reviewed and confirmed all related documents. The assessments show clearly that investment is unlikely to be 6% lower, and that tariff or generation are unlikely to be 6% higher – the likelihoods of a 10% variation are even smaller. Hence, DNV validated that the range of variations of the parameters in the sensitivity analysis are reasonable.

We sincerely hope that the Board accepts our aforementioned explanations.

Yours faithfully
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Technical Director
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Project Manager

3 The feasibility study report of “Shandong Tuoji Island windfarm project” and the approval letter by Economy and Trade committee of Shandong province dated 16 August 2006.

4 Tariff List of wind farms in Shangdong province.

5 The tariff approval of the proposed project, Webpage: http://www.gov.cn/zwgk/2008-08/14/content_1071728.htm