RESPONSE TO THE REQUEST FOR REVIEW

Bureau Veritas Certification Holding S.A.S had performed the validation of the CDM Project 1321- "Baxianyuan 27 MW Hydropower Project ". Subsequently, there have been three requests for review.

CDM Executive Board has sought clarifications on certain specific issues. We thank the CDM Executive Board and the Secretariat for giving us an opportunity to explain our position in validating the said project.

Our response to the clarification requests raised are given below:

Reasons for Review Request	**Bureau Veritas Certification's response**
RR -1	
1. The DOE is requested to provide further details and evidence to support its validation of the common practice analysis. In doing so the DOE is requested to recall the requirements of sub-step 4b of the *Tool for the demonstration and assessment of additionality.*	The statistics yearbooks titled *Yearbook of China Water Resources* (edition 2004 and 2005) and *Yearbook of Shaanxi Water Resources* (2002-2004) were published by the China Hydropower Press. Both of these data sources are the most authoritative and professional documents to demonstrate the latest situation of hydropower projects in China. The related information's from these three yearbooks were assessed by us to validate the description in Step 4 of the PDD – common practice analysis. The Project is a hydropower project located in Shaanxi Province with an installed capacity of 27 MW. As per the *Tool for the demonstration and assessment of additionality*, project activities with similar scale to the Project can be identified as similar project activities. The installed capacity of the Project is 27 MW. As per the Code (refer Annex 4), hydropower project activities with an installed capacity not more than 50,000 kW (50 MW) can be identified as similar project activities. To enhance the conservativeness and completeness of the common practice analysis, the range of installed capacity of similar scale is enlarged from 50 MW to 100 MW. Therefore, existing grid connected hydropower projects in Shaanxi Province with an installed capacity not more than 100 MW are identified as similar project activities to the Project as listed in the table below (the same as Table 3 provided in Step 4a in Section B.5 of the PDD). As per the *Tool for the demonstration and assessment of additionality*, Step 4b is used 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 is done by comparing the proposed project activity to the other similar activities, and pointing out and explaining essential distinctions between them. It is explained why the similar activities enjoy certain benefits that render them financially attractive (e.g., subsidies or other financial flows) and the proposed project activity cannot use. As per the *Tool for the demonstration and assessment of additionality*,

	essential distinctions may include a serious change in circumstances under which the proposed CDM project activity will be implemented when compared to circumstances under which similar projects were carried out. For existing grid connected hydropower projects in Shaanxi Province with an installed capacity not more than 100 MW that have been identified as similar project activities to the Project, essential distinctions are identified in Step 4b as: (1) Distinctions in regulation characteristics: · Linhekou Hydropower Project employs incompletely yearly regulation reservoir[1]; · Shimen Hydropower Project employs multi-year regulation reservoir;[2] · Shitouhe Hydropower Project is an auxiliary project to Shitouhe Reservoir, which is featured by incomplete yearly regulation[3]; · Heihe Hydropower Project is an auxiliary project to Heihe Jinpen Reservoir, featured by incomplete yearly regulation[4]; All of these four hydropower projects have incompletely yearly regulation capacity, yearly regulation capacity or multi-year regulation capacity. Therefore these projects have the regulation capacity to adapt the fluctuation of water resources, thus to use water resources to generate electricity in a better way, such as undertaking peak load balancing function and so on. The Project is a run-of-river hydropower project. Its operation is dependant on water resource. This kind of operation is much different from those hydropower projects with regulation capacity and more risky in the amount of electricity generated. Therefore, the above four projects possess incomparable advantages over the Project in respect of regulation characteristics. (2) Distinctions in investment · Shiquan Hydropower Addition Project is constructed based on the existing hydropower project, with an investment of 3333.3 RMB per kW[5], less than 40% of the Project (8550 RMB per kW); Based on the sensitivity analysis, if the total investment of the Project can be reduced to 40%, the financial indicators of the Project could reach the benchmark which makes the Project economically feasible. However, it is impossible to decrease the total investment of the Project to 40%. Therefore, Shiquan Hydropower Addition Project possesses incomparable advantages over the Project in respect of investment.

1 *Yearbook of Shanxi Water Resources* (2002-2004) P242-243.
2 http://www.hwcc.com.cn/newsdisplay/newsdisplay.asp?Id=40548
3 http://www.shuigong.com/papers/others/20060125/paper16040.shtml
4 http://www.cws.net.cn/zmslgc/ArticleView.asp?ArticleID=No&ClassID=1689
5 *Annual of China's Water Power* (volume 6) (data of 1998-2000)P219.

	(3) Distinctions in investment environment · Erlang Dam Step Hydropower Project is a complex project involving transferring more than 0.2 billion m3 water from Jialing River to Han River, which is one of the key projects listed in the Eighth Five Year Plan of Shaanxi Province and one of the 20 projects most important to Shaanxi's development.[6] The government of Shaanxi Province prior to year 2000 invested it and its bus-bar tariff was determined according to the principle of full-cost recovery[7]. Under the principle of full-cost recovery, the bus-bar tariff is defined as the sum of (1) per kWh electricity generation cost, (2) per kWh taxes and fees and (3) per kWh preset reasonable profit. This policy was issued to encourage investment in power industry. Therefore the Erlang Dam Step Hydropower Project supported by this policy didn't have any investment risk. · Auxiliary Hydropower Project of Dongfanghong Transferring Wei River for Irrigation Project was put into operation in 1970[8], far earlier than the time when the Project is put into operation. This project was invested and operated by the government in the age of planned economy, so the developer didn't have any investment risk. The Project is invested by a private company and the favorable policies for the bus-bar tariff (the principle of full-cost recovery) had already been cancelled in 2001[9]. Therefore the above two projects possess incomparable advantages over the Project in respect of investment environment. To summarize, existing grid connected hydropower projects in Shaanxi Province with a commensurate scale to the Project possess incomparable advantages over the Project in respect of regulation characteristics, investment per kW and investment environment. As per the Tool for the demonstration and assessment of additionality, "if Sub-steps 4a and 4b are satisfied, i.e. …(ii) similar activities are observed, but essential distinctions between the project activity and similar activities can reasonably be explained, then the proposed project activity is additional)". Therefore, the analysis carried out in Step 4b in Section B.5 of the PDD to draw the conclusion that the Project is additional satisfies the requirement of sub-step 4b of the Tool for the demonstration and assessment of additionality.
2. The DOE is also requested to provide	We were informed that at the time of preparing the Feasibility Study Report, the project owner had a clear understanding of the poor financial

6http://www.chinawater.com.cn/newscenter/df/shx/t20060724_184381.htm, http://www.sx-sigc.com/web-sitey/right?id=33&col=%B5%E7%C1%A6%CF%E0%B9%D8&on=right

7 Ministry of Water Resources and Electric Power, State Economic Committee and State Price Bureau, *Note on Implement methods of Various Power Tariff* (No. 101 Shuidiancaizi[1987])

8 http://zhidao.baidu.com/question/11298801.html

9 State Planning Committee, *Notice on Standardizing Electricity Tariff Management* (No. 701 Jijiage[2001])

a detailed description of the steps taken and evidence examined to determine that the benefits of the CDM were seriously considered prior to the start date.	performance of the Project. They endeavored to find out whether the Project can be feasible with certain type of support or funding. In February 2005, news regarding the enforcement of the *Kyoto Protocol* struck the eyes of the project owner. Being informed that the *Kyoto Protocol* had been enforced and the Clean Development Mechanism provided by the *Kyoto Protocol* could solve the investment barriers faced by the Project, the project owner held a board meeting on 09/03/2005 (please refer Annex 1 Board Meeting minutes dated 09/03/2005) and decided to implement the hydropower project with CDM assistance. Meanwhile, the project owner started to look for a qualified CDM developer. After three months' communication on CDM and negotiation on the agreement, on 06/06/2005, the project owner signed the CDM consultation agreement (please refer Annex 2 'Emission Reductions Cooperation Agreement') with Beijing Haohua Jianghe International Water Conservancy Consultation Co., Ltd (hereafter referred as Haohua). Additionally, Haohua promised to find CERs buyers to ensure the future CDM revenue for the project owner. Based on the confidence to obtain additional CDM revenue to overcome the investment barriers and make the Project financially attractive, the project owner started construction of the Project on 11/06/2005. (Please refer Annex 3 - Photograph for the beginning of the construction activity dated 11/06/2005) In conclusion, CDM had been seriously considered prior to the commencement of the Project. The evidences provided are 1) Annex 1 – Board Meeting minutes dated 09/03/2005 2) Annex 2 -Emission Reductions Cooperation Agreement 3) Annex 3- Photograph for the beginning of the construction activity dated 11/06/2005
RR-2	
1. The DOE is required to further clarify how they have assessed and validated the benchmark applied and its validity.	The Economic Evaluation Code for Small Hydropower Projects (hereafter referred to as the Code) was issued by the Ministry of Water Resources of China (Document No. SL16-95) for the economic evaluation of small hydropower projects. In Section 1 (General description) of the Code, paragraph 1.2 describes that "Economic evaluation for small hydropower projects focuses on economic evaluation for newly built, refurbishment, expansion, rebuilding or retrofit of hydropower plants and auxiliary grids with an installed capacity not more than 25,000 kW … … Economic evaluation of medium-sized hydropower plants located in rural areas with an installed capacity of 50,000 kW or below can refer to the Code." The Baxianyuan 27 MW Hydropower Project is a newly built hydropower plant satisfying the condition that "located in a rural area with an installed

	capacity not more than 50,000 kW". Therefore, the Code is applicable to the Project. The evidence in Chinese has been validated as described in the validation report. As per the No.3 Notice issued by the Ministry of Waster Resources on 26/06/2006 (http://www.lawon.cn/law/viewDetail.jsp?id=237012), the Code is valid. The evidence provided is 1) Annex 4- The Economic Evaluation Code for Small Hydropower Projects
2. The DOE is required to further clarify the appropriateness of the sensitivity analysis and the pertinence of its conclusions and how the said analysis was validated	Since the impact of bus-bar tariff on total investment is different to the impact of electricity output, The four financial parameters were taken as uncertain factors for sensitive analysis of financial attractiveness: ◆ Total investment ◆ Annual O&M cost ◆ Annual electricity output ◆ Bus-bar tariff (not including VAT) The results of sensitive analysis of three indicators of the Project are correctly presented in the PDD version 07 dated 07-01-2008. The selection of parameters and calculation in the sensitivity analysis were verified and found OK. The IRR will still below the benchmark when the most sensitive parameter varies at ±10%. As a result of fluctuation of energy price, the trend of price rising of building materials has kept in recent years. Therefore it is impossible to decrease the total investment of the Project. The data stated in the FSR was based on recent 53 years stable historical statistics made by Shaanxi Water Engineering Exploring and Planning Research Institute with the top level certificate in hydrologic and water resources survey and appraisal, hydro geological investigation, engineering and consulting. Therefore the ±10% in the sensitivity analysis of annual electricity output is sufficient to reflect the impact of the annual electricity output on the IRR of the Project. For the bus-bar tariff (not including VAT), it is fixed to 0.27 RMB/kWh by the *Notice on Revising the Bus-bar Tariff within Shaanxi Grid* by Shaanxi Bureau of Commodity Price (SHAANJIAJIAFA[2005]100) and has been used for almost 3 years and is still valid now. Therefore, taking the fluctuation range of ±10% in the sensitivity analysis of bus-bar tariff (not including VAT) is sufficient to reflect the impact of the bus-bar tariff on the IRR of the Project. **sensitivity analysis** / **IRR after tax** **item** / **variation range** / **-10%** / **0** / **10%** total investment / 0% / 6.51% / 5.54% / 4.72% annual O&M cost / 0% / 5.74% / 5.54% / 5.34% bus-bar tariff (not including VAT) / 0% / 4.56% / 5.54% / 6.49% annual electricity output / 0% / 4.56% / 5.54% / 6.49% Based on the above analysis, the project is not financially attractive.
3. The PDD states that detailed IRR	The IRR calculation was provided along with the PDD submitted for registration. To make the description in the PDD clear, the sentence is

calculation process will be provided in an additional document without specific reference. Further clarification is required.	revised to "detailed IRR calculation process has been provided in the IRR calculation excel table as an attachment submitted along with the PDD". The revised PDD version 07 dated 07-01-08 is provided along with the detailed IRR calculation as Annex 5 - Revised PDD version 07 dated 07-01-08 Annex 6 - Detailed IRR calculation
4. The DOE is requested to provide further details and evidence to support its validation of the common practice analysis. In doing so the DOE is requested to recall the requirements of sub-step 4b of the Tool for the demonstration and assessment of additionality.	Same as serial no. 1 under RR-1 above.
5. The DOE is also requested to provide a detailed description of the steps taken and evidence examined to determine that the benefits of the CDM were seriously considered prior to the start date	Same as serial no. 2 under RR-1 above.
6. Further clarification is required on the summary of the stakeholders comments received	The Project owner introduced the hydro station to the habitants nearby the Project site, and then published the opinion invitation letters on villages' billboards for 15 business days to invite public comments. Comments were received 15 days after they were sent out. We know from the outcome of this survey that people agreed that the Project actively decrease environment pollution and mitigate local environmental quality. In addition, the construction of this Project will renovate the local grid system, promote development of other industries, and partly address local employment pressure. All the stakeholders supported the Project. No negative comments were received. A position letter dated 10/04/2006 received from Committee of Qingxi Village, Huayang Town, Yang County was verified to confirm this. Please refer **Annex 7** – Position letter from stakeholder (Committee of Qingxi Village, Huayang Town, Yang County)

7. The Validation report states that "The State Development and Reform Commission (the Chinese DNA) as issued the Letter of Approval declaring the project complies with the permission requirements provided for in the Measures for the Operation and Management of CDM Project in China, and assists China in achieving sustainable development". The DOE shall further clarify whether the report is a draft version, as typographical errors in this and following paragraphs suggest, or a final report. A final Validation report shall be submitted.	The draft validation report was send inadvertently. We regret the inconvenience. Please refer Revised validation report version 03 dated 10-01-08 (Please refer **Annex 8** - Revised validation report version 03 dated 10-01-08)
8. The Validation Report, when indicating he Validation Team Conclusions states that "The IRR in excel has been offered on mail of 13/04. But as you know, there is a little difficult to find a qualified financial expert, the excel document is attached to you. A financial training is arranged on her. The financial expert has checked the calculation of	The draft validation report was send inadvertently. We regret the inconvenience. Please refer Revised validation report version 03 dated 10-01-08 (Please refer Annex 8 - Revised validation report version 03 dated 10-01-08)

IRR. No problems were found". Further clarification is required on this conclusion.	
9. The Validation Report, when indicating the Validation Team Conclusions states "it was not clear here which footnotes. I have checked the PDD and found the footnote on page 6 and 8 are considered when deciding the baseline. AMN: Not clear. Please elaborate The Pp has added the cross link in the PPD and this table 5. Please give the conclusion of the validation team". Further clarification is required on the scope and meaning of this conclusion	The draft validation report was send inadvertently. We regret the inconvenience. Please refer Revised validation report version 03 dated 10-01-08 (Please refer Annex 8 - Revised validation report version 03 dated 10-01-08)
RR-3	
1. The DOE is requested to provide further details and evidence to support its validation of the common practice analysis. In doing so the DOE is requested to recall the requirements of sub-step 4b of the Tool for the demonstration and assessment of additionality. [10]	Same as serial no. 1 under RR-1 above.
2. The DOE is also requested to provide	Same as serial no. 2 under RR-1 above.

a detailed description of the steps taken and evidence examined to determine that the benefits of the CDM were seriously considered prior to the start date.	

Hope the above responses given clarify the queries raised. We request the early registration of the project as a CDM project.

Thanking you,

For Bureau Veritas Certification Holding SAS

Ashok Mammen
Team Leader

H B Muralidhar
Internal Technical Reviewer