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	IS-CMS-MUC/RZ Rachel Zhang	+49 89 5791-3038 rachel.zhang@tuev-sued.de	+49 89 5791-2756	2009-01-05	1 of 7

Dear Sirs,

Please find below the response to the review formulated for the CDM project with the title "*Mengzhushan 15 MW Small Hydropower Project in Shaanxi Province, China*" with the registration number 2137. In case you have any further inquiries please let us know as we kindly assist you.

Best regards

Rachel Zhang  
Carbon Management Service

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

### **Request 1:**

**The DOE shall justify the suitability of the 10% benchmark specifically the appropriateness of a 1995 benchmark when assessing investment decisions made in 2004 and 2007 when construction started and re-started respectively.**

### **Response from PP:**

Economic Evaluation Code for Small Hydropower Projects (SL16-95) issued by the Ministry of Water Resources in 1995 is the water conservancy industry standard of PRC for economic evaluation of small hydropower projects with the capacity lower or equal to 25MW, it was shown that the benchmark IRR for small hydropower projects was 10% in this code. The validity of the code was confirmed twice by the Ministry of Water Resources of People's Republic of China in the past years.

On 18/06/2002, the Ministry of Water Resources of People's Republic of China issued a Public Notice on Effective Technical Standard in Hydro & Water Industry ( Document Number: [2002]Guokebianzi No.07. It was shown in this Notice that the Economic Evaluation Code for Small Hydropower Projects (SL16-95) was valid from 1995 to 18/06/2002.

The ongoing validity of this code was further confirmed again by Ministry of Water Resource of People's Republic of China on 9th September 2006 as another Public Notice (Document Number: No.5 in Year 2006). Economic Evaluation Code for Small Hydropower Projects (SL16-95) was still effective from 18/06/2002 to 31/08/2006. Furthermore, no new regulation has taken over the effectiveness of this code since 09/09/2006 and this code still remains in effect today.

Since 1995, this code and 10% benchmark has widely been applied for small hydropower projects in China. The investment decision for the proposed project was made in 2004 and 2007, so the benchmark of 10% adopted by the proposed project from SL16-95 was applicable at the two times of investment decision of the project.

### **Response from DOE:**

The proposed project applies the "Economic evaluation code for small hydropower projects, SL16-95" (IRL No.1) issued in 1995, in which it mentions "This evaluation code is applied for small hydropower projects with installed capacity no more than 25MW (all newly-built, expansion, modification or retrofit projects), and projects with a capacity of less than 50MW in rural areas can refer to this code too."(IRL No.1)

In 2002, the Ministry of Water Resources issued a Bulletin (IRL No.2) on Effective Technical Standard in Hydro & Water Industry. Accordingly, the "Economic evaluation code for small hy-

dropower projects" (Document No.SL16- 95) issued in 1995 was still indicated as valid at that time.

The ongoing validity of this code was further confirmed again by an official organization, i.e. Chinese Hydraulic Engineering Society, which published all valid standards for hydraulic industry on September 9th, 2006 (IRL No.3).

The Ministry of Water Resources did not issue more new Bulletins in 2007, so the standard on September 9<sup>th</sup> 2006 still can be used as valid and credible in 2007.

Furthermore, TÜV SÜD can confirm, based on its local and sectoral expertise, that this benchmark is commonly used and widely applied in China for this type of project.

As a result, TÜV SÜD is confident that the 10% benchmark is appropriately applied and can be considered as suitable for the proposed project activity when construction started and re-started in 2004 and 2007 respectively.

## **Request 2:**

**Information should be submitted regarding the IRR of the project activity at the time of the original investment decision in 2004, in order to justify the suitability of the benchmark.**

## **Response from PP:**

According to the Design Report of the project with the installed capacity of 15MW which was completed in June 2003 by Northwestern Survey and Design Institute of State Power Company, the benchmark was adopted as 10% in this Design Report based on Economic Evaluation Code for Small Hydropower Projects (SL16-95), and the IRR of the project was calculated to be 10.44% in this Design Report, so it was higher than the benchmark and this Design Report made a conclusion that the proposed project was financially feasible. Then this Design Report was approved by Shaanxi Province Development and Reform Commission on 04/11/2003. After this approval, the project was approved to start construction on 26/03/2004 by Shaanxi Province Development and Planning Commission. Based on the above issues, the project owner made the original investment decision that the project was higher than the benchmark and it was feasible in 2004 and started the construction.

So, the original investment decision in 2004 adopted the benchmark of 10%.

## **Response from DOE:**

The original investment analysis is taken from the Mengzhushan hydro project Design Report (IRL No.4), which was completed in June 2003 and was approved by Shaanxi Development and Reform Commission on 04/11/2003(IRL No.5).

As mentioned in response to issue 1 above, the 10% benchmark evidence (Economic Evaluation Code for Small Hydropower Projects (SL16-95) issued by the Ministry of Water Resources in 1995) was appropriately applied and valid for the proposed project activity in 2004 and 2007. Hence, The IRR calculation in the "Design Report" was 10.44 – after tax (IRL No.4), which was higher than benchmark. As the project would be financially attractive based on the original investment analysis, the project was approved to start construction on 26/03/2004 by Shaanxi Province Development and Planning Commission (IRL No.6).

In summary, TÜV SÜD confirms that the IR of 10.44% was valid in the original investment analysis, and the evidence of 10% benchmark (SL16-95) can be considered as suitable for the proposed project activity in 2004 and 2007.

### **Request 3:**

**The PP/DOE shall provide further information on the expenses of 4.84 million Yuan incurred prior the decision to proceed with the investment in 2007.**

(1), According to the Capital Assessment Report(Ximingpingbaozi(2006)No.0096) for Mengzhushan Project done by Xi'an Yongming Public Accounting Firm which was the chartered specialist as EB required issued on 13/06/2006, the expenses during the construction period from 26/03/2004 to 16/03/2006, was 4.84 million Yuan incurred.

(2) According to the Capital Assessment Report issued on 13/06/2006 and the Supervision Report by Hubei Hua'ao Water Resources and Hydropower Consulting Center which was the supervision entity of the project issued on 03/03/2006, both the evidences showed that 4.84 million Yuan was indeed incurred during the construction period from 26/03/2004 to 16/03/2006, certainly prior the decision to proceed with the investment in 2007.

(3) As for the following guidelines from Item 7 in Annex 45 "Guidance on the Assessment of Investment Analysis" in EB41:

*"Guidance: In the case of project activities for which implementation ceases after the commencement and where implementation is recommenced due to consideration of the CDM the investment analysis should reflect the economic decision making context at point of the decision to recommence the project. Therefore capital costs incurred prior to the revised project activity start date can be reflected as the recoverable value of the assets, which are limited to the potential reuse/resale of tangible assets<sup>1</sup>.(Capital expenditures should be included not at the original investment costs but at the market fair value at the point of the decision to proceed with the investment, demonstrating the value through assessments done by chartered specialists.)*

*Rationale: At the point of taking a decision to restart implementation of a project as a CDM project activity, the key issue of interest to an investor is the costs and revenues including the incentives from the CDM accruing from continuation of the investment."*

Firstly, as for the proposed project, in order to be more conservative and meet the above EB guidelines on the investment analysis, the investment in the table 2 in the PDD had removed the incurred investment before March 2006 of 4.84million yuan. (99.07million yuan=103.91 million yuan -4.84 million yuan)

Secondly, the temporary shed and the temporary bridge assessed in the above Capital Assessment Report was used for construction and they were reused by the constructors after the proposed project restarted the construction and they weren't sold to acquire the sales.

### **Response from DOE:**

TUV-SUD has performed a thorough review of on the expenses of 4.84 million RMB incurred prior the decision to proceed with the investment in 2007.

The proposed project ceased the construction from March .2006 to March 2007. On March 3rd, 2006, the supervision company--- “Hubei Hua’ao Water Resources and Hydropower Consulting Center” had issued a supervision report (IRL No.7) in which the investment of finished work was calculated and reconfirmed. Accordingly, the total cost of assets spent was 4.84 million RMB, comprising the work on a 440m excavated division tunnel (3,722,400 RMB), 1460m constructed road in the project location (262,800 RMB), 40 temporary public sheds(448,000 RMB) and one temporary bridge for construction purposes (406,800 RMB) respectively.

At the same time, the project owner consigned Xi’an Yongming Public Accounting Firm to issue a Capital Assessment Report to demonstrate the total cost which occurred from March 2004 to March 2006. The capital assessment report (IRL No.8) was issued in June 2006 in which the total cost---4.84 million RMB is confirmed again. Furthermore, the supervision company was interviewed when the DOE did validation audit on-site.

The IRR calculation as submitted with request for registration is based on the revised preliminary design report of Mengzhuan project, as published in May 2006, while subtracting the costs which incurred prior to project restart (please compare to the PDD, page 9, table 2, footnote 2,3 and the IRR spreadsheet “Investment analysis”, row 21, C, D, E). To apply a conservative approach, the PPs have removed the 4.84 million yuan from the investment calculation in the CDM context. The costs that incurred prior to the decision to proceed with the investment (4.84 million yuan) were completely removed from the investment calculation in the PDD and thus, due to conservativeness principle, the requirements of the EB41, Annex 45, paragraph 7 are fulfilled.



**The information reference list has listed all of documents which was used for the response. All documents has been verified and approved by TUV-SUD.**

Ref. No.	Issuance and/or submission date(dd/mm/yyyy)	Title/Type of Document	Author/Editor/ Issuer	Additional Information (Relevance in CDM Context)
1	02/06/1995	Economic Evaluation Code for Small Hydropower Projects	Ministry of Water Resource of People's Republic of China	Benchmark evidence
2	08/06/2002	Bulletin on Effective Technical Standard in Hydro & Water Industry	Ministry of Water Resource of People's Republic of China	
3	09/09/2006	Public Notice on Effective Technical Standard in Hydro & Water Industry	Ministry of Water Resource of People's Republic of China	
4	June.2003	The Design Report of Mengzhushan project	Northwestern Survey and Design Institute of State Power Company	Original investment analysis
5	04/11/2003	The approval letter for the design report of Mengzhushan	Shaanxi Province Development and Reform Commission	
6	26/03/2004	The approval letter for construction	Shaanxi Province Development and Reform Commission	
7	03/03/2006	Supervision Report for 4.84 million RMB	Hubei Hua'ao Water Resources and Hydropower Consulting Center	
8	June.2006	Capital Assessment Report	Xi'an Yongming Public Accounting Firm	