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	Werner Betzenbichler	Werner.Betzenbichler@tuev-sued.de			

## Request for Review

Dear Sirs,

Please find below the response to the request for review formulated for the CDM project with the registration number 1311. In case you have any further inquiries please let us know as we kindly assist you.

Yours sincerely,

Werner Betzenbichler  
Carbon Management Service

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## **Response to the CDM Executive Board**

### **Issue 1**

Further clarification is required on how the input values in the investment analysis have been validated.

#### **Response by TÜV SÜD**

The input parameter for the project IRR were carefully checked, and their sources are listed in table 4 of the PDD. The Main source of the IRR is Feasibility Study Report for CDM project "Hunan Dongping 72MW Hydropower Project", dated in May 2004, Hunan province P. R. China , submitted on 4<sup>th</sup> Jan, 2007 (Refer to IRL No. 7). The report received approval on 24<sup>th</sup> Sep, 2004 (Refer to IRL No. 8). The report is thus considered to be a reliable resource to reflect the actual economic situation of the project at the time of investment decision.

Basic Parameter	Value	Reference
Installed capacity	72 MW	Preliminary Design of Hunan Dongping 72MW Hydropower Project-Mar.2005
Electricity delivered to grid	271.1 GWh	Preliminary Design of Hunan Dongping 72MW Hydropower Project-Mar.2005
Static total investment	RMB 647.39 million	Preliminary Design of Hunan Dongping 72MW Hydropower Project-Mar.2005
Expected tariff (Incl. VAT)	RMB 0.327 /KWh (Incl. VAT)	Preliminary Design of Hunan Dongping 72MW Hydropower Project-Mar.2005
VAT	17%	Preliminary Design of Hunan Dongping 72MW Hydropower Project-Mar.2005
Income tax	33%	Preliminary Design of Hunan Dongping 72MW Hydropower Project-Mar.2005
Operation life	30 years	Preliminary Design of Hunan Dongping 72MW Hydropower Project-Mar.2005
Annual O&M cost	RMB 10.235 million	Preliminary Design of Hunan Dongping 72MW Hydropower Project-Mar.2005
Expected CERs price	7/tCO <sub>2</sub> e	Estimated during the Financial Decision Process

## **Issue 2**

Further clarification is required on how the common practice analysis has been validated.

### **Response by TÜV SÜD**

Additionality tool step 4 common practice analysis is described in the PDD. In listing all previously and currently implemented comparable projects in the same region the PPs exclude, in accordance with the tool, other CDM projects activities from their consideration.

The list, table B.4 in the PDD, was carefully checked by the DOE and found to be complete in regard to the requirements laid out in the additionality tool. Projects commissioned before 2002 do not have to be considered as they were implemented under a different policy scheme (please refer to footnote No.2 of the PDD "The Notice of the State Council on the Printing and Distributing the Electric Power Structural Reform Scheme (Précis of GUO FA [2002] No. 5)", China Electric Power Yearbook 2003.)

Substep 4a of the additionality tool advises to demonstrate that *"If similar activities are identified (...) then it is necessary to demonstrate why the existence of these activities does not contradict the claim that the proposed project activity is financially unattractive or subject to barriers. This can be done by comparing the proposed project activity to the other similar activities, and pointing out and explaining essential distinctions between them that explain why the similar activities enjoyed certain benefits that rendered it financially attractive (e.g., subsidies or other financial flows) and which the proposed project activity cannot use or did not face the barriers to which the proposed project activity is subject."*

In compliance with the above it was demonstrated and verified that the annual operating hours of the project listed which is implemented with financial support from the World bank (Footnote No.17 in the PDD, Refer to IRL No. 40) have been much higher. Where Dongping's operating hours amount 4044 hours (Refer to IRL No. 7) Zhuzhouhangdian Hydropower Station operating hours amount 4740 hours annually (Source from the website of Hunan hydro power research institution, refer to IRL No. 39).

Please note that some similar projects after year 2002 were not listed in the common practice analysis, e.g. Dafutan 200MW hydro project, Qingshuitang 128MW hydro project, Xiaoxi 135MW hydro project, Tongwan 180MW hydro project. However the above mentioned projects are all under CDM validation process, as could be verified by the DOE.

Generally it is considered to be a good measure to compare operating hours of hydropower projects to obtain a comparison of general economic attractiveness. Further the support of World Bank for Zhuzhouhangdian Hydropower Station is considered to be a main difference when comparing the two projects.

According to the above it is concluded the common practice analysis is correctly performed and the additionality criterion is fulfilled.

## **Issue 3**

The data on which calculations on key elements for the Annex 3, i.e. CERs, OM, BM and Combined Margin, shall be provided.

### **Response by PP**

The Excel calculation sheet which was used to calculate the CER, OM, BM and Combined margin is provided as annex to the answer.

#### Response by TÜV SÜD

The DOE can confirm that the submitted Spreadsheet is in fact the same as validated.

#### **Issue 4**

Further clarification is required on how the P (power) output of 72 MW was calculated and the information should be shown in the PDD.

AND

#### **Issue 5**

The DOE shall further clarify how it has cross-checked and validated the calculation of the value of P (power).

#### Response by PP

P (power) amounting 72MW is the designed capacity and by multiplying with expected operating hours, the 271.1Gwh is the net electricity fed into grid, the Auxiliary Power Rate and Transmission Line Loss Rate was deducted. The actual installed capacity could be refer to IRL No. 14, the main equipment purchasing contract.

#### Response by TÜV SÜD

The DOE has carefully checked the source of the P (power) (refer to IRL No. 9, the preliminary design report for CDM project "Hunan Dongping 72MW Hydropower Project", dated March 2005 and IRL No. 14, the main equipment purchasing contract). The requested information is presented in Section 15 "economic evaluation" (Page 388) of the preliminary design report.

#### **Issue 6**

Further clarification is required on the value adopted for the efficiency  $\eta$ . In addition, further clarification is required on how this value was validated by the DOE

#### Response by TÜV SÜD

The maximum possible emission by diesel was estimated and verified by the DOE based on the reference document "Investigation concerning Back-up Diesel Generator yearly usage hours in Large scale and middle scale hydropower plants, North China Power Institute Co., Ltd, dated December 2006" (IRL reference No.26). According to the reference the maximum possible emission by diesel is 24 ton CO<sub>2</sub>e/year (the maximum usage time of the backup diesel generator will be less than 100hours), which is negligible according to the methodology. Furthermore practically speaking, only when the power plant is accidentally fully stopped and the electricity supply from the grid is failed, the backup diesel generator could be put into operation; obviously this situation is unlikely to happen.