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Ref: Response to request for review "Shaanxi Shenyang 10MW Hydropower Project" with the Reference Number 2060

December 22, 2008

UNFCCC Secretariat
Martin-Luther-King-Strasse 8
D-53153 Bonn
Germany

Attention: CDM Executive Board

Dear Sir or Madam,

We were informed that our project "*Shaanxi Shenyang 10MW Hydropower Project*" (reference number 2060) was requested for review by CDM Executive Board. As required by the Executive Board and on behalf of the project participants, we would like to answer the questions and clarify the issues raised in the requests for review as follows:

Question 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."

Response by PP

Shenyang 10MW Hydropower Project is a small scale hydropower project under CDM rules (below 10MW) and Chinese regulations (below 50MW). We believe that a benchmark of 10% is suitable and appropriate when assessing the additionality of the investment decision made in 2006 for the following reasons:

- The benchmark of 10% is published in the "*Economic Evaluation Code for Small Hydropower Projects*" ("the Code"), issued by Ministry of Water Resources in 1995 (Document No.SL16-95). [1] The Code was approved and issued by the Ministry of Water Resources of the PRC as the sector standard for China small scale hydropower projects with installed capacity of up to 25MW (or up to 50MW in rural areas). Therefore 10% is the officially published relevant power sector benchmark for small scale hydropower project in China, such as this project. The benchmark meets the criteria set out in the *Tool for the Demonstration and Assessment of Additionality*, specifically Step 2, Section (6), which states that benchmarks can be derived from *"(d) Government/official approved benchmark where such benchmarks are used for investment decisions."*
- Although the Code was issued in 1995, it is the only source till date which clearly defines the expected minimum returns from such type of hydropower projects in China. There has been no revocation and there has been no new code published to replace it. In 2006, the year of investment decision for the project, the Code was confirmed its validity by the Ministry of Water Resources of the People's Republic of China.[2]
- The PPs have undertaken a review of a sample of the hydro projects registered this year. It is clear that the use of the 10% benchmark is the standard approach used by project owners in China for assessing the financial viability of such projects. It can be seen that most projects registered this year were commenced between the years 2004 and 2006. This is in line with our project which started construction in December 2006.

To conclude, we consider 10% is suitable for our project benchmark chosen given the fact it comes from an officially published guidance for small scale hydropower projects and thus is in accordance with EB requirements. In addition it's been valid to date including the year of investment decision and it has been used in most previously registered small scale hydropower projects from China.

[1] http://apps.lib.whu.edu.cn/12/test/gfbz/2/j/xsdpj.html#附录B%20小水电设计成本、利润及还贷资金计算

[2] http://www.mwr.gov.cn/tzgg/qt/20060926000000479251.aspx, issued on September 9, 2006.

Question 2:

"The DOE is requested to clarify how it was validated that CDM was considered prior to the project start date 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. "

Response by PP

Evidence to demonstrate the serious consideration of CDM has been included in the PDD and has been validated. Further discussion relating to this matter is provided below:

Date	Milestone
December 2004	FSR Completion
December 2004	EIA Approval issued by Ankang City Environment Protection Bureau
June 2005	FSR Approval issued by Shaanxi Development and Reform Commission
27 June 2005	Notice on Adjusting on-grid Tariff in Shaanxi issued by Shaanxi Province Price Bureau
22 July 2005	Board meeting resolution to suspend the construction of the project and start research on CDM
26 February 2006	Board meeting resolution to apply the project for CDM
March 2006	Exclusive Consulting Agreement between project owner and China National Water Resources & Electric Power Materials & Equipment Co., Ltd CDM Office
August 2006	Termsheet with the Buyer
20 November 2006	Bank Loan Offer Letter from Ziyang County Agriculature Development Bank
28 December 2006	Project Construction Approval issued by Ziyang County Development and Planning Bureau – **Project Start Date**
23 March 2007	Main Equipment Order Contract (Generator and Hydro Turbine)
23 April 2007	Emission Reduction Purchase Agreement with the Buyer
28 June 2007	Validation Agreement with DOE
13th July 2007	Project approved published at China NDRC CDM website[3]
7th September 2007	PDD published at UNFCCC website for **global stakeholder consultation**[4]

Following the instruction in paragraph 5 and 6, Annex 46 as per EB41, we provided the following explanation:

- **The project owner was aware of CDM prior to the project activity start date, and that the benefits of CDM were a decisive factor in the decision to proceed with the project.**

[3] http://cdm.ccchina.gov.cn/WebSite/CDM/UpFile/File1347.pdf
[4] http://cdm.unfccc.int/Projects/Validation/DB/WTKF174O0LC56D5B5CJIXCAGYO4SUX/view.html

On July 22, 2005 the shareholders of Ziyang County Minquan Hydropower Development Co., Ltd held its board meeting for the financial return and construction of Shenyang project. It was decided to suspend the construction of the project due to the expected poor financial return of the project[5]. The chairman of the company at that time was aware of CDM development in China[6] and it was decided to have the general manager of the company research CDM to see if their project can qualify. With the first small hydro project from China registered in December 2005[7], the project owner had confidence that CDM would deliver meaningful revenue for the project. On February 26, 2006 board meeting, the General Manager reported back on the possibility for the project to be registered under the CDM and secure further financing and it was agreed to apply the project for CDM..

Exclusive Consulting Agreement was signed in March and a termsheet with the CER Buyer was executed in August, 2006. Since the project owner secured a Buyer for their project, they applied for bank loan with relevant information provided to show their consideration of CDM revenue to the project. On November 20, 2006 Ziyang County Agriculture Development Bank confirmed a loan to the project provided the project can be developed under CDM. The project owner therefore started the project on December 28, 2006 with a strong determination for the project to be registered as CDM.

It shall be noted that in the early months of the project, given the fact the project owner was a small company with limited resources, it focused on getting the project underway. CDM registration at the time did not appear to take a long time and the project would only benefit from CDM after it was operating. So getting the project construction under way was a logical priority.

- **Continuing and real actions were taken to secure CDM status for the project in parallel with its implementation.**

  The project owner started Emission Reduction Purcahse Agreement ("ERPA") negotiation with the Buyer after the project start date. On March 23, 2007, the main requipment order contract was signed. One month later, ERPA was signed, which meant a Buyer for the project was finally secured.

[5] Section 12 Financial Analysis of Feasibility Study Report
[6] http://cdm.ccchina.gov.cn/web/Main.asp?ColumnId=18&ScrollAction=3; http://cdm.ccchina.gov.cn/web/NewsInfo.asp?NewsId=387
[7] http://cdm.unfccc.int/Projects/DB/DNV-CUK1131715798.81/view

Since then, the project started CDM application step by step. Validation Agreement for the project was signed with DOE in June 2007 and Host Nation Approval was obtained in July. Two months later the PDD of the project was published at UNFCCC.

It shall be noted that market practice in China dictates that the Buyer will typically pay all the upfront fees such as consultancy, DOE etc. So usually the consultant will not start work until a buyer for the project is confirmed in the final binding ERPA. That's why PDD development was not started right away after the signing of consulting agreement. This common practice in China makes securing an Annex I project participant before application for host nation approval.

The project owner worked continuously and steadily towards submission of the project for registration since start of the project. Progress had been sometimes slower than anticipated but at the time the investment decision was made the owner did not foresee the length of time it takes to register a project under the CDM. Despite the difficulties described above, the project participants remained determined in their intention to register the project activity for CDM as this had remained an essential precondition making the project actitivy financially attractive.

Question 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."

Response by PP

In the PDD published for GSP the the ex-ante grid baseline emission factor was incorrectly calculated as 0.8464 tCO_2/MWh, 0.50 OM: 0.50 BM. This value was calculated on the basis of a BM of 0.5671 tCO_2/MWh and an OM of 1.1257 tCO_2/MWh.

During valdiation it was found that an error had been made in the calculaiton of the emisison factor for thermal plants ($EF_{thermal}$) and this incorrect calculation led to an incorrect BM and *ex-ante* combined margin emisison factors. This was a calculaiton error and was corrected in the PDD for registraiton. The BM should in fact be 0.5739 tCO_2/MWh and this value was used in the PDD submitted for registration.

The data in the PDD submitted for registraiton is that published by the Chinese government.[8] The PDD and associated spreadsheets uploaded for registraiton correctly calculated the relevant BM and OM in line with the officially published data to derive the Combined Margin and has been validated by the DOE. The correct *ex-ante* emissions factor is 0.8498 tCO_2/MWh as published in the validated PDD submitted for registration.

Yours faithfully,

Des Godson
Director

[8] Department of Climate Change http://cdm.ccchina.gov.cn/web/NewsInfo.asp?NewsId=2193 and http://cdm.ccchina.gov.cn/WebSite/CDM/UpFile/File1364.pdf

Enclosure: Appendix I – Representative sample of benchmark adopted in the small scale hydropower projects registered in 2008

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Note: Projects with construction date in 2006 are in bold letters

Project Name	Ref No.	Installed Capacity	Registration Date	Project Construction Date	Adopted benchmark
Yunnan Lincang Zhenai Hydropower Project	**1994**	**9.6MW**	**8-Nov-08**	**May-06**	**10%**
Dongliuxi Erji 12.6MW Hydropower Project in Hubei Province	1960	12.6MW	27-Oct-08	May-05	10%
Lijiang Xinzhuhe Second Level Hydropower Project	**1879**	**12.6MW**	**27-Oct-08**	**Dec-06**	**10%**
Changshatou 10MW Hydropower Project	**1962**	**10MW**	**20-Oct-08**	**Jan-06**	**10%**
Yuexi Dayan Small Hydropower Project	**1814**	**12.6MW**	**1-Oct-08**	**Jul-06**	**10%**
14MW Bundle Small Hydropower Project in Xiping and Puhe	1513	14MW	12-Sep-08	Mar-05	10%
Shimen Suojie Small Hydropower project in Changde	1766	15MW	29-Aug-08	Dec-04	10%
Guizhou Zhenyuan Putian Hydropower Station	1785	6.4MW	24-Aug-08	Jun-05	10%
China Tuojiang Small Hydropower Project	1782	12.8MW	17-Aug-08	May-05	10%
China Xinhuang Xinchun Small Hydropower Project	1763	7.4MW	8-Aug-08	Dec-05	10%
Yunnan Yuanjiang Lutong Hydropower Station	1743	10MW	7-Aug-08	Feb-04	10%
Liyutang Small Hydropower Project	**1539**	**15MW**	**9-Jul-08**	**Jul-06**	**10%**
Yunnan Zemahe 15MW Small Hydropower Project	**1511**	**15MW**	**30-Jun-08**	**Jan-06**	**10%**
Mujiajia Erji 10MW Hydropower Project	**1504**	**10MW**	**25-Jun-08**	**Jan-06**	**10%**
Yunnan Dehong Longchuan Bienaihe 1st and 2nd level Hydropower Stations	1507	10.5MW	25-Jun-08	Jan-05	10%
Caoying Small Hydropower Project	1515	4.8MW	18-Jun-08	Jan-05	10%

Project Name	Ref No.	Installed Capacity	Registration Date	Project Construction Date	Adopted benchmark
Daguan Hongshayan 9.6MW Small Hydropower Project in Yunnan Province	1523	9.6MW	17-Jun-08	Dec-05	10%
Pihe 9.6MW Small Hydropower Project in Yunnan Province	1496	9.6MW	12-Jun-08	Mar-05	10%
Lishiluo Erji 6.4MW Small Hydropower Project	1485	6.4MW	12-Jun-08	Dec-05	10%
Douhuang 12.6MW Small Hydropower Project	1538	12.6MW	4-May-08	Mar-05	10%
Yunnan Mopo River 12.5MW Hydropower Project	**1510**	**12.5MW**	**29-Apr-08**	**Dec-06**	**10%**
Jielong Cascade Small Scale Hydropower Project	**1537**	**10.4MW**	**26-Apr-08**	**Jul-06**	**10%**
Guangdong Longtan 2*7MW Hydropower Project	1536	14MW	18-Apr-08	Sep-05	10%
China Zhijiang Peace Small Hydropower Project	**1555**	**13.5MW**	**13-Apr-08**	**May-06**	**10%**
Liujiashan 10MW Small Hydropower Project in Jiangxi	1477	10MW	10-Apr-08	Oct-04	10%
Yuejiang Small Hydropower Project	1490	12MW	9-Apr-08	Nov-04	10%
Bapan 12.7MW Hydropower Project	1522	12.7MW	7-Apr-08	Nov-05	10%
Baji River Stage I 10MW Hydropower Project	1498	10MW	5-Apr-08	Jun-05	10%
Aluhe 12.6MW Small Hydropower	**1438**	**12.6MW**	**3-Apr-08**	**Jul-06**	**10%**
Pushihe Erji 10MW Hydropower Project	**1430**	**10MW**	**3-Apr-08**	**Jan-06**	**10%**
Changpinghe Yiji and Erji 10.4MW Bundle Small Hydropower	**1524**	**10.4MW**	**31-Mar-08**	**Nov-06**	**10%**
Maocaoping 8MW Small Hydropower Project	**1489**	**8MW**	**31-Mar-08**	**Jul-06**	**10%**
Daguan Linguanyan Small Hydropower Project	1533	9.6MW	21-Mar-08	Jun-04	10%
Hubei Hefeng Yanzi Town Baishun Village Taohuashan Hydropower	1438	12.6MW	18-Feb-08	Aug-05	10%
Qinghai Dongxuerji 8MW Hydropower Project	**1426**	**8MW**	**16-Feb-08**	**Dec-07**	**10%**