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Att: CDM Executive Board

Your ref.:	Our ref.:	Date:
CDM Ref 2142	Ma/DUDAG/BRINKS	20 January 2009

Response to request for review of the project "Inner Mongolia Baotou Bayin Wind Power Project" (2153)

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 "Inner Mongolia Baotou Bayin Wind Power Project" (UNFCCC reference number 2153) and would like to provide following initial responses to the issue raised.

Comments: The DOE is requested to clarify how it has validated the appropriateness of the input values used in the investment analysis in line with EB 38, para. 54, including:
a) the update in investment costs;
b) the electricity tariff applied, as the calculations refer to values that are not found in the validation report and it is not clear how CL11 was closed;
c) the assumptions for the escalation in O&M costs; and
d) the decrease in total generation output in the last three years.

DNV response:

According to the guidance of EB38 paragraph 54, as DOE of the project, DNV has validated the input parameters used in the investment analysis and the procedures are as following:

Step 1: Assess the sources of the input parameters and confirm the consistency of the values

The all input parameters except the static investment used in the financial analysis of this proposed project in PDD are taken from the feasibility study report (FSR) developed by Xinjiang Wind Power Design Institute in August 2006 and approved by National Development and Reform Commission on 22 January 2007. The static investment is sourced from the investment amendment report issued by Xinjiang Wind Power Design Institute in March 2007 due to the equipment price and installation cost rising as approved by the Development and Reform Commission (DRC) of Baotou City dated 2 April 2007, information contained in a FSR and investment amendment report can thus be considered information provided by an independent and recognised source, which is verified and deemed reliable and available before the start date when the decision to proceed with the project was made (i.e. the start date when the equipment purchasing contract is signed on 10 April 2007).

DNV has compared the input parameters for the financial analysis included in the PDD with the parameters stated in the FSR and investment amendment report and was able to confirm that the values applied are consistent with the value stated in the FSR and investment amendment report.

Step 2: Assess the period of time between the finalization of the FSR and the investment decision

The FSR was approved on 22 January 2007 and the investment amendment report was approved on 2 April 2007 and thus they are both less than three months prior to the decision to proceed with the project activity (i.e. the start date of the project) which was on 10 April 2007. Given this relative short period of time between approval of the FSR and the investment amendment report and the 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 and the investment amendment report have been the basis of the decision to proceed with the investment in the project.

Step 3: Cross-check 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 Inner Mongolia Autonomous Region, by comparing investment costs per MW, electricity tariff, PLF and percentage of O&M costs relative to total investment costs, etc. 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.

Additional cross-check the estimated input values (based on FSR and investment amendment report) with the actual contracts, invoices and payments made already:

a) The update in investment costs

The static investment is 1541 million RMB in FSR which was completed in August 2006 and approved on 22 January 2007. In March 2007, the FSR designer has required by the project owner to develop an investment amendment report to reassess the investment analysis based on 2007 price level. The statistic investment was updated to 1590.88 million RMB to reflect the real situation of the project at the time when the investment decision was made as described in the project participant response.
DNV was able to confirm this by verifying the revised budgetary estimate report of Inner Mongolia Baotou Bayin Wind Power Project in March 2007 and the approval letter for the revised design budgetary estimate report by the Baotou Development and Reform Commission dated 2 April 2007.

The investment amendment report was developed and approved before the starting date of 10 April 2007, so it is considered to be the basis of the decision to proceed with the investment in the project.

b) The electricity tariff applied, as the calculations refer to values that are not found in the validation report and it is not clear how CL11 was closed;

The tariff applied for the proposed project has been set in the FSR and the first period tariff was approved by NDRC, where the tariff applied is 0.4656 RMB/kWh (including VAT) or 0.4291 RMB/kWh (excluding VAT) within 30 000-hour operation (i.e. first period). The tariff for the second period (i.e. after 30 000 hour operation) was set to the average tariff in Inner Mongolia power grid.

Since the tariff for the first 30 000-hour operation period is fixed, the sensitivity analysis regarding to the tariff is carried out on that of after 30 000-hour operation. The tariff applied for second period is 0.35 RMB/kWh set in the FSR developed by an independent entity and approved by NDRC. The result of tariff sensitivity analysis shows that the needed tariff after 30000-hour operation (second period) to reach the benchmark of 8% is increased to 31.15%. That means the needed tariff after 30 000-hour operation should reach up to 0.4590 RMB/kWh（including VAT) or 0.4231 RMB/kWh (excluding VAT) if the IRR exceed the benchmark.

However, Inner Mongolia power grid is dominated by the thermal power plants which are more than 98% of the total power generation, the average tariff but not wind power average tariff in the grid (see the approval letter by NDRC) should also be dominated by the thermal power tariff. The benchmark thermal power tariff in Inner Mongolia is only 0.2509 RMB/kWh (including VAT) and 0.2599 RMB/kWh (including VAT) only increased by 0.009 RMB/kWh per two years, the benchmark tariff twenty years later can be only increased to 0.3569 RMB/kWh calculated at this rate, so it is very unlikely for the actual tariff after 30 000-hour operation for the project have been increased from 0.2509 RMB/kWh to 0.4590 RMB/kWh.

b) The assumptions for the escalation in O&M costs;

The operation and maintenance costs are composed of five costs - maintenance costs, annual salaries for the employees, insurance premium of fixed assets, material fee and other costs, of which the maintenance costs cover the majority of the O&M costs. The rate of maintenance is sourced from FSR (0.2% for the 2nd and 3rd years, 0.3% for the 4th year, 0.5% for the 5th year, 1.0% for the 6th to 10th years, 1.5% for the 11th to 15th years, 2% for the 16th to 20th years and 2.5% for the last 5 years). With the operation of the project the frequency of maintenance will increase, therefore the maintenance costs (then the O&M costs) would be gradually increased over the operation period.

d) The decrease in total generation output in the last three years.

Since the lifetime of the wind turbines is 20 years as specified in the Equipment Purchasing Agreement dated on 10 April 2007 and the proposed project is permitted to have a longer operation period of 25 years (including construction period), the reliability of the wind turbines beyond the technical lifetime of wind equipment should be suspected. As shown in FSR, the total generation output is considered to be reduced by half in the last three years due to the unreliability of the wind turbines. In this regard, the total generation output in the last three years will be decreased from 465 920 MWh to 232 960 MWh.

We sincerely hope that the Board accepts our aforementioned explanations.

Yours faithfully
for DET NORSKE VERITAS CERTIFICATION AS

H.W. Brinks

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