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Att: Registration and Issuance Team

Your ref.:
 CDM Ref: 2060

Our ref.:
 BRINKS/MVIL

Date:
 31 December 2008

Response to request for review Shaanxi Shenyang 10 MW Hydropower Project (2060)

Dear Members of the UNFCCC Secretariat,

We refer to the requests for review by three Board members concerning DNV's request for registration of project activity 2060 "Shaanxi Shenyang 10 MW Hydropower project" and would like to provide the following initial response to the issues raised by the requests for review.

***Comment 1:** The DOE is requested to justify the suitability of the 10% benchmark, in particular, the appropriateness of a benchmark of year 1995 when assessing the additionality with investment decision made in 2006.*

DNV Response:

The project proponent has compared the project financials against the benchmark of 10%. DNV would like to indicate that the selected benchmark is in accordance with the document No.SL16-95 (Economic evaluation code for small hydropower projects), issued by the Ministry of Water Resources of China. Though this document was issued by the Chinese ministry in the year 1995, it is the only source till date which clearly defines the expected minimum returns from such type of hydropower projects. The benchmark of 10% is most commonly used in China for assessing the financial viability of such projects. This can also be seen from other similar small hydropower projects in China, recently registered under CDM, such as Hunan Yangmingshan Three Level Hydropower Project (2145), Yunnan Lincang Zhenai Hydropower Project (1994), Fujian Wuyishan Wenlin River 2nd and 3rd Level Hydropower Station (1831) and Lijiang Xinzhuhe Second Level Hydropower Project (1879), etc., all of them referring to the document No.SL16-95.

The applicability of the same benchmark for the proposed CDM project activity can further be demonstrated from the list of existing regulations for hydropower plants in China provided in the annexure of "Notice on the current technical standard of water resources ([2006] No.05)", published by the division for construction and management, Ministry of Water Resources of China¹ and Chinese Hydraulic Engineering Society (CHES)'s website¹, which provides the complete list of regulations for the hydropower sector including expired regulations, regulations under amendment and existing regulations in China.

DNV would also like to state that in the approved feasibility study report, the financial projections of the proposed project activity have also been compared against the same benchmark of 10%. The approval of the FSR by the Shaanxi DRC also adds to the fact that the benchmark of 10% is still

¹ <http://www.mwr.gov.cn/tzgg/qt/20060926000000479251.aspx>, issued on September 9, 2006.

considered appropriate in China. This benchmark is a decisive factor in China for the rejection or approval of the projects.

Furthermore, according to the “Economic evaluation code for small hydropower projects (Document No.SL16-95)”, the code of 10% is applicable to small scale hydropower projects with an installed capacity below 25 MW, and to small scale hydropower projects with an installed capacity below 50 MW in the rural hydropower region. DNV would like to indicate that it is appropriate to use a benchmark of 10%, considering the fact that the project activity has an installed capacity of 10 MW, which is below the installed capacity of 25 MW.

***Comment 2:** The DOE is requested to clarify how it has validated that CDM was considered prior to the project start date and that continuing and real actions were undertaken to secure the CDM status for the project activity in parallel with its implementation according to EB41, Annex 46, paragraph 5 guidance..*

DNV Response:

The prior consideration of the CDM project has been demonstrated by PP and verified by DNV by reviewing the below listed documents:

- On 1 December 2004, Ankang Environmental Protection Agency approved the Environmental Impact Assessment of the project. This has been provided and reviewed by DNV during validation
- In December 2004, the FSR was completed by Ankang Tianchang Engineering Design Co., Ltd. This FSR of 2004 has been provided and reviewed by DNV during validation.
- On 27 June 2005, the FSR was approved by the Shaanxi Development and Reform Commission.
- On 22 July 2005 the shareholders of Ziyang County Minquan Hydropower Development Co., Ltd held its board meeting. Their decision was to suspend the project due to the expected poor financial return identified in the FSR. It was decided to look if the project could be qualified as CDM. Evidence of the board minutes has been provided by the PP and reviewed by DNV.
- On 26 February 2006 the shareholders of Ziyang County Minquan Hydropower Development Co., Ltd held another board meeting and there was a resolution to apply for the project as CDM after the General Manager reported that the project could be registered under CDM. Evidence of the board minutes has been provided by the PP and reviewed by DNV.
- On March 2006 an Exclusive Consulting Agreement was signed between project owner and China National Water Resources & Electric Power Materials & Equipment Co., Ltd CDM Office
- On August 2006 a termsheet with the Buyer was executed. Then the project owner applied for bank loan.
- On 20 November 2006 Ziyang County Agricultural Development Bank confirmed a loan to the project if the project owner agrees to develop the project under the CDM. Evidence of the loan confirmation under CDM consideration has been provided by the PP and reviewed by DNV during validation.
- On 28 December 2006 the project construction approval was issued by Ziyang County Development and Planning Bureau. Evidence of the approval has been provided by PP and checked by DNV. This date has been taken as **project start date** by the project developer.

- On 23 March 2007 the main Equipment order contract was issued (for the generator and the hydro turbine)
- On 23 April the Emission Reduction Purchase Agreement was signed with the Buyer.
- On 28 June 2007 validation contract for the project was signed by DNV.
- On 13 July 2007 the project was approved and published at China NDRC website.
- On 7 September 2007 the PDD was published at UNFCCC website for global stakeholder consultation.
- On April 2008 Ankang Tianchang Engineering Design Co., Ltd Hydrology and Hydropower Design Institute confirmed the input values used for the feasibility study report approved on June 2005.

Comment 3: *The DOE is requested to explain the discrepancy in the grid emission factor between the PDD submitted with the request for registration and the PDD submitted for validation.*

DNV Response:

During validation and thus after the PDD was published for global stakeholder consultation it was found that there has been an error in the calculation of the BM emission factor for thermal plants (EF_{thermal}). In the published PDD the result of the calculation for EF_{Thermal} according to formula

$$EF_{\text{Thermal}} = \lambda_{\text{Coal}} \times EF_{\text{Coal,Adv}} + \lambda_{\text{Oil}} \times EF_{\text{Oil,Adv}} + \lambda_{\text{Gas}} \times EF_{\text{Gas,Adv}}$$

results in $EF_{\text{Thermal}} = 0.9298 \text{ tCO}_2/\text{MWh}$.

The correct calculation with data described in PDD results in $EF_{\text{Thermal}} = 0.9410 \text{ tCO}_2/\text{MWh}$.

This calculation error has been corrected in the updated PDD submitted for registration. This incorrect calculation of the emission factor for thermal plants led to an error in the Build Margin and *ex-ante* Combined Margin emission factors in the PDD published for global stakeholder consultation. With the new value of the emission factor for thermal plants, the BM has been recalculated as $0.5739 \text{ tCO}_2/\text{MWh}$ and the *ex-ante* combined emissions factor as $0.8498 \text{ tCO}_2/\text{MWh}$.

Please note that the calculations in the updated PDD submitted for registration have been checked and deemed correct by DNV.

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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