



JAPAN CONSULTING INSTITUTE

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Ref. No. : JCI-CDM-C-08-081

CDM Executive Board
c/o Mr. Kai-Uwe Barani Schmit
Manager CDM Section

Subject : DOE and Project Participants Response
on the Request for Review

(Reference No.1759: Shuangbai Ejia Magahe River Hydropower Project)

Dear Sirs,

Please find the attached document which shows JCI's response and the Project Participants' response on the request for review for the CDM project with the reference number 1759.

In case you have any further question or request, please let us know by phone call or Email.

Yours sincerely,

A handwritten signature in black ink, appearing to be 'Hideyuki Sato', is written over a horizontal line.

Hideyuki Sato

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Initial Response of DOE and Project Participants on Requests for Review

Project title: Shuangbai Ejia Magahe River Hydropower Project
Reference No.: No. 1759
Project Participants: Yunnan Dianneng Chuxiong Hydropower Development Co., Ltd.
Standard Bank Plc
(CDM consultant: Coway International TechTrans Co., Ltd.)
DOE: Japan Consulting Institute, JCI

***Issue 1:** The DOE is requested to explain how it has validated that the input values used for the IRR calculations are appropriate in the context of the project activity in line with EB 38, paragraph 54c, including the use of fixed input values (tariff of 0.21 Yuan kWh; O&M is also constant).*

Response of Project Participant:

All input values in the financial analysis, including the tariff and O&M cost, are taken from the Feasibility Study Report (FSR) and the Revised Budget Report. The FSR was developed by “No.14 Institute of Chinese Water Conservancy & Hydroelectric Survey Design Institute and Research Institute”. Due to dramatic price rise of construction materials, the Revised Budget Report was also developed by the same institute in May 2005. This project got the approval by local Development and Reform Committee on 25 July 2005. No.14 Institute of Chinese Water Conservancy & Hydroelectric Survey Design Institute and Research Institute was an independent and recognized design institute, and it was undergone the approval process by the governmental authorities.

Using fixed input values to calculate IRR in the FSR is based on “Economic Evaluation Code for Small Hydropower Projects” issued by the China Ministry of Water Resources in 1995 (Document No. SL16-95), and all the FSR in China adopted fixed input values, this is common practice in China. Furthermore, in order to ensure the stability of the domestic price level, the tariff is fully determined and strictly controlled by China government, so it’s relatively stable.

Based on the notice issued on 6th January 2006 by Yunnan Province Development and Reform Commission¹⁾, the benchmark on-grid tariff of hydropower plants in Yunnan Province is 0.215 Yuan/kWh (including VAT). For hydro projects with installed capacity less than 50MW, the tariff should be varied in different month, 0.215 Yuan/kWh (including VAT) for May and November, 0.19 Yuan/kWh (including VAT) from June to October, and 0.24 Yuan/kWh (including VAT) for December

1) Refer to Evidence 3 of Enclosure 3



and January to April. Based on the benchmark price of Yunnan government, the average tariff for Magahe project is 0.205 Yuan/kWh (including VAT) or 0.193 Yuan/kWh (excluding VAT). So the tariff of 0.21 Yuan/kWh (excluding VAT) adopted in the investment analysis by Magahe project is higher than the benchmark of Yunnan province, so it's a conservative method.

Further explanation to this question will be provided by DOE.

Response of JCI:

The input values used in the investment analysis of the PDD were as below table that compared with those values used in the FS Report. The table showed that all input values were same between FS Report and PDD except Total Static Investment.

Item	Parameters	Unit	FS Report	PDD
1	Installed Capacity	MW	15	15
2	Estimated Annual Electricity Deliver to the Grid	GWh	59.7	59.7
3	Project Lifetime	Year	28	28
4	Total Static Investment	Million Yuan	85.6746	100.7692
5	Annual O&M Cost	Million Yuan	1.6216	1.6216
6	Annual Tax;			
	Income Tax	%	33	33
	Value-Added Tax	%	6	6
	Tax Premium	%	7.5	7.5
7	Prospective Tariff (excluding VAT)	Yuan/kWh	0.21	0.21
8	Crediting Period (renewable)	Years	-	7*3
9	Expected CERs Price (Change rate: 1:8)	US\$/tCO ₂ e	-	10

JCI judged as follows regarding the requirements of EB 38, paragraph 54c.

(a) Total Static Investment

The reason of increase of Total Static Investment was reported by the revised budgeted report that was prepared by No. 14 Institute of Chinese Water Conservancy & Hydroelectric Survey Design and Research Institute ¹⁾. The increased costs and reasons are shown item by item. This report was submitted to the Yunnan Dianneng Chuxiong Hydropower Development Co., Ltd. This report was approved by the Development and Reform Commission of Chuxiong State, Yunnan Province. And this report was submitted to the Agricultural Bank of China-Branch of Chuxiong Yi Nationality Autonomous City which studied it and decided to agree a reopen of the loan by applying for CDM registration.

JCI have validated the reason of increase of Total Static Investment of which details were reported



in page 19 - 20 of the Validation Report. Main reasons were price increase of building materials and consumable, worker's salary increase and design changes. JCI judged that the investment increase as 15.0946 million Yuan was appropriate for the project.

(b) Prospective Tariff

Regarding the prospective tariff of 0.21 Yuan/kWh (excluding VAT) was adopted to the IRR calculation as shown in the PDD. JCI issued CLAR 4 to clarify the tariff and the Project Participants responded that 0.21 Yuan/kWh (excluding VAT) was adopted with a conservative value based on the average price of 0.205 Yuan/kWh (including VAT) or 0.193 Yuan/kWh (excluding VAT) in Yunnan province. JCI interviewed with key persons of China Southern Power Grid Company (CSPG), during On-site Assessment. Though the CSPG did not have the agreement on tariff with the project participants yet, the personnel of CSPG anticipated the actual tariff less than 0.21 Yuan/kWh. JCI confirmed that the prospective tariff adopted was somewhat higher level but conservative value for the financial analysis.

(c) O & M cost

The O/M cost adopted in the financial analysis was determined through the estimation of labour cost and maintenance cost in accordance with Economic Evaluation Code for Small Hydropower Projects issued by Ministry of Water Resources, P. R. China. In China an investment analysis for small hydropower project was carried out in accordance with the Code and fixed/constant values were used commonly for input data along with life times such as prospective tariff and O & M cost unless special reason for change.

Therefore, JCI judged that the O/M costs were formally permitted in the sector of hydropower project of China.

(d) JCI judged that all of the input values were valid and applicable at the time of investment decision from above information. And JCI confirmed that each input value was approved and assessed respectively by the relevant organizations such as local Development and Reform Committee, Bank and Grid Company who have specific local and sectoral expertise abilities.

Issue 2: *The PP/DOE are requested to provide the details (of the investment analysis in a spreadsheet format that allows replication of the calculation following EB 41, Annex 35, paragraph 7.*

Note; JCI supposed that this issue was following EB39, Annex 35, paragraph 7, not EB41.

Response of Project Participant:

We provide the spreadsheet format table as required. Please refer to the attached Excel table.



Response of JCI:

The Project Participants submit the Excel sheet that allows replication of the IRR calculation. JCI send it to UNFCCC with the response.

Issue 3: The PP/DOE are requested to provide relevant evidence of actions taken to secure CDM status for the project activity in parallel with its implementation, under EB 41 guidance, Annex 42, paragraphs 5 and 6.

Note; JCI supposed that this issue was under EB41 guidance, Annex 46, paragraph 5 and 6, not Annex 42.

Response of Project Participant:

As outlined in the PDD, for the proposed project, 70% investment is from bank. In the beginning of 2005, the owner discussed the loan for Magahe river project with bank. After made the investigation on the project, bank thought the budget was not enough and worried about payback ability of the project, so they delayed the loan. On 28th February 2005, the board of directorate decided to ask help from CDM, then the bank open the loan after study on the new proposal of Magahe hydropower projects with income from CDM on 30th May 2005. The detailed history of the proposed project is as following table in PDD.

Time	Description
2004	The price of the construction materials such as steel and cement increased more than 15%. Meanwhile, after discussed with the power grid, Project Owner realized they still had to pay about 3 million Yuan for the transmitting lines on top of the cost outlined in FSR.
01~02/2005	Agricultural Bank of China-Branch of Chuxiong Yi Nationality Autonomous City refused the loan request after assessed the project.
28/02/2005	Board of directorate decided to seek support from CDM and started to contact the consulting company.
30/05/2005	Agricultural Bank of China-Branch of Chuxiong Yi Nationality Autonomous City agreed to lend after the new proposal put in CDM income.
25/07/2005	Magahe project got the approval from local Development and Reform Committee
21/03/2006	Project Owner signed the CDM consulting agreement with “Coway International



	TechTrans Co., Ltd. (Coway)". Coway began to prepare the PDD as well as look for buyer.
06/07/2006	Construction agreement signed
28/07/2006	Project construction started
31/08/2006	Equipment Purchase Contract signed
12/01/2007	After rounds of negotiation, Project Owner signed the term sheet with the Buyer "Standard Bank Plc".
03/2007	Coway finished the PDD and submitted to apply for China LoA.
13/07/2007	The project was approved by China DNA. This news was published on China DNA website.
30/08/2007	Coway engaged JCI to validate the project. PDD was published online for public comments.

In conclusion, CDM was seriously considered prior to the start of the Project. CDM activities were thus conducted in parallel with project implementation. The relevant evidences were submitted to JCI.

Response of JCI:

The Project Participants submit the response above and the related evidences. The followings are a list of evidences.

- 1) The revised budget report of Shuangbai Ejia Magahe River Hydropower Station, Evidence 1 in Enclosure 2 (Enclosure 2 has been submitted to UNFCCC on 02/05/2008)
- 2) General Manager Office Conference Minutes dated on 28/02/2005, Evidence 2 in Enclosure 2 (Enclosure 2 has been submitted to UNFCCC on 02/05/2008)
- 3) Bank Notification on Re-Open of Loan for Magahe River Hydropower Project, Evidence 3 in Enclosure 2 (Enclosure 2 has been submitted to UNFCCC on 02/05/2008)
- 4) Notice on Construction Start for Magahe River Hydropower Project, Evidence 4 in Enclosure 2 (Enclosure 2 has been submitted to UNFCCC on 02/05/2008)
- 5) Consulting Contract between the Project Owner and Coway International TechTrans Co., Ltd., Evidence 1 in Enclosure 3.
- 6) Term Sheet Contract between the Project Owner and Standard Bank Plc, Evidence 2 in Enclosure 3

JCI judged that above evidences support serious CDM consideration prior to the project activity by the project participant and also secure CDM status for the project in parallel with its implementation.