Response to the CDM Executive Board

1. *The DOE is requested to justify the suitability of the benchmark, in particular, appropriateness of a benchmark of year 1995 when assessing the additionality of a project activity with investment decision made in 2006.*
2. *The DOE shall describe how the reliability of the input values used in the investment analysis has been validated in accordance with the guidance of EB38 paragraph 54.*
3. *The start date of the project activity should be as per the CDM glossary of terms.*

Referring to Issue 1

Response from Project Participant

The "Revision of Economic Evaluation Code for Small Hydropower Project (SL16-95)" belong to the Professional Standards of People's Republic of China which was approved and published by the Ministry of Water Resources of the People's Republic of China on June 2, 1995 and began to take effect on July 1, 1995. In this document, the small hydropower project is defined as: the station with installed capacity is lower than 25MW and the building, revising, expansion, rebuilding of corresponding Grid of it. Middle scale hydropower stations with installed capacity of 50MW or lower 50MW in the rural area should follow these regulations. In 2002, the Ministry of Water Resources of the People's Republic of China issued the "Bulletin of Valid Hydropower Technical Standard" currently. According to this hydropower document No [2002]07 the "Revision of Economic Evaluation Code for Small Hydropower Project (SL16-95)", is still effective and enforceable.

Since 1995, institutes on hydropower aspect in China generally apply the document (SL-95) to make out Feasibility Study Reports (FSRs), Preliminary Design Reports (PDRs), and relevant reports.

Pingbian and Guanyintuo hydropower stations (hereinafter refers "Pingbian" or "Quanyintuo") are located in rural area, and the installed capacity of each station is 20 MW, which are both lower than the benchmark of 50MW, therefore, the benchmark of 10% in the document SL16-95 as mentioned above is applicable to the project. In addition, the Financial Analysis of the PDRs (the PDRs of the project were approved by local government on 1 June 2005 and 2 November 2005 respectively) of the project, made by "Chengdu Hydropower Investigation Design & Research Institute", which is a certified and independent designed institute, was estimated as per supervision of the document No [2002]07 (SL-95). In PDRs, based on the document (SL-95), the benchmark of 10% for post-tax projects is used and still valid and appropriate on the date of investment decision (13 June 2006). Therefore, the project is also appropriate to employ the benchmark of 10% for post-tax project IRR in PDD.

Referring to Issue 2

Response from Project Participant

Background:

54. The Board clarified that in cases where project participants rely on values from Feasibility Study Reports (FSR) that are approved by national authorities for proposed project activities, DOEs are required to ensure that:

(a) The FSR has been the basis of the decision to proceed with the investment in the project, i.e. that the period of time between the finalization of the FSR and the investment decision is sufficiently short for the DOE to confirm that it is unlikely in the context of the underlying project activity that the input values would have materially changed.

(b) The values used in the PDD and associated annexes are fully consistent with the FSR, and where inconsistencies occur the DOE should validate the appropriateness of the values.

(c) On the basis of its specific local and sectoral expertise, confirmation is provided, by cross-checking or other appropriate manner, that the input values from the FSR are valid and applicable at the time of the investment decision.

Approved PDRs of Pingbian and Guanyintuo were completed in April 2005 by "Chengdu Hydropower Investigation Design & Research Institute", which is an independent organization which is certified to compile design reports for hydropower projects (it has obtained a "grade B" in water conservancy industry and electricity industry and a "grade C" in hydrography and engineering measurement in the type of project reconnaissance, all issued by the Construction Bureau of Yunnan Province). Therefore, the PDRs can be considered as an independent and realistic assessment of the proposed project activity, including the parameters listed and used as input values in the IRR calculation of the PDD for requesting registration. Most input values are cited from PDRs of Pingbian and Guanyintuo, except grid tariff. Because, the project owner and the grid company signed the Power Connection Intent Agreement (PCIA) with an actual grid tariff of 0.22Yuan RMB/kWh on 13 May 2005(confirmed later by the Power Connection Agreement) after PDRs but at a time before CDM decision. In a word, PDRs and PCIA of Pingbian and Guanyintuo were issued at a time before investment decision, and only with support from local government and cooperation from CDM consulting company, the project owner just signed the Purchase Contracts of Turbines and Generators for Pingbian and Guanyintuo on 13 June 2006 which is the starting date of the project activity and also the earliest date of investment decision. Therefore, the period between the completion of PDRs of two stations and the investment decision is only around one year. In addition, the PDRs of the project were approved by local government on 1 June 2005 and 2 November 2005 respectively, and the period between the approvals of PDRs of two stations and the investment decision is only about one year or half a year, which is unlikely in the context of the underlying project activity that the input values would have materially changed.

Pingbian and Guanyintuo were supposed to start commissioning in November 2008 and January 2009 respectively (addressed in PDD). However, by the middle of November 2008, the construction of two hydropower stations has not been completed yet. As per the project owner's statement, the construction would delay to be completed till May 2009 because of the

disasters of snow in January, the earthquake (level 8) in May and flood in August and September in Sichuan.

In order to prove the conservative of the input values based on the PDRs, the important input values from PDRs will be cross checked using the actual data or reference to the conditions of available documents for similar project activities.

Table 1 the Designed Data in PDRs and Actual Values

	Value in PDRs	Actual Value	Comment
Annual utilization hours	4,705h (Pingbian) 4,580 (Guanyintuo)	N.A. Because the project will be started to operate in May 2009	Both of annual utilization hours in the PDRs of Pingbian and Guanyintuo are calculated based on water resource data of 35 years (1966~2000), so dramatically change of electricity generation of the project in the whole crediting period will rarely happen. Therefore, the value of annual utilization hours from PDRs is reasonable to be used for IRR calculation.
Grid tariff	0.22 Yuan RMB/kWh with VAT in PCIA 2005[1]	0.22 Yuan RMB/kWh with VAT in PCA 2005[2]	The price from PCIA 2005 is the same as the actual grid tariff, so it used in IRR calculation is reasonable.
Total investment	130,028,900 Yuan RMB (Pingbian) 126,937,800 Yuan RMB (Guanyintuo)	166,930,000 Yuan RMB (Pingbian) 133,422,000 Yuan RMB (Guanyintuo) [3]	The actual partial investment is far higher than the designed total investment in the PDRs, so 130,028,900 Yuan RMB (Pingbian) and 126,937,800 Yuan RMB (Guanyintuo) from the PDRs used in IRR calculation is more conservative.
Annual operational cost	2,872,100 Yuan RMB	3,242,100 Yuan RMB	The annual operational costs from the PDRs used in IRR calculation of PDD

[1] The grid tariff of 0.22Yuan RMB/kWh with VAT refers to PCIA 2005 signed in 13 May 2005.

[2] The grid tariff of 0.22Yuan RMB/kWh with VAT refers to PCA 2005 signed in 30 June 2005. According to the No [1995]186 documents, the input values in the investment analysis should use the "current" fixed data. The "current" means the time of the investment decision. In China, the tariff is strictly regulated by China government and it is established on strict regulation rather than the market mechanism, so it is hard to forecast the future tariff by the project owner. As the tariff is related tightly to the national economy and livelihood of people, the government of China has to make the tariff steady.

[3] By 12 November 2008, the total investment of the completed partial projects (Pingbian and Guanyintuo) cost by the project owner refers to "Investment for the Completed Projects of Pingbian&Guanyintuo Hydropower Stations".

	(Pingbian) 3,104,000 Yuan RMB (Guanyintuo)	(Pingbian) 3,400,000 Yuan RMB (Guanyintuo) [4]	are more conservative.

Note: N.A.= not available

Annual Operational Costs

The annual operational costs are calculated according to the data from the approved PDRs of Pingbian and Guanyintuo. In order to further demonstrate the input values of annual operational costs are appropriate, the fluctuation of annual operational costs has been considered. Based on the PDRs, hydropower No [1995]186 documents and Interim Regulations of Hydropower Construction Project Financial Evaluation, annual operational costs mainly include salary, overhaul cost, welfare fund, employee's insurance, housing provident fund, water charges and other cost. The parameters using to calculate the annual operational costs of the project have been analyzed respectively:

- Based on the above SL16-95 evaluation code, regarding to a hydropower project with an capacity of each unit of hydro-generator set greater than 6MW, 2 units of hydro-generator set should be operated by 48~79persons., which is higher than the values (37 persons for Pingbian and 37 persons for Guanyintuo) in the IRR calculation of the PDD. Hence, the values used in PDD are more conservative. However, according to the payroll record of all employees of both stations from the Pingshan Zhongxing Electrometallurgy Co., Ltd., the number of all employees of Pingbian and Guanyintuo is 112 persons. With the ending of the construction of two stations, the number of employees will decrease and be close to the number designed in PDRs.
- Based on the above SL16-95 evaluation code, the average rate of overhaul cost is 1%, which is fixed and consistent with the values (1%) in IRR calculation of the PDD;
- Based on the Interim Regulations of Hydropower Construction Project Financial Evaluation, the range of other cost is 24Yuan RMB/kW as the installed capacity of the hydropower station not more than 250MW, which is fixed and consistent with the value of 24 Yuan RMB/kW in the IRR calculation of the PDD;
- Based on the above SL16-95 evaluation code, the welfare fund for employees should be 14% of the total salary, which is fixed and consistent with the total salary of 14% in the IRR calculation of the PDD. Based on the relevant regulations published by China government, the maximum value of the employee's insurance is about 26% of the total wage, which is fixed and consistent with the value of 25% in the IRR calculation of the PDD.
- According to Inform of Adjustment on Collection Standard of Water Charge (Doc.: Chuanbanhan [2005]110) in Sichuan Province published by local government, the water charge of hydropower station in Sichuan Province should be 0.0025~0.005Yuan RMB/kWh, which is fixed and higher than the value (0.001Yuan RMB/kWh) in IRR

[4] Please see the details in the paragraph for the annual operational costs below the Table 1.

calculation, the PDD used the lower value of 0.001Yuan RMB/kWh is conservative.

- Based on the PDRs, the IRR calculation uses 8,000 Yuan RMB/Person for Pingbian and 10,000Yuan RMB/Person for Guanyintuo annually, but according to the payroll record of all employees of both stations from the Pingshan Zhongxing Electrometallurgy Co., Ltd., the actual average payroll of the employees is 18,000 Yuan RMB/Person annually, which is higher than the payroll in the PDDs.

Therefore, the actual annual operational cost is higher than the designed values in PDRs. Most data of annual operational costs are fixed and comparatively stable, but only the salary of the employees has been increased from 8,000 and 10,000Yuan RMB/Person annually in PDRs to 18,000 Yuan RMB/Person annually. Thus the actual annual operational costs of Pingbian and Guanyintuo will be increased to 3,242,100 Yuan RMB and 3,400,000 Yuan RMB, respectively.

In conclusion, based on the above cross-check, the important input values used in the financial analysis is reasonable and more conservative than the actual values.

Therefore, the input values from the PDRs of Pingbian and Guanyintuo employed in the investment analysis are appropriate and valid at the time of the investment decision which is consistent with the EB 38 guidance, paragraph 54.

Referring to Issue 3

Response from Project Participant

The Glossary of CDM Terms' and EB41 guidance, paragraph 67 shows "*the earliest date at which either the implementation or construction or real action of a project activity begins*".

From Table of key events of the project activity and real actions on CDM application as below, It is obvious that the date of 13 June 2006, the project owner signed the purchase contract of turbines and generators, is the earliest activity happened on the project (the earliest starting date of the project activity) and also the date of investment decision, so it is appropriate to requirements of Glossary of CDM Terms and EB41 guidance, paragraph 67. Afterwards, Pingbian&Guanyintuo hydropower stations were approved to start construction on 18 December 2006 (as the starting date in the PDD for requesting registration).

In order to further clearly reply the Issue 3, the key events are listed in the below table (Table 2) to show the important information, documents and events for investment analysis and CDM status of the project.

Table 2 Key Events of the Project Activity and Real Actions on CDM Application

Date	Key Event
April 2005	Preliminary Design Report (PDR) of Pingbian and Guanyintuo hydropower station was completed.
13 May 2005	The project signed the Power Connection Intent Agreement (PCIA) with a

	grid tariff of 0.22Yuan RMB/kWh.
18 May 2005	Directorate decided to apply for CDM.
28 May 2005	Project owner trusted an agency to find a proper cooperator on CDM application.
1 June 2005	PDR of Pingbian hydropower station was approved.
30 June 2005	The project signed the Power Connection Agreement (PCA) with a grid tariff of 0.22Yuan RMB/kWh.
1 July 2005	The project owner trusted and confirmed Beijing Tianqing Power International CDM Consulting Co., Ltd (hereinafter refers "Tianqing Power") to cooperate on CDM application of the project activity
24 October 2005	Tianqing Power signed a General Framework Agreement for the Development of CDM projects with Climate Expert Ltd. (hereinafter refers "CE")
2 November 2005	PDR of Guanyintuo hydropower station was approved.
7 November 2005	EIAs of Pingbian and Guanyintou hydropower stations were approved.
24 November 2005	ENEL signed a Letter of Intent (LoI) to Tianqing about the project.
16 January 2006	The project owner and Tianqing Power signed CDM PDD Cooperation Agreement.
12 May 2006	Received Approval of supporting CDM application by local government
17 May 2006	The project owner held a stakeholders' consultancy meeting about CDM application of the project
13 June 2006	**The project owner signed the Purchase Contracts of Turbines and Generators for Pingbian and Guanyintuo hydropower stations (the earliest starting date of project activity and the date of investment decision)**
7 November 2006	The CDM approval of the project was issued by Chinese DNA.
18 December 2006	Pingbian&Guanyintuo hydropower stations were approved to start construction.
11 April 2007	The date of publication of the CDM-PDD for global stakeholder process (GSP) by the DOE
May 2009	The project is expected to start commissioning.

The PDRs of Pingbian and Guanyintuo are both completed in April 2005. In the PDRs, the post-tax project IRRs are lower than the benchmark. Besides, in the Power Connect Intent Agreement (PCIA) signed on 13 May 2005, the grid tariff is only 0.22Yuan RMB/kWh with VAT, which is confirmed by the sequent Power Connection Agreement (PCA). As per the PDRs and the grid tariff in the PCIA, the project owner decided to apply for CDM at Directorate Meeting on 18 May 2005. In July 2005, the project owner trusted Tianqing Power to cooperate on CDM application of the project. About 3 months later, Tianqing Power signed General Framework Agreement for the Development of CDM projects with CE on some CDM tasks for the project. Soon, ENEL was interested in the project and signed a LoI on 24 November 2005. In January 2006, the project owner and Tianqing Power signed CDM PDD Cooperation Agreement formally. Afterwards, the project owner tried to apply for the support of local government on CDM application work and also did some investigate to stakeholders.

Till May 2006, the project owner finally got the Approval of supporting CDM application from local government and held a stakeholders' consultancy meeting about the CDM application of the project. After completion of above works on preparation of CDM application and the application of necessary approvals, the project owner finally signed the Purchase Contracts of Turbines and Generators for Pingbian and Guanyintuo hydropower stations on 13 June 2006, which is the earliest starting date of the project activity and the date of investment decision. The above events clearly demonstrate that the project owner was aware about the potential for CDM before the start of the CDM activity, and that it played a crucial role in overcoming the barriers towards the implementation of the project activity.

After the signed Purchase Contracts of Turbines and Generators for Pingbian and Guanyintuo hydropower stations, the project were submitted to Chinese DNA, and was approved by 7 November 2006. One month later, the project (both Pingbian and Guanyintuo hydropower stations) were approved to start construction. After checked by DOE, publication of the CDM-PDD for global stakeholder process was started on 11 April 2007. Since then, the DOE formally started the validation of the project. The project was supposed to start commissioning in November 2008, but it delayed to May 2009 because of the disasters of snow in January, the earthquake (level 8) in May and flood in August and September in Sichuan.