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Request for Review

CDM Executive Board

"Xinning County Dalong Small-scale Hydropower Bundled Project" (2175)

Dear Sir/Madam,

Please find below the response of the TÜV NORD JI/CDM Certification Program and the project participant to the request for review for the above mentioned project no. 2175.

If you have any questions do not hesitate to contact us.

Yours sincerely,

TÜV NORD JI/CDM Certification Program

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Request f	or Review (1)					
Issue raised by EB Members / DNA	The DOE is requested to clarify how it has validated the suitability of the 10% benchmark (1995) when assessing the additionality with investment decision made in 2006.					
Response of PP	The 10% benchmark is employed from the "Economic evaluation code for small hydropower projects (Document No.SL16-95)" ¹ , which is issued by Ministry of Water resource of China in year 1995 and suitable for small scale hydropower project with installed capacity below 25 MW, or capacity below 50 MW in rural region. Both in 2002 and 2006, the Ministry of Water resource of China issued a Bulletin on Effective Technical Standard in Hydro and Water Industry confirmed that the Document No. SL16-95 is still in effect ^{2 3} and till today no other substituted standard has been published yet. The Project includes two small scale hydropower plants with installed capacity 5MW and 1.6MW respectively, the SL16-95 was effective while investment decision has been made in 2006. Therefore, the 10% of total investment IRR is official and common practice for identifying benchmark to small scale hydro power project, this benchmark is also suitable for the proposed project. In addition, the Preliminary Design Report (PDR) of both two hydropower plants employs 10% as benchmark. These two PDRs were approved by the Ministry of Water resource of Shaoyang City on 16/07/2007 (Dalong 5th Plant) and 17/10/2007 (Dalong 3rd Plant). Based on above analysis, benchmark 10% is applicable to the proposed					
Response of DOE	Economic Evaluation Code for Small Hydropower Projects" (SL16-95), published by the Ministry of Water Resources of People's Republic of China in 02/06/1995, is commonly accepted as standard for financial analysis of small hydropower plants in China for the past few years and is still valid at the time of the validation. Evidence has been obtained and checked by the validators. Many registered small hydropower plants in China are all referring to SL16-95 for benchmark and financial analysis approach, etc. This project activity, located in Shaoyang City of Hunan Province, has 2 plants whose installed capacities are 5MW and 1.6MW respectively. Both qualify as "small hydropower plant". Detailed explanation is listed in PP response thus won't be repeated again here. In conclusion, it is quite appropriate to use SL16-95 for investment analysis of this project and in particular 10% for project IRR benchmark according to SL16-95. Thus the DOE accepted the benchmark during validation stage. If this information is not sufficient to close the request for review, we appoint Mr. Li Yong Jun as our contact person: Mr. Li Yong Jun CDM project manager China Room 11C, East Ocean Centre II, No. 618 Yan An Rd. (E),					

¹ http://apps.lib.whu.edu.cn/12/test/gfbz/2/j/xsdpj.html 2 http://www.cws.net.cn/guifan/bzdt/bzgg.asp 3 www.mwr.gov.cn/tzgg/qt/20060926000000479251.aspx



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Request f	or Review (2)
Issue raised by EB Members / DNA	The DOE should explain how Dalong 2 and 4 stations were developed in 2003 and 2004 without the support of CDM.
Response from PP	The feasibility study report (FSR) for Dalong 2 and Dalong 4 stations were carried out by Shaoyang City Water Resource and Hydro Power Reconnaissance Design Institute in Nov. 2001 and then approved by Shaoyang City Development Plan Committee. As per the FSR it is clearly indicated that the IRR of Dalong 2 and Dalong 4 stations are 19.89% and 17.51% respectively, both of which are above the benchmark of 10 % (document No.SL16-95). Then the project owner started the construction for Dalong 2 and Dalong 4 stations in May 2002 (2 nd) and July 2002 (4 th) accordingly. After that, Dalong 4 th Plant and Dalong 2 nd Plant were put into operation in Aug 2004 and Jul 2005 respectively. According to the completion acceptance report provided by project supervision party and issued tariff price document, it can be seen that the financial analysis in the FSR is reasonable and valid. The project owner commissioned Shaoyang City Water Resource and Hydro Power Reconnaissance Design Institute to conduct the preliminary design report (PDR) for Dalong 3 and Dalong 5 station has obvious disadvantages on both the nature condition (e.g water resources and tunnel length) and per unit investment comparing with Dalong 2 and Dalong 4. As per the PDR and the relevant official documents available, it is indicated that the project IRR for the Dalong 5 and Dalong 3 are 8.81% and 8.11% respectively, both of which are lower than benchmark of 10%. So the project owner conducted two Board meetings in May 2006 (5 th) and Oct. 2007 (3 rd). As analysis above, Dalong 2 and Dalong 4 were financial attractive, so the project owner could start the construction work without the help of CDM. For Dalong 3 and Dalong 5 and Dalong 4 and Dalong 5 and Dalong 3 and Dalong 5 and Dalong 5 and Dalong 3 and Dalong 5 and Dalong 3 and Dalong 5 and Dalong 3 and Dalong 5



	Table 1: the main difference among the four projects						
		Dalong 2 nd Plant Dalong 4 th Plant		Dalong 3 rd Plant	Dalong 5 th Plant		
	Installed Capacity(MW)	1.8	3	1.6	5		
	Total investment (10000RMB)	381.82	639.7	954.4	2947.9		
	Electricity generated(10000kwh)	704 1053		662	2268		
	Water head(m)	130	185	96	102		
	The length of the tunnel(m)	1320	1860	2774	6406		
	Per kw investment(RMB yuan/kw)	2121	2132	5965	5896		
Response of DOE	 Ine Feasibility Study Report of Dalong 2rd and 4rd Plants were finished in 2001. The construction of Dalong 2rd started in 2002 and finished in 2004. Evidences of construction start date were submitted and checked by the validators. According to FSR, the IRR of Dalong 2rd Plant is 19.89%. Total investment used in IRR calculation in FSR is 381.82*104 RMB. Electricity tariff used in IRR calculation in FSR is 0.225 RMB/kWh (VAT Incl.) According to completion acceptance report of Dalong 2rd Plant, issued by Shaoyang Kaituo Hydro Construction Project Supervision Co., Ltd. on 28th June 2005, the actual total investment is 399.60*104 RMB, 4.7% higher than estimated in FSR. According to Document about Electricity price of Dalong 4th Level Hydropower Station, [2004]208, 18/11/2004, (since the Dalong Cascade Plants use the same electricity tariff), the actual electricity tariff is 0.215 RMB/kWh (VAT Incl.), 4.4% lower than estimated in FSR. Since the key financial indicators did not differ much between actual value and FSR value, it can be concluded that the investment analysis conclusion in FSR is 0.225 RMB/kWh (VAT incl.) According to FSR, the IRR of Dalong 4th Plant is 17.51%. Total investment used in IRR calculation in FSR is 639.70⁻¹¹⁰⁴ RMB. Electricity tariff used in IRR calculation in FSR is 0.225 RMB/kWh (VAT incl.) According to FSR, the IRR of Dalong 4th Plant is 17.51%. Total investment used in IRR calculation in FSR is 639.70⁻¹¹⁰⁴ RMB. Electricity tariff used in IRR calculation in FSR is 0.225 RMB/kWh (VAT incl.) According to Construction Project Supervision Co., Ltd. on 26th August 2004, the actual total investment is 653.63^{*104} RMB, 2.2% higher than estimated in FSR. According to Document about Electricity price of Dalong 4th Plant, issued by Shaoyang Kaituo Hydro Construction Project Supervision Co., Ltd. on 26th August 2004, the actual total investment is 653.63^{*104} RMB, 2.2% higher than estimated i						
	 The main differences between 2nd, 4th and 3rd, 5th (the proposed project) are: 1. The water resource of 2nd and 4th plant is more favourable than that of 3rd plant. This means, although the 4 plants are at the same river and have simil rate, natural water head of 2nd and 4th are larger than water head of 3rd a Meanwhile, the tunnel length of 3rd and 5th Plants are much longer than 2nd plants. The advantage in topographical conditions of the second and fourth leads to the decision that these to stages were developed first as they are more 						



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 effective and financial viable. Furthermore the 2nd and 4th plants started construction in 2002, while the proposed project started construction in 2006 and 2007 respectively. From 2002 to 2006 the material price increased largely in China. This increase leads to a higher investment compared to the previously implemented stages. This makes the proposed project less favourable compared to 2nd and 4th stage.
Considering this and the result of checking documented evidences from the project proponent the validation team came to the conclusion that implementing the 2 nd and 4 th stage without CDM benefits is reasonable. Bearing in mind that the proposed project activity
 started construction 4 years later than the already implemented stages and
 that the proposed project has natural topographical disadvantages (water head) compared to the implemented ones,
the validation team came to the conclusion that significant differences between the proposed project and the already implemented stages exist.
If this information is not sufficient to close the request for review, we appoint Mr. Li Yong Jun as our contact person:
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Request for Review (3)					
Issue raised by EB Members / DNA	The DOE should clarify the starting date of the project activity, as per the CDM Glossary of Terms.				
Response from PP	According to the Glossary of CDM Terms (ver.4), the starting date of a CDM project activity is the earliest date at which either the implementation or construction or real action of a project activity begins. To facilitate the clear definition of this term the Board further clarified in the EB 41 Meeting Report that: "In light of the above definition, the start date shall be considered to be the date on which the project participant has committed to expenditures related to the implementation or related to the construction of the project activity. This, for example, can be the date on which contracts have been signed for equipment or construction/operation services required for the project activity. Minor pre-project expenses, e.g. the contracting of services /payment of fees for feasibility studies or preliminary surveys, should not be considered in the determination of the start date as they do not necessarily indicate the commencement of implementation of the project. For those project activities which do not require construction or significant pre-project implementation (e.g. light bulb replacement) the start date is to be considered the date				



	when real action occurs. In the context of the above definition, pre-project planning is not considered "real action". For the Project, the approval of construction of Dalong 5 th Plant was issued on 16/05/2006 by the Xinning County Bureau of Water Resource, some pre-preparing works for the construction were implemented and relevant costs were invested. The construction contract between the Project owner and the Xinshao County Tuqiao Architecture Company of Dalong 5 th Plant was signed on 28/08/2006. The equipment purchase contract of Dalong 5 th Plant was signed on 12/12/2006. The approval of construction of Dalong 3 rd Plant was received on 08/02//2007. On 20/09/2007, the loan contract of Dalong 3 rd Plant and Dalong 5 th Plant was finally signed. After that, the tunnel construction currently, no equipment purchase contract has been signed till today. So, according to the CDM glossary of terms and the EB 41 meeting report, the starting date of the proposed project is 16/05/2006 which is the earliest date of implementation or construction or real action of the project.
Response of DOE	The starting date of the project activity is 16/05/2006, which is the date when approval of construction of Dalong 5 th Plant was issued. It is the earliest date of implementation or construction or real action of the Project. For details of the project timeline, please refer to the PP response. All relevant documents were carefully checked by the validators. In conclusion the validation team can confirm that 16/05/2006 as start date of the project activity is in compliance with the CDM Glossary of Terms as well as the clarification in EB 41 Meeting Report. If this information is not sufficient to close the request for review, we appoint Mr. Li Yong Jun as our contact person: Mr. Li Yong Jun CDM project manager China Room 11C, East Ocean Centre II, No. 618 Yan An Rd. (E), Huangpu District, Shanghai China 200001 Tel: +86 (0)21 5385533-259

Request for	Request for Review (4)					
Issue raised by EB Members / DNA	The DOE should provide further evidence of consideration of CDM prior to the actual project start date and serious actions taken to secure CDM status, in line with the guidance of EB 41 Annex 46 paragraph 5					
Response from PP	The reference and description of serious CDM consideration has been presented in PDD, it is concluded that CDM has been seriously taken into account before the proposed project started. Below we further describe in more details regarding the Project and CDM implementation:					



Material	Const	truction timeline	CDM relation timeline		
Number	Date	Event	Date	Event	
1			26/02/2005	Shaoyang City Development and Reform Commission suggested the Project owner to apply for CDM.	
2	05/2005	The Preliminary Design Report (PDR) of Dalong 5 th Plant was developed.			
3			05/05/2005	The board meeting of project owner has been held and the Project owner decided to apply for the CDM.	
4			05/07/2005	The Project owner received an invitation letter from the Xinning County Bureau of Water Resource which invited the Project owner to attend a meeting about the CDM.	
5	12/10/2005	The Project owner applied for loan for Dalong 5 th Plant to China Agriculture Development Bank ⁶ .			
6			25/11/2005	The Project owner signed the Letter of Intent of CDM development with Hunan Tongcheng law Group.	
7	16/05/2006 (considered as the start date)	The construction of the Dalong 5 th Plant has been approved.			
8			11/07/2006	The Project owner faxed to terminate cooperation with Hunan Tongcheng law Group because no any substantive development of CDM application.	
9			25/07/2006	The Project owner signed the Letter of Intent (LoI) of CDM development with AGET.	
10	28/08/2006	The construction contract of Dalong 5 th Plant was signed between the Project owner and the Xinshao County Tuqiao Architecture Company.			
11			30/11/2006	No any reply from the China Agriculture Development Bank from initial application submitted (12/10/2005), the Project owner held board meeting to discuss attempt of loan application again, in which the suggestion from	



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				AGET was adopted, CDM income has been considered as important payback guaranty for loan application.
12	02/12/2006	The Project owner signed the equipment purchase contract with Hunan Lingling Electrical Equipment Co.Ltd.		
13			26/12/2006	The Project owner appointed Ou Mingzhi as the representative to implement the cooperation with AGET.
14			27/12/2006	The Project owner submitted loan application to the China Agricultural D evelopment Bank in which CDM revenue has been accepted as a reasonable loan payback source by bank.
15			23/01/2007	The China Agriculture Development Bank replied a letter to project owner in which CDM has been accepted as an important loan payback source by bank.
16			25/01/2007	The Project owner signed the consultant contract with AGET to develop the CDM.
17	08/02//2007	The approval of construction of Dalong 3rd Plant was issued.		
18	05/2007	The <i>Preliminary</i> <i>Design Report (PDR)</i> of Dalong 3 rd Plant was developed.		
19			09/05/2007	Since similar financial situation and investment barrier, the Project owner held Board meeting to seek CDM assists for Dalong 3 rd Plant. Furthermore, in order to cut cost of CDM application, in this meeting project owner decided to bundle Dalong 3 rd and 5 th Plant together for CDM application, the PDD had to be revised.
20			26/09/2007	The Project owner signed the Term sheet with Win-Win International Investment Ltd.
21	20/09/2007	The loan contract of Dalong 3 rd Plant and Dalong 5 th Plant was signed.		
22	18/10/2007	The Project owner		



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			signed the tunnel construction contract of Dalong 3 rd Plant which indicated the start date of the Dalong 3 rd Plant.			
			Dalong of Flam.	27/11/2007	The Project GSP ⁷ .	
	23			10/12/2007	The Win-Win International Investment Ltd. Give up the Project for business reason.	
	24			10/12/2007	The Project owner signed the Purchase Contract with the Carbon Asset Management Sweden AB.	
	25			03/01/2008	the Project has been approved by China DNA	
				13/08/2008	The Project request for registration.	
		9/2008	The Dalong 5 th Plant put into operation.			
		12/2009	Dalong 3 rd Plant will be put into operation.			
	 Following the instruction in paragraph 5a), Annex 46 as per EB41, we provided bell explanation: The starting date the Dalong 5th Plant is identified as 16/05/2006, before that the CI management decision has been made and dated on 05/05/2005. For the Dalong Plant, the starting date is 18/10/2007, the CDM management decision is dated 09/05/2007 which is also prior to the starting date. From above table, the CDM matters are continual from Feb. 2005 to Aug. 2008 a geared up from final consultant contract signed on Jan, 2007, furthermore, the CI development is parallel with project implementation, each CDM event is related project milestone. The CDM is also an important factor to gain loan and prom project implementation, i.e. the current schedule of project would have been not exis in absence of CDM implementation. 					
Response of DOE	 The project consists of 2 plants: Dalong 3rd plant and Dalong 5th plant. CDM management decision of Dalong 5th Plant was done on 05/05/2005 based on high investment risk indicated by Preliminary Design Report. The project start date (approva of Dalong 5th Plant's construction) was 16/05/2006. CDM was seriously considered before the project start date. Besides the board meeting decision, the project owner also had communications with some 3rd parties regarding to CDM prior to the project start date, i.e. Shaoyang City Development and Reform Commission, Xinning County Bureau of Water Resource. Hunan Tongcheng law Group. All documented evidences were available and were carefully checked by the validators. Dalong 5th Plant finished construction in September 2008. From June 2006 to September 2008, the project owner continuously took serious actions to secure CDM status. These actions are parallel to the project implementation, including communications with Bank regarding CDM, assigning responsible person for CDM consultancy company, term-sheet/contract with CER buyer, GSP for CDM validation, hosting on-site validation, getting LOAs, requesting registration to UNFCCC, etc. All documented evidences were available and were carefully checked by the validators. 					



CDM management decision of Dalong 3rd Plant was done on 09/05/2007 also based on high investment risk indicated by Preliminary Design Report. The actual start date of Dalong 3rd Plant (tunnel construction contract) was 18/10/2007. CDM was seriously considered before the plant start. Besides the board meeting decision, prior to the plant start date, the project owner signed Termsheet with Win-Win International Investment Ltd regarding to both Dalong 3rd Plant and Dalong 5th Plant in September 2007. Dalong 3rd plant is expected to finish construction in December 2009. From October 2007 till now, the project owner continuously took serious actions to secure CDM status. These actions are parallel to the project implementation, including GSP, changing CER buyer, hosting on-site validation, getting LOAs, requesting registration to UNFCCC. All documented evidences were available and were carefully checked by the validators. In conclusion, DOE has carefully checked all documented evidences and confirmed the consideration of CDM prior to the actual project start date and serious actions taken to secure CDM status, in line with the guidance of EB 41, Annex 46, paragraph 5. Thus the validation team can confirm that the requirements of EB41, Annex46, paragraph 5 are fully met. If this information is not sufficient to close the request for review, we appoint Mr. Li Yong Jun as our contact person: Mr. Li Yong Jun CDM project manager China Room 11C, East Ocean Centre II, No. 618 Yan An Rd. (E), Huangpu District, Shanghai China 200001 Tel: +86 (0)21 53855353-259 Fax: +86 (0)21 53855369

⁶ The bank rejected the request which can be seen from the board meeting report on 30/11/2006.

⁷ http://www.global-warming.de/e/1696/