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Validation Report

Arreon Carbon UK Ltd. Beijing Representative Office

VALIDATION OF THE CDM-PROJECT:

Hubei Xiakou Hydropower Project of Nanzhang County, Xiangfan City, Hubei Province, P.R. China.

REPORT NO. 970791

2008, May 14

TÜV SÜD Industrie Service GmbH

Carbon Management Service
Westendstr. 199 - 80686 Munich – GERMANY

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Report No.	Date of first issue	Revision No.	Date of this revision	Certificate No.
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Subject: Validation of a CDM Project	
Accredited TÜV SÜD Unit: TÜV SÜD Industrie Service GmbH Certification Body "climate and energy" Westendstr. 199 - 80686 Munich FEDERAL REPUBLIC OF GERMANY	**TÜV SÜD Contract Partner:** TÜV SÜD Industrie Service GmbH Carbon Management Service Westendstr. 199 - 80686 Munich FEDERAL REPUBLIC OF GERMANY
Client: Arreon Carbon UK Ltd. Beijing Representative Office Suite 1208, West Tower, Twin Towers, B12 Jianguomenwai Avenue; (100022) Beijing; P.R. China	**Project Site(s):** The project is located on the Juhe River. The power plant area is located at 31° 21'2 N; 111° 29'23 E. HXKHP is geographically located at Xiangfan City, Nanzhang County in Hubei Province P. R CHINA
Project Title: Hubei Xiakou Hydropower Project of Nanzhang County, Xiangfan City, Hubei Province, P.R. China.	
Applied Methodology / Version: ACM0002/ Version 06.	**Scope(s):** 1
First PDD Version: Date of issuance: 2006-10-20 Version No.: 1 Starting Date of GSP 2006-12-21	**Final PDD version:** Date of issuance: 2008-01-03 Version No.: 4
Estimated Annual Emission Reduction:	66 208 tons CO_{2e}
Assessment Team Leader: Dr. Sven Kolmetz	**Further Assessment Team Members:** Cuiyun Zhang Carl Zhou

Summary of the Validation Opinion:

☒ The review of the project design documentation and the subsequent follow-up interviews have provided TÜV SÜD with sufficient evidence to determine the fulfilment of all stated criteria. In our opinion, the project meets all relevant UNFCCC requirements for the CDM. Hence TÜV SÜD will recommend the project for registration by the CDM Executive Board in case letters of approval of all Parties involved will be available before the expiring date of the applied methodology(ies) or the applied methodology version respectively.

☐ The review of the project design documentation and the subsequent follow-up interviews have not provided TÜV SÜD with sufficient evidence to determine the fulfilment of all stated criteria. Hence TÜV SÜD will not recommend the project for registration by the CDM Executive Board and will inform the project participants and the CDM Executive Board on this decision.

Abbreviations

ACM	Approved Consolidated Methodology
AM	Approved Methodology
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CR	Clarification Request
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	Executive Board
EIA / EA	Environmental Impact Assessment / Environmental Assessment
ER	Emission reduction
GHG	Greenhouse gas(es)
KP	Kyoto Protocol
MP	Monitoring Plan
NGO	Non Governmental Organisation
PDD	Project Design Document
PP	Project Participant
TÜV SÜD	TÜV SÜD Industrie Service GmbH
UNFCCC	United Nations Framework Convention on Climate Change
VVM	Validation and Verification Manual

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1 INTRODUCTION

1.1 Objective

The validation objective is an independent assessment by a Third Party (Designated Operational Entity = DOE) of a proposed project activity against all defined criteria set for the registration under the Clean Development Mechanism (CDM). Validation is part of the CDM project cycle and will finally result in a conclusion by the executing DOE whether a project activity is valid and should be submitted for registration to the CDM-EB. The ultimate decision on the registration of a proposed project activity rests at the CDM Executive Board and the Parties involved.

The project activity discussed by this validation report has been submitted under the project title:

Hubei Xiakou Hydropower Project of Nanzhang County, Xiangfan City, Hubei Province, P.R. China..

1.2 Scope

The scope of any assessment is defined by the underlying legislation, regulation and guidance given by relevant entities or authorities. In the case of CDM project activities the scope is set by:

- The Kyoto Protocol, in particular § 12
- Decision 2/CMP1 and Decision 3/CMP.1 (Marrakech Accords)
- Further COP/MOP decisions with reference to the CDM (e.g. decisions 4 – 8/CMP.1)
- Decisions by the EB published under http://cdm.unfccc.int
- Specific guidance by the EB published under http://cdm.unfccc.int
- Guidelines for Completing the Project Design Document (CDM-PDD), and the Proposed New Baseline and Monitoring Methodlogy (CDM-NM)
- The applied approved methodology
- The technical environment of the project (technical scope)
- Internal and national standards on monitoring and QA/QC
- Technical guideline and information on best practice

The validation is not meant to provide any consulting towards the client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project design.

Once TÜV SÜD receives a first PDD version, it is made publicly available on the internet at TÜV SÜD's webpage as well as on the UNFCCC CDM-webpages for starting a 30 day global stakeholder consultation process (GSP). In case of any request a PDD might be revised (under certain conditions the GSP will be repeated) and the final PDD will form the basis for the final evaluation as presented by this report. Information on the first and on the final PDD version is presented at page 1.

The only purpose of a validation is its use during the registration process as part of the CDM project cycle. Hence, TÜV SÜD can not be held liable by any party for decisions made or not made based on the validation opinion, which will go beyond that purpose.

2 METHODOLOGY

The project assessment aims at being a risk based approach and is based on the methodology developed in the Validation and Verification Manual, an initiative of Designated and Applicant Entities, which aims to harmonize the approach and quality of all such assessments.

In order to ensure transparency, a validation protocol was customised for the project. TÜV SÜD developed a "cook-book" for methodology-specific checklists and protocol based on the templates presented by the Validation and Verification Manual. The protocol shows, in a transparent manner, criteria (requirements), the discussion of each criterion by the assessment team and the results from validating the identified criteria. The validation protocol serves the following purposes:

- It organises, details and clarifies the requirements a CDM project is expected to meet;
- It ensures a transparent validation process where the validator will document how a particular requirement has been validated and the result of the validation.

The validation protocol consists of three tables. The different columns in these tables are described in the figure below.

The completed validation protocol is enclosed in Annex 1 to this report.

Validation Protocol Table 1: Conformity of Project Activity and PDD				
Checklist Topic / Question	**Reference**	**Comments**	**PDD in GSP**	**Final PDD**
The checklist is organised in sections following the arrangement of the applied PDD version. Each section is then further subdivided. The lowest level constitutes a checklist question / criterion.	Gives reference to documents where the answer to the checklist question or item is found in case the comment refers to documents other than the PDD.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached. In some cases sub-checklist are applied indicating yes/no decisions on the compliance with the stated criterion. Any **Request** has to be substantiated within this column	Conclusions are presented based on the assessment of the first PDD version. This is either acceptable based on evidence provided (☑), or a **Corrective Action Request (CAR)** due to non-compliance with the checklist question (See below). **Clarification Request (CR)** is used when the validation team has identified a need for further clarification.	Conclusions are presented in the same manner based on the assessment of the final PDD version.

Validation Protocol Table 2: Resolution of Corrective Action and Clarification Requests			
Clarifications and corrective action requests	**Ref. to table 1**	**Summary of project owner response**	**Validation team conclusion**
If the conclusions from table 1 are either a Corrective Action Request or a Clarification Request, these should be listed in this section.	Reference to the checklist question number in Table 1 where the Corrective Action Request or Clarification Request is explained.	The responses given by the client or other project participants during the communications with the validation team should be summarised in this section.	This section should summarise the validation team's responses and final conclusions. The conclusions should also be included in Table 1, under "Final PDD".

In case of a denial of the project activity more detailed information on this decision will be presented in table 3.

Validation Protocol Table 3: Unresolved Corrective Action and Clarification Requests		
Clarifications and corrective action requests	**Id. of CAR/CR 1**	**Explanation of the Conclusion for Denial**
If the final conclusions from table 2 results in a denial the referenced request should be listed in this section.	Identifier of the Request.	This section should present a detail explanation, why the project is finally considered not to be in compliance with a criterion.

2.1 Appointment of the Assessment Team

According to the technical scopes and experiences in the sectoral or national business environment TÜV SÜD has composed a project team in accordance with the appointment rules of the TÜV SÜD certification body "climate and energy". The composition of an assessment team has to be approved by the Certification Body ensuring that the required skills are covered by the team. The Certification Body TÜV SÜD operates four qualification levels for team members that are assigned by formal appointment rules:

- Assessment Team Leader (ATL)
- Greenhouse Gas Auditor (GHG-A)
- Greenhouse Gas Auditor Trainee (T)
- Experts (E)

It is required that the sectoral scope linked to the methodology has to be covered by the assessment team.

The validation team was consisting of the following experts (the responsible Assessment Team Leader in written in bold letters):

Name	Qualification	Coverage of technical scope	Coverage of sectoral expertise	Host country experience
Dr. Sven Kolmetz	**ATL**	☑	☑	☑
Cuiyun Zhang	**GHG-A**	☑	☑	☑
Carl Zhou	**T**			☑

Dr. Sven Kolmetz is physicist and deputy head at the department "TÜV Carbon Management Service" located in the head office of TÜV Süddeutschland in Munich. Furthermore he is officially authorized expert in the verification of GHG emissions in the framework of the European Emission Trading Scheme. Before entering TÜV SÜD he worked as energy consultant for industrial companies and as consultant for the German Federal Government on instruments for the reduction of GHG emissions.

Cuiyun Zhang is an auditor for environmental management systems (according to ISO 14001) at Jiangsu TUV Product Service Ltd. She is based in Shanghai. In her position she is responsible for the implementation of validation, verification and certifications audits for management systems. She has received training in the CDM validation process and participated already in several CDM project assessments.

Carl Zhou is an auditor for environmental management systems (according to ISO 14001) at Jiangsu TUV Product Service Ltd. He is based in Shenzen.

2.2 Review of Documents

The first PDD version submitted by the client and additional background documents related to the project design and baseline were reviewed as initial step of the validation process. A complete list of all documents and proofs reviewed is attached as annex 2 to this report.

2.3 Follow-up Interviews

On January 9-10th, 2007 TÜV SÜD performed interviews on-site with project stakeholders to confirm selected information and to resolve issues identified in the first document review. The table below provides a list of all persons interviewed in the context of this on-site visit.

Name	Organisation
Mr. Dai Mingxiong	Hubei Province Nanzhang Xiakou Power Co., Ltd.
Ms. Lu Na	Arreon Carbon
Mr. Liu Shubin	Hubei Province Nanzhang Xiakou Power Co., Ltd.
Mr. Liu Shangsong	Hubei Province Nanzhang Xiakou Power Co., Ltd.

2.4 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the validation is to resolve the requests for corrective actions and clarifications and any other outstanding issues which needed to be clarified for TÜV SÜD`s positive conclusion on the project design. The Corrective Action Requests and Clarification Requests raised by TÜV SÜD were resolved during communication between the client and TÜV SÜD. To guarantee the transparency of the validation process, the concerns raised and responses that have been given are summarised in chapter 3 below and documented in more detail in the validation protocol in annex 1.

2.5 Internal Quality Control

As final step of a validation the validation report and the protocol have to undergo and internal quality control procedure by the Certification Body “climate and energy”, i.e. each report has to be approved either by the head of the certification body or his deputy. In case one of these two persons is part of the assessment team approval can only be given by the other one.

It rests at the decision of TÜV SÜD’s Certification Body whether a project will be submitted for requesting registration by the EB or not.

3 SUMMARY OF FINDINGS

As informed above all findings are summarized in table 2 of the attached validation protocol.

History of the validation process

The audit team has been provided with a draft PDD in December 2006. Based on this documentation a document review and a fact finding mission in form of an on-site audit has taken place. Afterwards the client decided to revise the PDD according to the CARs and CRs indicated in the audit process. The final PDD version submitted in January 2008 serves as the basis for the assessment presented herewith. Changes are not considered to be significant with respect to the qualification of the project as a CDM project based on the two main objectives of the CDM to achieve a reduction of anthropogenic GHG emissions by sources and to contribute to sustainable development.

Project description

The following description of the project as per the PDD could be verified during the on-site audit.

The Hubei Xiakou Hydropower Project (HXKHP) is located on the Juhe River in Nanzhang County of Hubei Province, China. The installed capacity of HXKHP is 31.6 MW, which consists of a 30 MW power house and a 1.6 MW small power house. It is a new hydro electric power project with a reservoir (the power density is 7.02 W/ m^2, which is greater than 4 W/ m^2). Its output to the interconnected Central China Power Grid (through the Hubei Power Grid) per year in long-term average terms is 84.23 GWh. The Hubei Power Grid is a part of the Central China Power Grid, which consists of the Hubei, Hunan, Jiangxi, Henan, Sichuan and Chongqing provincial grids.

The purpose of the project activity is to generate electricity by using the renewable hydro resources and reduce CO_2 emissions by displacing electricity produced by the Central China Power Grid, which is dominated by thermal power plants.

Findings

In total the assessment team expressed 10 Corrective Action Requests and 9 Clarification Requests.

Most of the requests addressed formal aspects and inconsistencies between the documents delivered during the audit and the PDD (CAR1-5, 7 – 10). Besides this the project owner had to deliver additional documents regarding the additionality (CAR6, CR5) and the monitoring has to be described more detailed (CR 8). Finally all the inconsistencies could be revised and the delivered documents have been submitted as required.

Baseline calculation

For the BM calculation the PDD adopts modified methods agreed by the EB for the approved methodologies AM0005 and AMS I.D. because plant specific data are not available in China. The emission factor of the thermal power plants is calculated by the proportion of the emissions of coal, gas and oil times the emission factor of the best available coal, gas and oil power plant as defined and published by the Chinese DNA. The new thermal capacity installation that exceeds 20% in the last years, for which data are available, is finally assessed with this factor. The emission reductions are calculated based on Chinese yearbooks 2003 – 2005 as published by the Chinese DNA on December 15th 2006. These were the latest available data at the time of PDD writing. Meanwhile the new yearbooks have been published resulting in higher emission factors. Hence, the more conservative figures used in the PDD have been accepted.

Additionality

The additionality has been evidenced by investment analysis and barrier analysis. The IRR calculation will be uploaded together with the PDD. The basic figures of the calculation have been evidenced by the report of the Hubei Irrigation and Electricity Research Institution, a 3rd-party organization. The barriers have been shown by evidencing the additional costs due to crack layers at the construction site. The calculation has been checked and verified.
The sensitivity analysis and the limits of the sensitivity (+/- 7.5%) have been verified by a certificate from the Hubei Institute of Water Conservation & Hydroelectric Engineering Exploration.
The project has been started in March 2004 when the contracts with the main manufacturers have been signed. CDM has been considered after a loan has been withdrawn and the construction had to stop in September 2005. Based on the CDM application in June 11, 2005 the Nanzhang County Rural Credit Cooperation decided to provide an additional loan that enabled the project owner to proceed with the construction. The evidences for this process have been verified and will be uploaded with the PDD (English translation). The Chinese version is available to the DOE as well and may be provided. The restarting of the construction is the starting date of the project activity as indicated in C.1.1 of the PDD.
The common practise analysis has been verified by public available official statistics as quoted in the PDD.

Since all the open questions have been closed the project is in compliance with the CDM requirements.

In May 2008, following the projects submission requesting registration under the CDM, the EB raised a request for review. In the following we describe how we have validated the projects additionality based on this circumstance.

While reassessing the projects additionality argumentation it was found that barrier analysis is more appropriate for the projects specific conditions. In the revised PDD of step 2 of the additionality assessment has been deleted and thus the question is no longer of any relevance.

In the following we will take the opportunity to describe how the barrier faced by the project activity has been validated.

Because the IRR in the original FSR is lower than the general benchmark in the Chinese power industry, the project did not launch construction at the time when completing the FSR in 1999. In July of 2001, a government grant (51.819 million RMB) was promised by Hubei Water Resources Bureau and the local county government (IRL 25), as well as the World Bank loan guaranteed in June of 2002, the construction had started in November of 2002 (IRL12). However, the promised grant of the Hubei Water Resource Bureau has never been deposited into the project owner's construction account (refer to cancelation letter of the loan IRL 55), which caused the tight cash flow and delayed the progress of construction.

Learning from the introduction notice issued by Ministry of Science and Technology of China in March 2005, the project owner started to explore the possibility of CDM support in March 2005 (IRL45). In July of 2005, according to the cancellation notice issued by Hubei Water Resources Bureau (IRL55), the government grant was officially withdrawn which directly induced the cash flow break in September 2005. Consequently, the construction work had been stopped in September 2005 (IRL49). According to the meeting minutes of the communication between the construction company and project owner, the construction was expected to not continue till the project owner could pay off the debts.

With the plausible CDM revenue, the project owner applied for an urgent loan from the bank Nanzhang County Rural Credit Cooperation (China Xinhe) (IRL21). As required, a financial risk-analysis

report was worked out by the Nanzhang County Rural Credit Cooperation and project owner on Sept. 27, 2005 (IRL58). Referring to this report, the CDM revenue became the key element to improve the investment return. According to the approval letter issued by the bank, the ability to service debt without CDM is poor. However, considering the additional sales income of CER, the ability is improved, hence the loan could be released (IRL21). The official loan agreement was undersigned on September 30th, 2005. With the guarantee from the bank, the project owner negotiated with the construction company again in October. As soon as the loan was transferred, the construction re-started in November of 2005. Considering the cancellation of the government grant and the increasing investment costs in recent years in China, as per the requirement of NDRC, a financial re-assessment report was developed by Hubei Institute of Water Conversation and hydroelectric Exploration & Design and approved in October of 2006 (IRL24), revealing an IRR of 5.6%. Hence we accepted the project to request for registration, as it could be demonstrated that the projects financial indicator was consistently below the benchmark rate of 8%.

After having received the request for review the client decided to skip step 2 of the additionality tool and elaborated step 3 in more detail in the revised PDD. At the same time our validation opinion now is based on the investment barrier discussed above.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

TÜV SÜD published the project documents on UNFCCC website by installing a link to TÜV SÜD's own website and invited comments by Parties, stakeholders and non-governmental organisations during a period of 30 days.

The following table presents all key information on this process:

webpage: http://www.netinform.de/KE/Wegweiser/Guide2_1.aspx?ID=2423&Ebene1_ID=26&Ebene2_ID=722&mode=1	
Starting date of the global stakeholder consultation process: 2006-12-21	
Comment submitted by: none	**Issues raised:** -
Response by TÜV SÜD: -	

5 VALIDATION OPINION

TÜV SÜD has performed a validation of the following proposed CDM project activity:

Hubei Xiakou Hydropower Project of Nanzhang County, Xiangfan City, Hubei Province, P.R. China..

The review of the project design documentation and the subsequent follow-up interviews have provided TÜV SÜD with sufficient evidence to determine the fulfilment of stated criteria. In our opinion, the project meets all relevant UNFCCC requirements for the CDM. Hence TÜV SÜD will recommend the project for registration by the CDM Executive Board.

An analysis as provided by the applied methodology demonstrates that the proposed project activity is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that the project is implemented as designed, the project is likely to achieve the estimated amount of emission reductions as specified within the final PDD version.

The validation is based on the information made available to us and the engagement conditions detailed in this report. The validation has been performed using a risk based approach as described above. The only purpose of this report is its use during the registration process as part of the CDM project cycle. Hence, TÜV SÜD can not be held liable by any party for decisions made or not made based on the validation opinion, which will go beyond that purpose.

Munich, 2008-05-14	Munich, 2008-05-14
Certification Body “climate and energy” TÜV SÜD Industrie Service GmbH	Assessment Team Leader

Annex 1: Validation Protocol

Industrie Service

Table 1 Conformity of Project Activity and PDD

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
A. General description of project activity					
A.1. Title of the project activity					
A.1.1.	Does the used project title clearly enable to identify the unique CDM activity?	1	The project is titled with the name of the project location and the energy source of the project. Hence, it can be clearly identified.	☑	☑
A.1.2.	Are there any indication concerning the revision number and the date of the revision?	1	The available PDD for the document review and the on-site assessment is indicated as the 1st version and has been completed on Oct. 20th, 2006.	☑	☑
A.1.3.	Is this consistent with the time line of the project's history?	1	The same version has been published for the GSP since Dec. 21th, 2006.	☑	☑
A.2. Description of the project activity					
A.2.1.	Is the description delivering a transparent overview of the project activities?	1, 6, 7, 15, 16, 24, 36, 37	The proposed project is a new hydropower plant with a reservoir (the power densities is greater than 4 W/m^2). The location of the proposed project is in Nanzhang County, Hubei Province, China. The generated power will be fed to the Hubei Provincial Power Grid, an integral part of the Central China Grid, to displace the electricity mainly supplied by thermal power plants. Moreover, this project is supported by World Bank loans under the name of 'Hydropower Projects in Poor Area of Hubei Province'. During the on-site audit, the project activities described in the PDD have been proven, besides the following issues. <u>Clarification Request 1:</u> In Chapter A.2., it is stated that the project is located on the Juhe River, however, in Chapter A.4.1.4., the proposed project is on Juzhanghe River, pls. clarify this in the revised PDD.	CR 1 CAR 1	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
			Corrective Action Request 1: During the site visiting, besides the turbine-generator system with a total 30 MW capacitiy, another set with 1.6 MW capacitiy was detected. Confirmed with the project owner, the small generation system would share all the resources with the big one and deliver the generated electricity through the same bus-line to the grid. Hence, the description in the PDD (including annual power generation, annual electricity supplied to the grid, yearly emission reduction, etc.) shall be updated accordingly. Moreover, pls. also provide the documents to prove that such additional design, construction, electricity delivery and operation are approved by the China government.		
A.2.2.	What proofs are available demonstrating that the project description is in compliance with the actual situation or planning?	1, 6, 7, 15, 16, 24, 36, 37	The following data deliver evidences for the project activity: - Purchasing contracts of the turbines and generators (30 MW + 1.6 MW generation systems); - Feasibility Study Report of the 30MW generation system (approved by the Hubei Development and Reform Commission on July 5th, 2000) - Environmental Impact Assessment of the 30MW generation system (approved by the EPB of Hubei Province on Jan. 7th, 2000) - Technical agreement of the connection system to the grid and measuring instruments issued by the Hubei Grid Company However, referring to CAR 1, more official documents regarding the installation of an additional 1.6 MW generation system shall be delivered to the auditor.	See CAR 1	☑
A.2.3.	Is the information provided by these proofs consistent with the information pro-	1, 6, 7, 15,	Pls. kindly refer to CAR 1 and CR 1 in section A.2.1. of the proto-	See	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
	vided by the PDD?	16, 24, 36, 37	col.	CAR 1 CR 1	
A.2.4.	Is all information presented consistent with details provided by further chapters of the PDD?	1	Pls. kindly refer to CAR 1 and CR 1 in section A.2.1. of the protocol.	See CAR 1 CR 1	☑
A.3. Project participants					
A.3.1.	Is the form required for the indication of project participants correctly applied?	1	Yes. The required form is applied correctly.	☑	☑
A.3.2.	Is the participation of the listed entities or Parties confirmed by each one of them?	1	The Arreon Carbon UK Ltd. and Hubei Province Nanzhang Xiakou Power Company, Ltd. are the project participants. The related information has been verified on site. <u>Open Issue:</u> Pls. deliver the LoA issued by P.R. China and United Kingdom together with the MoC countersigned by all parties to the DOE before raising the request for registration.	Open Issue	☑
A.3.3.	Is all information on participants / Parties provided in consistency with details provided by further chapters of the PDD (in particular annex 1)?	1	The information about the participants is consistent throughout the entire PDD.	☑	☑
A.4. Technical description of the project activity					
A.4.1.	*Location of the project activity*				
A.4.1.1.	Does the information provided on the location of the project activity allow for a clear identification of the site(s)?	1	The exact geographical coordinates are clearly given in section A.4.1.4 of the PDD. Whereas, pls. refer to CR 1 for the modifica-	See CR 1	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
			tion.		
A.4.1.2.	How is it ensured and/or demonstrated, that the project proponents can implement the project at this site (ownership, licenses, contracts etc.)?	1	As mentioned in this protocol above, the approvals of the feasibility report and the EIA of the proposed project were issued in 2000 by the Chinese authorized offices respectively. Moreover, the construction has been almost completed and a visit has been executed by the auditor in January 2007. The risk of not implementing this project at the defined site deems to be zero.	☑	☑
A.4.2.	*Category(ies) of project activity*				
A.4.2.1.	To which category(ies) does the project activity belonging to? Is the category correctly identified and indicated?	1, 2	The project activity falls into scope 1, which has been clearly identified in the PDD.	☑	☑
A.4.3.	*Technology to be employed by the project activity*				
A.4.3.1.	Does the technical design of the project activity reflect current good practices?	1, 15, 16	The domestic equipment implemented at the hydropower projects is a mature technology in China. Therefore, all the equipments used in this project are developed and manufactured domestically. In this case, the supplier of the 30 MW facility is the Sichuan Dongfeng Electrical Engine Manufacturer. Because the main loan is delivered by the World Bank, the bidding of key equipments (turbine and generator) was carried out by specialists from the World Bank. <u>Corrective Action Request 2:</u> - The turbine type of the 30 MW generation system shall be HLSK3059-LJ-168 and the type of the generator is SF15-16/3900. Pls. correct the relevant information in the table at section A.4.3. of the PDD; - Referring to CAR 1, an additional 1.6 MW generation system has been installed, pls. add the basic data into the table mentioned above; moreover, the Figure A3 (layout of	CAR 2	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
			the power plant) shall also be updated.		
A.4.3.2.	Does the description of the technology to be applied provide sufficient and transparent input/ information to evaluate its impact on the greenhouse gas balance?	1	Because the project activity is a new hydro power project, which will produce power for the substitution of grid-supplied electricity mainly from coal fired plants. Doubtlessly, this technology will reduce GHG emissions significantly.	☑	☑
A.4.3.3.	Does the implementation of the project activity require any technology transfer from annex-I-countries to the host country(ies)?	1, 15, 16	In this case, the advanced domestic-made facilities are used, hence, there's no technology transfer from annex-I-countries to the host country.	☑	☑
A.4.3.4.	Is the technology implemented by the project activity environmentally safe?	1, 6, 15, 16	Referring to the approved EIA and the environmental study carried out by a 3rd party which is authorized by the World Bank, it will not cause any environmental problem. <u>Clarification Request 2:</u> According to the requirement from the World Bank (the main loan provider of the proposed project), the project owner shall guarantee the minimum water flow (3 m^3/s) to protect the ecological environment. Pls. introduce the related actions which have been implemented or is in planning into the revised PDD.	CR 2	☑
A.4.3.5.	Is the information provided in compliance with actual situation or planning?	1	Besides CAR 1, the information provided from the PDD is consistent with the information obtained at the on site audit.	See CAR 1	☑
A.4.3.6.	Does the project use state of the art technology and / or does the technology result in a significantly better performance than any commonly used technologies in the host country?	1, 6	Because the technology of installing a new hydropower plant has been fully developed and successfully implemented over China for decades, the technology applied in the proposed project is not different compared to that of other similar hydropower plants.	☑	☑
A.4.3.7.	Is the project technology likely to be substituted by other or more efficient technolo-	1, 6, 15, 16	We do not expect that there will be a substitution because the turbines, generators and the other equipment will be newly commissioned and installed. The life cycle of the turbines and generators	☑	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
	gies within the project period?		are under normal circumstances longer than the project period.		
A.4.3.8.	Does the project require extensive initial training and maintenance efforts in order to be carried out as scheduled during the project period?	1, 6, 15, 16	To guarantee safe operation during the life time, the operators were linked to Danjiangkou Hydropower Plant, a power plant in operation for years with a similar system, to acquire the experience on maintenance and operation.	☑	☑
A.4.3.9.	Is information available on the demand and requirements for training and maintenance?	1, 31	Yes, the training evidence, including participant list, course agenda and assessment of each trainee at the end of the course, has been reviewed by validator on site.	☑	☑
A.4.3.10.	Is a schedule available for the implementation of the project and are there any risks for delays?	1, 31	The construction has started in Sep., 2003, however, according to the introduction by the project owner, two crack layers were found recently and till now, the remediation work has not been finished. Therefore, the expected time of electricity generation will be postponed to April, 2007. <u>Clarification Request 3:</u> Pls. deliver a time schedule of construction, installation and operation into the revised PDD.	CR 3	☑
A.4.4.	*Estimated amount of emission reductions over the chosen crediting period*				
A.4.4.1.	Is the form required for the indication of projected emission reductions correctly applied?	1	Yes, the required form is correctly applied in the PDD. <u>Corrective Action Request 3:</u> Since the electricity generation could not start on Jan. 1st, 2007, and the on site audit is executed in January 2007, the starting day of the 1st crediting period needs to be re-chosen in a conservative manner. Consequently, the related emission reduction figures in A.4.4. and B.6.4. of the PDD and the starting date in C.2.1.1. of the PDD shall be updated.	CAR 3	☑
A.4.4.2.	Are the figures provided consistent with other data presented in the PDD?	1	Pls. refer to CAR 3.	See CAR 3	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
A.4.5.	*Public funding of the project activity*				
A.4.5.1.	Is the information provided on public funding provided in compliance with the actual situation or planning as available by the project participants?	1, 21-23	There's no public funding from Annex I parties. Project owner's equity capital and commercial loan from World Bank compose the investment of this project. The agreements between the bank and project owner has been reviewed during the audit.	☑	☑
A.4.5.2.	Is all information provided consistent with the details given in remaining chapters of the PDD (in particular annex 2)?	1, 21-23	Yes, it is.	☑	☑
B. Application of a baseline and monitoring methodology					
B.1. Title and reference of the approved baseline and monitoring methodology					
B.1.1.	Are reference number, version number, and title of the baseline and monitoring methodology clearly indicated?	1, 2	The ACM0002 methodology under version 06 issued on May 19th, 2006 is applied to this project. It is clearly indicated at B.1. of the PDD.	☑	☑
B.1.2.	Is the applied version the most recent one and / or is this version still applicable?	1, 2	The 6th version of ACM002 is the latest one.	☑	☑
B.2. Justification of the choice of the methodology and why it is applicable to the project activity					
B.2.1.	Is the applied methodology considered the most appropriate one?	1, 2	The project activity fulfills the criteria of ACM002: - new hydro electric power projects with reservoirs having power densities 7 W/m^2 (greater than 4 W/m^2); - not involving switching from fossil fuels to renewable energy at the project site; - the geographic and system boundaries of Central China Grid can be clearly identified and the information of this grid is available.	☑	☑

<table>
<tr><th colspan="2">CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PDD in GSP</th><th>Final PDD</th></tr>
<tr><td colspan="2"></td><td></td><td>Thus, the baseline methodology is the most applicable for this project among the existing approved baseline methodologies.</td><td></td><td></td></tr>
<tr><td>B.2.2.</td><td>Criterion 1:
Type of capacity addition by renewable energy</td><td>1, 2</td><td><table><tr><th>Applicability checklist</th><th>Yes / No</th></tr><tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Evidences provided in the PDD?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table></td><td>☑</td><td>☑</td></tr>
<tr><td>B.2.3.</td><td>Criterion 2:
Exclusion of fuel switching activities</td><td>1, 2</td><td><table><tr><th>Applicability checklist</th><th>Yes / No</th></tr><tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Evidences provided in the PDD?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table></td><td>☑</td><td>☑</td></tr>
<tr><td>B.2.4.</td><td>Criterion 3:
Defined electricity grid boundaries</td><td>1, 2</td><td><table><tr><th>Applicability checklist</th><th>Yes / No</th></tr><tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Evidences provided in the PDD?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table></td><td>☑</td><td>☑</td></tr>
<tr><td>B.2.5.</td><td>Criterion 4:
Approved inclusion in other methodologies (if applied only)</td><td>1, 2</td><td>Among the methodologies, ACM002 is the only one applied to this project activity. Thus, this section is not applicable.</td><td>☑</td><td>☑</td></tr>
</table>

<table>
<tr><th colspan="2">CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PDD in GSP</th><th>Final PDD</th></tr>
<tr><td colspan="6">B.3. Description of the sources and gases included in the project boundary</td></tr>
<tr><td>B.3.1.</td><td>Source:
Fugitive Emissions from non-condensable gases (geothermal activities only)
Gas(es): CO_2, CH_4
Type: Project Emissions</td><td>1, 2</td><td><table><tr><th>Boundary checklist</th><th>Yes / No</th></tr><tr><td>Source and gas(es) discussed by the PDD?</td><td>N.A.</td></tr><tr><td>Inclusion / exclusion justified?</td><td>N.A.</td></tr><tr><td>Explanation / Justification sufficient?</td><td>N.A.</td></tr><tr><td>Consistency with monitoring plan?</td><td>N.A.</td></tr></table>
Because the proposed project is a hydropower plant, this section needs not to be considered.</td><td>☑</td><td>☑</td></tr>
<tr><td>B.3.2.</td><td>Source:
Emissions from combustion of fossil fuels (geothermal activities only)
Gas(es): CO_2
Type: Project Emissions</td><td>1, 2</td><td><table><tr><th>Boundary checklist</th><th>Yes / No</th></tr><tr><td>Source and gas(es) discussed by the PDD?</td><td>N.A.</td></tr><tr><td>Inclusion / exclusion justified?</td><td>N.A.</td></tr><tr><td>Explanation / Justification sufficient?</td><td>N.A.</td></tr><tr><td>Consistency with monitoring plan?</td><td>N.A.</td></tr></table>
Because the proposed project is a hydropower plant, this section needs not to be considered.</td><td>☑</td><td>☑</td></tr>
<tr><td>B.3.3.</td><td>Source:
Emissions from the reservoir (new hydroe-lectric activities only)
Gas(es): CO_2, CH_4
Type: Project Emissions</td><td>1, 2</td><td><table><tr><th>Boundary checklist</th><th>Yes / No</th></tr><tr><td>Source and gas(es) discussed by the PDD?</td><td>Yes</td></tr><tr><td>Inclusion / exclusion justified?</td><td>Yes</td></tr><tr><td>Explanation / Justification sufficient?</td><td>Yes</td></tr><tr><td>Consistency with monitoring plan?</td><td>Yes</td></tr></table></td><td>☑</td><td>☑</td></tr>
<tr><td>B.3.4.</td><td>Source:
Emissions from electricity generation in fossil fuel fired power plants of the project electricity system
Gas(es): CO_2</td><td>1, 2</td><td><table><tr><th>Boundary checklist</th><th>Yes / No</th></tr><tr><td>Source and gas(es) discussed by the PDD?</td><td>N/A</td></tr><tr><td>Inclusion / exclusion justified?</td><td>N/A</td></tr><tr><td>Explanation / Justification sufficient?</td><td>N/A</td></tr></table></td><td>☑</td><td>☑</td></tr>
</table>

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
Type: Baseline Emissions		Consistency with monitoring plan? — N/A		
B.3.5. Source: Emissions from electricity generation in fossil fuel fired power plants of any connected electricity system Gas(es): CO_2 Type: Baseline Emissions	1, 2	Boundary checklist — Yes / No Source and gas(es) discussed by the PDD? — Yes Inclusion / exclusion justified? — Yes Explanation / Justification sufficient? — Yes Consistency with monitoring plan? — Yes	☑	☑
B.3.6. Source: Emissions from electricity generation in fossil fuel fired power plants of imported electricity Gas(es): CO_2 Type: Baseline Emissions	1, 2	Boundary checklist — Yes / No Source and gas(es) discussed by the PDD? — Yes Inclusion / exclusion justified? — Yes Explanation / Justification sufficient? — Yes Consistency with monitoring plan? — N.A. Because the ex-ante approach is adopted in this case, the EF of defined grid needs not be re-calculated in the 1st crediting period. In other words, the consideration of monitoring this parameter is not required.	☑	☑
B.3.7. Do the spatial and technological boundaries as verified on-site comply with the discussion provided by the PDD?	1, 2	Referring to the delineation of grid boundaries which is provided by NDRC (China DNA), the connected electricity system is defined as Central China Grid, which is also verified by the auditor on site.	☑	☑
B.4. Description of how the baseline scenario is identified and description of the identified baseline scenario				
B.4.1. Is it clearly described that the baseline is represented by the combined margin of	1, 2	It's clearly stated in the PDD that the baseline is: electricity delivered to the grid by the proposed project would have otherwise	☑	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
	the grid the activity will be connected to?		been generated by fossil-fuel-fired plants which are connected to Central China Grid.		
B.4.2.	In case of any modification or retrofit of existing facilities: Is data available to determine the historic production level?	1, 2	There's no modification of an existing facility, so this section is not applicable.	☑	☑
B.4.3.	In case of any modification or retrofit of existing facilities: Have conservative assumptions been applied in order to estimate the point in time when the existing equipment needs to be replaced?	1, 2	There's no modification of an existing facility, so this section is not applicable.	☑	☑
B.5. Description of how the anthropogenic emissions of GHG by sources are reduced below those that would have occurred in the absence of the registered CDM project activity (assessment and demonstration of additionality):					
B.5.1.	In case of applying step 0 of the additionality tool: Is evidence provided, that CDM has been considered seriously in the decision to proceed with the project activity?	1, 3	See B.5.1. of protocol.	☑	☑
B.5.2.	Have realistic and credible alternatives been identified providing comparable outputs or services? (step 1a)	1, 3	The following baseline scenarios are discussed: - Business as usual (grid electricity supplied from the Central China Grid) - Installation of a coal-fired power plant with similar capacity - The project itself without consideration of the CDM These scenarios are the only ones that are making sense.	☑	☑
B.5.3.	Is the project activity without CDM included in these alternatives? (step 1a)	1, 3	Yes, the proposed project activity without CDM is considered as an alternative scenario.	☑	☑
B.5.4.	Is a discussion provided for all identified	1, 11	The relative regulations and laws are clearly discussed for each	☑	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
	alternatives concerning the compliance with applicable laws and regulations? (step 1b)		scenario one by one in the PDD. According to the Chinese power regulations, construction of a coal-fired power plant of less than 135 MW are prohibited in the areas covered by large grids, the alternative of installation of a coal-fired power plant with similar capacity is not a realistic and credible alternative.		
B.5.5.	In case the PDD argues that specific laws are not enforced in the country or region: Is evidence available concerning that statement? (step 1b)	1, 11	All the laws quoted in the PDD are enforced in this project; hence, this section is not applicable.	☑	☑
B.5.6.	In case of applying step 2 / investment analysis of the additionality tool: Is the analysis method identified appropriately (step 2a)?	1, 20-30, 35	3 analysis methods are provided according to the additionality tool (version 2). Because the proposed project generates economic benefits through the sales of electricity other than CDM revenue, therefore, the Option I (simple cost analysis) can't be taken. Moreover, the Option II (investment comparison analysis) only applies to projects where the alternative should be similar investment projects, however, in this case, the baseline scenario is Central China Grid, hence, Option II can't be adopted either. Option III (benchmark analysis) is the only applicable one. In this case, the benchmark IRR quoted from "Economical assessment and parameters for construction project, 3rd edition" is used. <u>Corrective Action Request 4:</u> During the on site audit, the validator was informed that the IRR excluding VAT (7%) will replace the one including VAT (8%) which is indicated in the PDD. Hence, the related data in Sub-step 2 needs to be updated. Pls. deliver the new spreadsheet to the audit team for verification.	CAR 4	☑
B.5.7.	In case of Option I (simple cost analysis): Is it demonstrated that the activity produces no economic benefits other than CDM income?	1	As described above, Option III is chosen for the investment analysis. So this section is not applicable.	☑	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
B.5.8.	In case of Option II (investment comparison analysis): Is the most suitable financial indicator clearly identified (IRR, NPV, cost benefit ratio, or (levelized) unit cost)?	1	As described above, Option III is chosen for the investment analysis. This section is not applicable.	☑	☑
B.5.9.	In case of Option III (benchmark analysis): Is the most suitable financial indicator clearly identified (IRR, NPV, cost benefit ratio, or (levelized) unit cost)?	1, 20-30, 35	The IRR with / without CDM revenue together with the basic input data are clearly demonstrated in Table B1 and B2 of the PDD. However, referring to CAR 4, some data will be updated in the revised PDD. The spreadsheet in Chinese has been verified by the auditor on site. Because the approved report of the feasibility report was issued 6 years ago, it could not reflect the current financial status of the project. In September 2006, the Hubei Irrigation and Electricity Research Institution, a 3rd-party organization, reassessed the investment situation and released a report for the project owner. Hence, most of the data presented in the spreadsheet are quoted from this latest released version. Besides, <u>Corrective Action Request 5:</u> - Required by the last EB meeting in 2007, the data and calculation process of figuring out the IRR has to be added into the PDD or attached to the PDD as an annex; - The capital asserted is not consistent in the first two excel sheets (IRR and TAX); - The column AF in the TAX sheet is not the sum of 29 years. <u>Clarification Request 4:</u> The yearly operation time of the proposed project is 2,667 hours which is much lower than the average operation hours of hydropower plants in Hubei province. Although the figure is from the feasibility report, additional official evidence like studies shall be	CAR 5 CR 4	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
			delivered to the DOE for review.		
B.5.10.	In case of Option II or Option III: Is the calculation of financial figures for this indicator correctly done for all alternatives and the project activity?	1, 20-30, 35	Referring to CAR 5, the spreadsheet needs to be updated and published. Furthermore, the audit team has verified the calculation process and quoted data under the scenario of the project activity without CDM revenue and the project itself.	☑	☑
B.5.11.	In case of Option II or Option III: Is the analysis presented in a transparent manner including publicly available proofs for the utilized data?	1, 20-30, 35	All the data used in the reviewed spreadsheet are from the latest financial analysis report issued by a 3rd-party organization. However, referring to CAR 4 and CAR 5, an updated calculation process needs to be assessed by the audit team.	See CAR 4 CAR 5	☑
B.5.12.	In case of applying step 3 (barrier analysis) of the additionality tool: Is a complete list of barriers developed that prevent the different alternatives to occur?	1, 27-30	It is expected that implementing the project has to face both investment and technical barriers.	☑	☑
B.5.13.	In case of applying step 3 (barrier analysis): Is transparent and documented evidence provided on the existence and significance of these barriers?	1, 27-30	Doubtless, while implementing the project activity, the project owner has to face financing and technical barriers. Clearly demonstrated in the IRR calculation, the result without CDM revenue is lower than the benchmark. On the other hand, during the construction time, some unexpected geological problems were detected which cause the delay of progress and additional cost. Compared with installing a coal-fire power plant, the low operation time and high risk of operation weaken the loan repayment capability. These difficulties have been assessed by the audit team on site.	☑	☑
B.5.14.	In case of applying step 3 (barrier analysis): Is it transparently shown that the execution of at least one of the alternatives is not prevented by the identified barriers?	1, 27-30	Yes, these barriers will not prevent the 2nd option, business as usual (grid electricity supplied from the Central China Grid). Hence, this is the baseline scenario.	☑	☑
B.5.15.	Have other activities in the host country / region similar to the project activity been	1	<u>Corrective Action Request 6:</u> The project listed in the Sub-step 4b of the PDD is not complete.	CAR 6	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
	identified and are these activities appropriately analyzed by the PDD (step 4a)?		Pls. present all similar projects in Hubei Province, which fulfill the following criteria: - installed capacity between 15MW – 50 MW, and - in operation since 2000		
B.5.16.	If similar activities are occurring: Is it demonstrated that in spite of these similarities the project activity would not be implemented without the CDM component (step 4b)?	1	Pls. kindly refer to B.5.16 of protocol.	See CAR 6	☑
B.5.17.	Is it appropriately explained how the approval of the project activity will help to overcome the economic and financial hurdles or other identified barriers (step 5)?	1	The CDM registration will help to overcome the financial risks and technical barriers. Clarification Request 5: At the time of site visiting, most of the construction has been accomplished and all the key equipments have been installed. Pls. clarify what will happen if the project could not be registered as CDM project.	CR 5	☑
B.6. Emissions reductions					
B.6.1.	*Explanation of methodological choices*				
B.6.1.1.	Is it explained how the procedures provided in the methodology are applied by the proposed project activity?	1, 2	The ex-ante approach is chosen for the baseline emission calculation.	☑	☑
B.6.1.2.	Is every selection of options offered by the methodology correctly justified and is this justification in line with the situation verified on-site?	1, 2, 32-34	Yes, the justification has been fully discussed and demonstrated in the PDD based on the options provided from the latest version of the methodology. All the data are referring to the latest available Chinese Electric Power Yearbook (2003-2005), the China Energy Statistical Yearbook (2000-2005), besides the following issues:	CR 6 CAR 7	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
		Clarification Request 6: - Pls. kindly provide the data source of PGCC and COEFi,j y in Year 2002, 2003 and 2004; - The calculation process of the grid EF in the spreadsheet is inconsistent with the content in Annex 3 of the PDD, pls. clarify. Corrective Action Request 7: - The total emission caused by the fuel consumed by relevant power sources in recent years has also to be included "2004", "2003" and "2002" as numbers, pls. kindly correct; - The calculation process of BM has not completely demonstrated neither in the PDD nor the spreadsheet which was provided to the audit team. - The IPCC default values under version 2006 shall be used for the emission calculations.		
B.6.1.3. Are the formulae required for the determination of project emissions correctly presented, enabling a complete identification of parameter to be used and / or monitored?	1, 2, 32-34	Yes, the emissions of the reservoir have been considered. There are no other project emissions.	☑	☑
B.6.1.4. Are the formulae required for the determination of baseline emissions correctly presented, enabling a complete identification of parameter to be used and / or monitored?	1, 2, 32-34	All the formulae used are in compliance with the ones in the defined methodology under version 06.	☑	☑
B.6.1.5. Is the choice of options to determine the emissions factor (OM, BM) justified in a suitable and transparent manner?	1, 2, 32-34	The justification is demonstrated in the PDD. Referring to the data from China Electric Yearbook, the Simple OM deems to be the only approach for OM calculation. However, the BM calculation	See CAR 7	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
			process is not clearly demonstrated, so additional information is required.		
B.6.1.6.	In case of alternative weighing factors for the Combined Margin: Is the quantification of the alternative weighing factor justified in a suitable and transparent manner?	1, 2, 32-34	The default weights for hydro power project (W_{OM} =0.5; W_{BM} =0.5) defined in the methodology (ver. 06) are used.	☑	☑
B.6.1.7.	In case of alternative weighing factors for the Combined Margin: Is the guidance for the PDD concerning the acceptability of alternative weights considered in the discussion?	1, 2, 32-34	See B.6.1.6. of protocol.	☑	☑
B.6.1.8.	Are the formulae required for the determination of leakage emissions correctly presented, enabling a complete identification of parameter to be used and / or monitored?	1, 2, 32-34	According to the methodology, consideration of leakages is not required.	☑	☑
B.6.1.9.	Are formulae required for the determination of emission reductions correctly presented?	1, 2, 32-34	Yes. Besides the issues raised at CAR 7 and CR 6, most formulae in the PDD are clearly presented for the determination of the emission reduction.	See CAR 7 CR 6	☑
B.6.2.	*Data and parameters that are available at validation*				
B.6.2.1.	Is the list of parameters presented in chapter B.6.2 considered to be complete with regard to the requirements of the applied methodology?	1, 2, 32-34	All the parameters used for the emission reduction calculation are verified by the audit team on site. However, in section B.6.2. of the PDD, some indicators are missing. <u>Corrective Action Request 8:</u> Please refer to the B.6.2.3 - B.6.2.13 of the protocol, the mentioned indicators shall be included into the PDD, although the data and related sources have been assessed on site.	CAR 8	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
B.6.2.2. Is the choice of ex-ante or ex-post vintage of OM and BM factors clearly specified in the PDD?	1, 2, 32-34	The ex-ante approach is chosen, which is clearly stated in B.6.3 of the PDD.	☑	☑
B.6.2.3. Parameter Title: Annual electricity supplied to the grid prior to retrofit (applicable only for retrofit and modification activities)	1, 2, 32-34	Data Checklist / Yes / No Title in line with methodology? N.A. Data unit correctly expressed? N.A. Appropriate description of parameter? N.A. Source clearly referenced? N.A. Correct value provided? N.A. Has this value been verified? N.A. Choice of data correctly justified? N.A. Measurement method correctly described? N.A. The project activity is a newly installation of hydropower plant, hence this parameter is not applicable.	☑	☑
B.6.2.4. Parameter Title: Emission factor of the grid (CM)	1, 2, 32-34	Data Checklist / Yes / No Title in line with methodology? No Data unit correctly expressed? No Appropriate description of parameter? No Source clearly referenced? No Correct value provided? No Has this value been verified? No Choice of data correctly justified? No Measurement method correctly described? No Pls. see CAR 7 and CAR 8.	See CAR 7, 8	☑
B.6.2.5. Parameter Title: Operating margin (OM) emission factor of the grid	1, 2, 32-34	Data Checklist / Yes / No Title in line with methodology? Yes	CR 7	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
		Data unit correctly expressed? Yes Appropriate description? Yes Source clearly referenced? No Correct value provided? No Has this value been verified? No Choice of data correctly justified? No Measurement method correctly described? No Clarification Request 7: The calculation processes were verified by the auditor on site. The results are used for the estimation of the emission reduction and presented in Table B7 of the PDD. But in chapter B.6.2 of the PDD, the OM and BM published by the NDRC publish ones are used. Pls. clarify which data and results will be used for the emission reduction estimation of the proposed project.		
B.6.2.6. Parameter Title: Build margin (BM) emission factor of the grid	1, 2, 32-34	Data Checklist / Yes / No Title in line with methodology? Yes Data unit correctly expressed? Yes Appropriate description of parameter? No Source clearly referenced? No Correct value provided? No Has this value been verified? No Choice of data correctly justified? No Measurement method correctly described? No Pls. see CR 7.	See CR 7	☑
B.6.2.7. Parameter Title: fuel consumption of each power source	1, 2, 32-34	Data Checklist / Yes / No Title in line with methodology? Yes Data unit correctly expressed? Yes	☑	☑

<table>
<tr><th>CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PDD in GSP</th><th>Final PDD</th></tr>
<tr><td></td><td></td><td><table>
<tr><td>Appropriate description of parameter?</td><td>Yes</td></tr>
<tr><td>Source clearly referenced?</td><td>Yes</td></tr>
<tr><td>Correct value provided?</td><td>Yes</td></tr>
<tr><td>Has this value been verified?</td><td>Yes</td></tr>
<tr><td>Choice of data correctly justified?</td><td>Yes</td></tr>
<tr><td>Measurement method correctly described?</td><td>Yes</td></tr>
</table></td><td></td><td></td></tr>
<tr><td>B.6.2.8. Parameter Title:
emission coefficient of each fuel</td><td>1, 2, 32-34</td><td><table>
<tr><th>Data Checklist</th><th>Yes / No</th></tr>
<tr><td>Title in line with methodology?</td><td>No</td></tr>
<tr><td>Data unit correctly expressed?</td><td>No</td></tr>
<tr><td>Appropriate description of parameter?</td><td>No</td></tr>
<tr><td>Source clearly referenced?</td><td>Yes</td></tr>
<tr><td>Correct value provided?</td><td>Yes</td></tr>
<tr><td>Has this value been verified?</td><td>Yes</td></tr>
<tr><td>Choice of data correctly justified?</td><td>Yes</td></tr>
<tr><td>Measurement method correctly described?</td><td>No</td></tr>
</table>
Pls. kindly refer to CAR 8.</td><td>See CAR 8</td><td>☑</td></tr>
<tr><td>B.6.2.9. Parameter Title:
electricity generation of each power source</td><td>1, 2, 32-34</td><td><table>
<tr><th>Data Checklist</th><th>Yes / No</th></tr>
<tr><td>Title in line with methodology?</td><td>N.A.</td></tr>
<tr><td>Data unit correctly expressed?</td><td>N.A.</td></tr>
<tr><td>Appropriate description of parameter?</td><td>N.A.</td></tr>
<tr><td>Source clearly referenced?</td><td>N.A.</td></tr>
<tr><td>Correct value provided?</td><td>N.A.</td></tr>
<tr><td>Has this value been verified?</td><td>N.A.</td></tr>
<tr><td>Choice of data correctly justified?</td><td>N.A.</td></tr>
<tr><td>Measurement method correctly described?</td><td>N.A.</td></tr>
</table>
As mentioned in the PDD, because the data on the five power plants built most recently are not available, an approved deviation</td><td>☑</td><td>☑</td></tr>
</table>

<table>
<tr><th>CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PDD in GSP</th><th>Final PDD</th></tr>
<tr><td></td><td></td><td>is implemented. Hence, the fuel consumption for best technology commercially available and the share of incremental installed capacity of fuel-fired power in the whole incremental installed capacity are used as parameters for BM calculation. Both of them are verified during the on site assessment.</td><td></td><td></td></tr>
<tr><td>B.6.2.10. Parameter Title:
surface area of full reservoir level
(for new hydroelectric activities only)</td><td>1, 2, 32-34</td><td><table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>No</td></tr><tr><td>Data unit correctly expressed?</td><td>No</td></tr><tr><td>Appropriate description of parameter?</td><td>No</td></tr><tr><td>Source clearly referenced?</td><td>No</td></tr><tr><td>Correct value provided?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Choice of data correctly justified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>No</td></tr></table>
Pls. kindly refer to CAR 8.</td><td>See CAR 8</td><td>☑</td></tr>
<tr><td>B.6.2.11. Parameter Title:
fraction of time with low costs /must run plant at the margin
(for simple adjusted OM only)</td><td>1, 2, 32-34</td><td><table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N.A.</td></tr><tr><td>Data unit correctly expressed?</td><td>N.A.</td></tr><tr><td>Appropriate description of parameter?</td><td>N.A.</td></tr><tr><td>Source clearly referenced?</td><td>N.A.</td></tr><tr><td>Correct value provided?</td><td>N.A.</td></tr><tr><td>Has this value been verified?</td><td>N.A.</td></tr><tr><td>Choice of data correctly justified?</td><td>N.A.</td></tr><tr><td>Measurement method correctly described?</td><td>N.A.</td></tr></table>
For this project, the simple OM is adopted as the most appropriate approach; hence, this parameter is not applicable.</td><td>☑</td><td>☑</td></tr>
</table>

<table>
<tr><th>CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PDD in GSP</th><th>Final PDD</th></tr>
<tr><td>B.6.2.12. Parameter Title:
electricity imports</td><td>1, 2,
32-34</td><td><table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>No</td></tr><tr><td>Data unit correctly expressed?</td><td>No</td></tr><tr><td>Appropriate description of parameter?</td><td>No</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Choice of data correctly justified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>No</td></tr></table>Pls. kindly refer to CAR 8.</td><td>See CAR 8</td><td>☑</td></tr>
<tr><td>B.6.2.13. Parameter Title:
CO_2 emission coefficient of fuels used in connected grids</td><td>1, 2,
32-34</td><td><table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>No</td></tr><tr><td>Data unit correctly expressed?</td><td>No</td></tr><tr><td>Appropriate description of parameter?</td><td>No</td></tr><tr><td>Source clearly referenced?</td><td>No</td></tr><tr><td>Correct value provided?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Choice of data correctly justified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>No</td></tr></table>Pls. kindly refer to CAR 8.</td><td>See CAR 8</td><td>☑</td></tr>
<tr><td colspan="5">B.6.3. Ex-ante calculation of emission reductions</td></tr>
<tr><td>B.6.3.1. Is the projection based on the same procedures as used for future monitoring?</td><td>1, 2,
32-34</td><td>Yes, it is.</td><td>☑</td><td>☑</td></tr>
<tr><td>B.6.3.2. Are the GHG calculations documented in a complete and transparent manner?</td><td>1, 2,
32-34</td><td>Pls. kindly refer to CAR 7 and CR 6.</td><td>See CAR 7</td><td>☑</td></tr>
</table>

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
			CR 6	
B.6.3.3. Is the data provided in this section consistent with data as presented in other chapters of the PDD?	1, 2, 32-34	Pls. kindly refer to CR 7.	See CR 7	☑
B.6.4. Summary of the ex-ante estimation of emission reductions				
B.6.4.1. Will the project result in fewer GHG emissions than the baseline scenario?	1, 2, 32-34	Demonstrated in the PDD, being a hydropower plant, the project emission is much lower than the baseline emssion.	☑	☑
B.6.4.2. Is the form/table required for the indication of projected emission reductions correctly applied?	1, 2, 32-34	Yes, the table is complete, which includes the emission due to the project activity, baseline emission, leakage emission and the overall emission reduction.	☑	☑
B.6.4.3. Is the projection in line with the envisioned time schedule for the project's implementation and the indicated crediting period?	1, 2, 32-34	The life time of the project is expected to be 21 years and the renewable crediting period of max 7 years with potential for 2 renewals is chosen. The yearly emission reduction and total emission reduction indicated in B.6.4. in the PDD. However, refer to CAR 3, the starting date of the crediting period shall be updated.	See CAR 3	☑
B.6.4.4. Is the data provided in this section in consistency with data as presented in other chapters of the PDD?	1, 2, 32-34	Yes, it is.	☑	☑
B.7. Application of the monitoring methodology and description of the monitoring plan				
B.7.1. Data and parameters monitored				
B.7.1.1. Is the list of parameters presented by chapter B.7.1 considered to be complete with regard to the requirements of the applied methodology?	1	Because the ex-ante approach is adopted, the net electricity fed to the grid is required to be monitored. This parameter has been included in table B.7.1 in the PDD.	☑	☑
B.7.1.2. Parameter Title: Electricity supplied to the grid	1	Monitoring Checklist / Yes / No Title in line with methodology? / Yes	CR 8	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
		Data unit correctly expressed? — Yes Appropriate description of parameter? — Yes Source clearly referenced? — No Correct value provided for estimation? — Yes Has this value been verified? — Yes Measurement method correctly described? — Yes Correct reference to standards? — Yes Indication of accuracy provided? — Yes QA/QC procedures described? — Yes QA/QC procedures appropriate? — Yes <u>Clarification Request 8:</u> - When the proposed project is not in operation, electricity supplied from the grid will be used to ensure the minimum requirement of running a plant. Pls. clearly describe the approach of measuring consumed electricity (including the accuracy of meter, QA/QC procedure, calibration process, etc.); - Pls. add a diagram which could clearly show the location of all the related meters into the revised PDD.		
B.7.1.3. Parameter Title: Quantity of steam produced (for geothermal projects only)	1	Monitoring Checklist — Yes / No Title in line with methodology? — N.A. Data unit correctly expressed? — N.A. Appropriate description of parameter? — N.A. Source clearly referenced? — N.A. Correct value provided for estimation? — N.A. Has this value been verified? — N.A. Measurement method correctly described? — N.A.	☑	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
		Correct reference to standards? N.A. Indication of accuracy provided? N.A. QA/QC procedures described? N.A. QA/QC procedures appropriate? N.A. This parameter needs not be considered, because the activity is a hydropower plant.		
B.7.1.4. Parameter Title: Fraction of CO_2 in steam produced (for geothermal projects only)	1	Monitoring Checklist — Yes / No Title in line with methodology? N.A. Data unit correctly expressed? N.A. Appropriate description of parameter? N.A. Source clearly referenced? N.A. Correct value provided for estimation? N.A. Has this value been verified? N.A. Measurement method correctly described? N.A. Correct reference to standards? N.A. Indication of accuracy provided? N.A. QA/QC procedures described? N.A. QA/QC procedures appropriate? N.A. This parameter needs not be considered, because the activity is a hydropower plant.	☑	☑
B.7.1.5. Parameter Title: Fraction of CH_4 in steam produced (for geothermal projects only)	1	Monitoring Checklist — Yes / No Title in line with methodology? N.A. Data unit correctly expressed? N.A. Appropriate description of parameter? N.A. Source clearly referenced? N.A. Correct value provided for estimation? N.A. Has this value been verified? N.A.	☑	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
		Measurement method correctly described? N.A. Correct reference to standards? N.A. Indication of accuracy provided? N.A. QA/QC procedures described? N.A. QA/QC procedures appropriate? N.A. This parameter needs not be considered, because the activity is a hydropower plant.		
B.7.1.6. Parameter Title: Quantity of steam generated during well testing (for geothermal projects only)	1	Monitoring Checklist / Yes / No Title in line with methodology? N.A. Data unit correctly expressed? N.A. Appropriate description of parameter? N.A. Source clearly referenced? N.A. Correct value provided for estimation? N.A. Has this value been verified? N.A. Measurement method correctly described? N.A. Correct reference to standards? N.A. Indication of accuracy provided? N.A. QA/QC procedures described? N.A. QA/QC procedures appropriate? N.A. This parameter needs not be considered, because the activity is a hydropower plant.	☑	☑
B.7.1.7. Parameter Title: Fraction of CO_2 in steam during well testing (for geothermal projects only)	1	Monitoring Checklist / Yes / No Title in line with methodology? N.A. Data unit correctly expressed? N.A. Appropriate description of parameter? N.A. Source clearly referenced? N.A. Correct value provided for estimation? N.A.	☑	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
		Has this value been verified? N.A. Measurement method correctly described? N.A. Correct reference to standards? N.A. Indication of accuracy provided? N.A. QA/QC procedures described? N.A. QA/QC procedures appropriate? N.A. This parameter needs not be considered, because the activity is a hydropower plant.		
B.7.1.8. Parameter Title: Fraction of CH_4 in steam during well testing (for geothermal projects only)	1	Monitoring Checklist — Yes / No Title in line with methodology? N.A. Data unit correctly expressed? N.A. Appropriate description of parameter? N.A. Source clearly referenced? N.A. Correct value provided for estimation? N.A. Has this value been verified? N.A. Measurement method correctly described? N.A. Correct reference to standards? N.A. Indication of accuracy provided? N.A. QA/QC procedures described? N.A. QA/QC procedures appropriate? N.A. This parameter needs not be considered, because the activity is a hydropower project.	☑	☑
B.7.1.9. Parameter Title: CO_2 emission coefficient of fuel used by the geothermal plant (for geothermal projects only)	1	Monitoring Checklist — Yes / No Title in line with methodology? N.A. Data unit correctly expressed? N.A. Appropriate description of parameter? N.A. Source clearly referenced? N.A.	☑	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
			Correct value provided for estimation? N.A. Has this value been verified? N.A. Measurement method correctly described? N.A. Correct reference to standards? N.A. Indication of accuracy provided? N.A. QA/QC procedures described? N.A. QA/QC procedures appropriate? N.A. This parameter needs not be considered, because the activity is a hydropower project.		
B.7.2.	*Description of the monitoring plan*				
B.7.2.1.	Is the operational and management structure clearly described and in compliance with the envisoned situation?	1	A CDM group is going to be established to carry out the monitoring work. As mentioned in CR 8, the monitoring parameters are not clear now, more detailed information is required. But, the basic system would be the following: the reading of the meter installed at plant site will be recorded by the Monitoring Officer of the plant. The collected information will be documented and sent to the Plant Manager for verification. The General Manger is responsible for the overall monitoring process.	See CR 8	☑
B.7.2.2.	Are responsibilities and institutional arrangements for data collection and archiving clearly provided?	1	The management structure of monitoring the electricity fed to the grid is clearly presented in the PDD, however, referring to CR 8, the procedure of monitoring the power delivered from the grid is not clear.	See CR 8	☑
B.7.2.3.	Does the monitoring plan provide current good monitoring practice?	1	Pls. see CR 8.	See CR 8	☑
B.7.2.4.	If applicable: Does annex 4 provide useful information enabling a better understanding of the envisoned monitoring provisions?	1	Not applicable.	☑	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
B.8. Date of completion of the application of the baseline study and monitoring methodology an the name of the responsible person(s)/entity(ies)					
B.8.1.	Is there any indication of a date when the baseline was determined?	1	The baseline is determined on Oct. 20, 2006.	☑	☑
B.8.2.	Is this consistent with the time line of the PDD history?	1	Yes. The PDD is prepared with the latest available data at that time (China Electric Power Yearbook 2003-2005, China Energy Statistical Yearbook 2000-2005 as well as IPCC 1996). However, the IPCC data shall be updated with the latest published 2006 version. Pls. see CAR 7.	See CAR 7	☑
B.8.3.	Is the information on the person(s) / entity(ies) responsible for the application of the baseline and monitoring methodology provided consistent with the actual situation?	1	Yes. The responsible persons indicated in the PDD are also the ones being interviewed for baseline verification during the on site audit.	☑	☑
B.8.4.	Is information provided whether this person / entity is also considered a project participant?	1	Yes, the PDD developer, Arreon Carbon UK Ltd., is also the investor party of the proposed project.	☑	☑
C. Duration of the project activity / crediting period					
C.1. Duration of the project activity					
C.1.1.	Are the project's starting date and operational lifetime clearly defined and reasonable?	1	Pls. refer to CAR 3.	See CAR 3	☑
C.2. Choice of the crediting period and related information					
C.2.1.	Is the assumed crediting time clearly defined and reasonable (renewable crediting	1	The life time of the project is 21 years. Confirming with the provided evidence, such as purchasing contract, business plan, the	☑	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
	period of max 7 years with potential for 2 renewals or fixed crediting period of max. 10 years)?		validator has the confidence that it's reasonable. Therefore, the max. 7 years with potential for 2 renewals is chosen as the crediting period.		
D. Environmental impacts					
D.1. Documentation on the analysis of the environmental impacts, including transboundary impacts					
D.1.1.	Has the analysis of the environmental impacts of the project activity been sufficiently described?	1, 36, 37	Yes, the environmental impacts of the project activity such as noise, visual impacts, interference with communication, land use, air quality and water usage have been clearly described.	☑	☑
D.1.2.	Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, has an EIA been approved?	1, 36, 37	Yes, the EIA is a must in the P. R. China for installation of a new hydropower plant. Besides the EIA survey which was carried out by the authorized organization and issued on Dec., 1999 and approved by the EPB of Hubei Province on Jan. 7th, 2000. A 3rd-party organization authorized by the World Bank executed another environmental assessment. All the documents have been reviewed by the DOE. Clarification Request 9: Due to the installation of the proposed project, hundreds of residents need to migrate to the nearby counties. The migration scheme was developed in Aug., 2001 by the local government and approved by the World Bank afterwards. Since the launch of the project, the specialist dispatched by the World Bank would inspect the plant site and the progress of migration in a fixed periodic period. A report including all the findings and corrective actions will be issued to the World Bank, the project owner and the local government. Moreover, an independent organization authorized by the World Bank is responsible for monitoring the migration and release a monitoring report of migration every year. Pls. submit	CR 9	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
			the latest migration report to the DOE.		
D.1.3.	Will the project create any adverse environmental effects?	1, 36, 37	Referred to the approved EIA and independent report carried out by World Bank, the project will create no negative environmental impacts.	☑	☑
D.1.4.	Were transboundary environmental impacts identified in the analysis?	1, 36, 37	The proposed plant locates within China; hence, this section is not applicable.	☑	☑
D.2. If environmental impacts are considered significant by the project participants or the host Party, please provide conclusions and all references to support documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party					
D.2.1.	Have the identified environmental impacts been addressed in the project design sufficiently?	1, 36, 37	Referred to the EIA and the approval of EIA, the impacts on the environment are not significant.	☑	☑
D.2.2.	Does the project comply with environmental legislation in the host country?	1, 36, 37	Yes, it is.	☑	☑
E. Stakeholders' comments					
E.1. Brief description how comments by local stakeholders have been invited and compiled					
E.1.1.	Have relevant stakeholders been consulted?	1, 38-44	<u>Corrective Action Request 9:</u> A survey was carried out while preparing the EIA, however, because it only focuses on the environmental impacts due to the project activity, the stakeholders had not been consulted regarding the CDM issues; Hence, the local stakeholder process is not complete. Additional introduction of the CDM and the relevant impact to the proposed project shall be delivered to the stakeholders by appropriate media. And the feedbacks shall be collected, analyzed and documented.	CAR 9	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
E.1.2.	Have appropriate media been used to invite comments by local stakeholders?	1, 38-44	Pls. kindly refer to E.1.1. of protocol.	See CAR 9	☑
E.1.3.	If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws?	1, 38-44	A stakeholder consultation is a must when the EIA is prepared. Its purpose is obtaining the opinion on the environmental impacts which is part of the purpose of the CDM stakeholder process.	See CAR 9	☑
E.1.4.	Is the undertaken stakeholder process that was carried out described in a complete and transparent manner?	1, 38-44	Pls. kindly see E.1.1. of protocol.	See CAR 9	☑
E.2. Summary of the comments received					
E.2.1.	Is a summary of the stakeholder comments received provided?	1, 38-44	Pls. kindly see E.1.1. of protocol.	See CR 9	☑
E.3. Report on how due account was taken of any comments received					
E.3.1.	Has due account been taken of any stakeholder comments received?	1, 38-44	Pls. kindly see E.1.1. of protocol.	See CAR 9	☑
F. Annexes 1 - 4					
Annex 1: Contact Information					
F.1.1.	Is the information provided consistent with the one given under section A.3?	1	Please see A.3.2. of protocol.	☑	☑
F.1.2.	Is the information on all private participants and directly involved Parties presented?	1	Corrective Action Request 10: The email addresses of all project participants have to be delivered in annex 1.	☑	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
Annex 2: Information regarding public funding					
F.1.3.	Is the information provided on the inclusion of public funding (if any) in consistency with the actual situation presented by the project participants?	1	Yes. Please see the A.4.5.1 of protocol.	☑	☑
F.1.4.	If necessary: Is an affirmation available that any such funding from Annex-I-countries does not result in a diversion of ODA?	1	Not applicable.	☑	☑
Annex 3: Baseline information					
F.1.5.	If additional background information on baseline data is provided: Is this information consistent with data presented by other sections of the PDD?	1	Pls. kindly refer to CR 7.	See CR 7	☑
F.1.6.	Is the data provided verifiable? Has sufficient evidence been provided to the validation team?	1	Pls. see CAR 7 and CR 6, 7.	See CAR 7 CR 6, 7	☑
F.1.7.	Does the additional information substantiate / support statements given in other sections of the PDD?	1	Pls. see CAR 7 and CR 6, 7.	See CAR 7 CR 6, 7	☑
Annex 4: Monitoring information					
F.1.8.	If additional background information on monitoring is provided: Is this information consistent with data presented in other sections of the PDD?	1	There's no additional background information mentioned in Annex 4 of the PDD.	☑	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
F.1.9.	Is the information provided verifiable? Has sufficient evidence been provided to the validation team?	1	Pls. see F.1.8. of protocol.	☑	☑
F.1.10.	Do the additional information and / or documented procedures substantiate / support statements given in other sections of the PDD?	1	Pls. see F.1.8. of protocol.	☑	☑

Table 2 Resolution of Corrective Action and Clarification Requests

Corrective Action Request 1: During the site visiting, besides the turbine-generator system with a total 30 MW capacitiy, another set with 1.6 MW capacitiy was detected. Confirmed with the project owner, the small generation system would share all the resources with the big one and deliver the generated electricity through the same bus-line to the grid. Hence, the description in the PDD (including annual power generation, annual electricity supplied to grid, yearly emission reduction, etc.) shall be updated accordingly. Moreover, pls. also provide the audit team the documents to prove that such additional design, construction, electricity delivery and operation are approved by the China government.	A.2.1.	The project description has been updated with information of the additional 1.6MW generator system. The proven document of the 1.6MW generator system has been provided, The working hour data source of the small generation system has been provided. The geographical coordinates of the project have been updated. The map on page 4 has been translated to English. The ecological flow on page 6 has been correct.	☑ The installed capacity of the hydropower project is 31.6 MW, which consists of a 30MW power house and a 1.6MW small power house. The power plant area is located at 31^{o} 21'2 N; 111^{o} 29'23 E. Figure A1. and A2. is now written in English. The minimum water flow needed to protect the ecological environment is $3m^3/s$.

The domestic technology implemented at the hydropower projects has been mature in China. Therefore, all the equipments are developed and manufactured domestically. In this case, the supplier of the 30 MW facility is the Sichuan Dongfeng Electrical Engine Manufacturer. Because the main loan is delivered by World Bank, a bidding of key equipments (turbine and generator) was carried out by specialists from World Bank. <u>Corrective Action Request 2:</u> - The turbine type of 30 MW generation system shall be HLSK3059-LJ-168 and the type of generator is SF15-16/3900. Pls. correct the relevant information in table at Section A.4.3. of the PDD; - Referring to CAR 1, an additional 1.6 MW generation system has been installed, pls. add the basic data into the table mentioned above; moreover, the Figure A3 (layout of the power plant)shall also be updated.	A.4.3.1.	Figure A3 has been updated with the additional 1.6MW generation system and the ecological diversion channel. The type of generators and turbines of the 30MW generation system have been corrected. The main design features and characteristics of the additional 1.6MW generator system are also listed in A4.3.1.	☑ See Chapter A.3. and Table 4.3.1. of the PDD.
Yes, the required form is correctly applied in the PDD. <u>Corrective Action Request 3:</u> Since the electricity generation could not start on Jan. 1st, 2007, on the other hand, the on site audit is executed in Jan. of 2007, the starting day of the 1st crediting period needs to be re-chosen in a conservative manner. Consequently, the related emission reduction figures in A.4.4. and B.6.4. of the PDD and the starting date in C.2.1.1. of the PDD shall be updated.	A.4.4.1.	The actual stating date of first crediting period is November 1st, 2007. The related figures in A 4.4 and B 6.4 have also been updated.	☑

3 analysis methods are provided according to the additionality tool (version 2). Because the proposed project generates economic benefits through the sales of electricity other than CDM revenue, therefore, the Option I (simple cost analysis) can't be taken. Moreover, the Option II (investment comparison analysis) only applies to projects where alternative should be similar investment projects, however, in this case, the baseline scenario is Central China Grid, hence, Option II can't be adopted either. It deems that Option III (benchmark analysis) is the only applicable one. In this case, the benchmark IRR quoted from "Economical assessment and parameters for construction project, 3rd edition" is used. <u>Corrective Action Request 4:</u> During the on site audit, the validator was informed that the IRR excluding VAT (7%) will replace the one including VAT (8%) which is indicated in the PDD. Hence, the related data in Sub-step 2 needs to be updated. Pls. deliver the new spreadsheet to audit team for verification.	B.5.7.	The electricity sales price including VAT (17%) has been replaced with electricity sales price excluding VAT (17%) in both PDD and IRR calculation. The IRR benchmark source has been provided.	☑ See Table B1 and B2 in Chapter B.5. of the PDD. See the files of IRR benchmark source.pdf, IRR data source.pdf, IRR-Xiakou-ZF-Aug2 2007-EN.xls.

The IRR with / without CDM revenue together with the basic input data are clearly demonstrated in Table B1 and B2 of the PDD. However, referring to CAR 4, some of the data will be updated in the revised PDD. The spreadsheet in Chinese has been verified by the auditor on site. Because the approved report of the feasibility report was issued 6 years ago, it could not reflect the current financial status of the project. In Sept. of 2006, the Hubei Irrigation and Electricity Research Institution, a 3rd-party organization, re-assessed the investment situation and releases a report to the project owner. Hence, most of the data presented in the spreadsheet are quoted from this latest released version. Besides, Corrective Action Request 5: - Required by the latest EB meeting, the data and calculation process on figuring out the IRR shall be added into the PDD or attached to the PDD as an annex; - The capital asserted is not consistent in the first two excel sheets (IRR and TAX) in spreadsheets; - The column AF in TAX sheet is not the sum of 29 years.	B.5.10.	The capital assets in the excel sheets IRR is not including the interest during the construction period and the capital assets in excel sheets TAX is the static total investment which is not including interest. The calculation is consistent with the preliminary design report. The column AF in the TAX sheet has been revised, which is the sum of 29 years. The data sources of the total investment and the IRR calculation have been provided. The construction time of the project has been corrected.	See the files of IRR benchmark source.pdf, IRR data source.pdf, IRR-Xiakou-ZF-Aug2 2007-EN.xls. The construction time table is listed in Chapter A.3.
Corrective Action Request 6: The project listed in the Sub-step 4b of the PDD is not complete. Pls. present all the similar project in Hubei Province, which fulfills the following criteria: - is in the installed capacity range of 15MW – 50 MW, and - has been in operation since 2000	B.5.16.	All the similar projects in Hubei Province with installed capacity in range of 15MW – 50 MW and in operation since 2000 have been listed, The Source of data is China Investigation Result of Water Resource (2003). More information about projects which started construction have been provided.	☑ See Table B4 in Chapter B.5.

Corrective Action Request 7: - The total emission caused by the fuel consumed by relevant power sources in recent years has also included "2004", "2003" and "2002" as numbers, pls. kindly correct; - The calculation process of BM has not completely demonstrated in either PDD or spreadsheet which was provided to audit team. - The IPCC default values under version 2006 shall be used for the emissions calculations.	B.6.1.2.	The excel Table of OM calculation have been updated. The calculation process of BM has been completed. The IPCC default values under version 2006 have been used in new EF calculation. New baseline calculation sheet has been provided.	☑ See file cal_CEN_CH_200700802_luna.xls E. g. IPCC 2006, Volume 2, p. 1.23
All the parameters used for the emission reduction calculation are verified by the audit team on site. However, in section B.6.2. of the PDD, some indicators are missing. Corrective Action Request 8: Please refer to the B.6.2.3 - B.6.2.13 of the protocol, the mentioned indicators shall be included into the PDD, though the data and related sources have been assessed on site.	B.6.2.1.	The needed indicators have been listed in B6.2 The import from the connected grid is small. Therefore, there is no need to take into account electricity imported from other grids Then the indicators about import from the connected grid are not listed, because the Central China Power Grid exports hydroelectricity to other grids and only imports electricity from the East Power Grid of China (information from China Electric Power Yearbooks, see Table in Annex 3). Because the import was negligibly small and the net import from the East Power Grid was minus, there is no need to take into account electricity imported from other grids to Central China Power Grid in calculating the OM factor.	☑ See Step 1 in Chapter B.6.3 of the PDD.

Corrective Action Request 9: A survey was carried out while preparing the EIA, however, because it only focus on the environmental impacts due to the project activity, in other words, the stakeholders had not been consulted with the CDM issues, the local stakeholder process is not complete. Additional introduction of the CDM and the relevant impact to the proposed project shall be delivered to the stakeholders by appropriate media. And the feedbacks shall be collected, analyzed and documented.	E.1.1.	The additional survey with an introduction of CDM and the relevant impact to the proposed project had been taken. The summery of survey is showed in E.2	☑
Corrective Action Request 10: The email addresses of all project participants have to be delivered in annex 1.	F.1.2.	The email addresses of project owner had been added in annex1 All information has been rechecked and corrected.	☑

The proposed project is a new hydropower plant with a reservoir (the power densities is greater than 4 W/m^2). The location of the proposed project is in Nanzhang County, Hubei Province, China. The generated power will be fed to the Hubei Provincial Power Grid, an integral part of the Central China Grid, to displace the electricity mainly supplied by thermal plants. Moreover, this project is supported by World Bank loans under the name of 'Hydropower Projects in Poor Area of Hubei Province'. During the on-site audit, the project activities described in the PDD have been proven, besides the following issues. <u>Clarification Request 1:</u> In Chapter A.2., it is stated that the project is located on the Juhe River, however, in Chapter A.4.1.4., the proposed project is on Juzhanghe River, pls. clarify this in the revised PDD.	A.2.1.	As described in the project's feasibility report, the project is located on the Juhe river. The description of the project's location in A 4.1.4 has been corrected.	☑
Referring to the approved EIA and the environmental study carried out by 3rd party which is authorized by the World Bank, it will not cause any environmental problem. <u>Clarification Request 2:</u> According to the requirement from the World Bank (the main loan provider of the proposed project), the project owner shall guarantee the minimum water flow (3m^3/s) to protect the ecological environment. Pls. introduce the related actions which have been implemented or is in plan into the revised PDD.	A.4.3.4.	According to the requirement from the World Bank and the environment impact assessment, the minimum water flow (3m^3/s) is needed to protect the ecological environment. The project owner built the ecological diversion channel, and installed a 1.6MW generator on the channel. The bypass pipe of the channel will be opened when the small generator is not on use. The water flow in the ecological diversion channel will be monitored to ensure the conformation to the requirement. The information and the components sketch map have been added in A 4.3.	☑

The construction has started since Sep., 2003, however, according to the introduction by the project owner, two crack layers were found recently and till now, the remediation work has not been finished. Therefore, the expected time of electricity generation will be postponed to April, 2007. <u>Clarification Request 3:</u> Pls. deliver a time schedule of construction, installation and operation into the revised PDD.	A.4.3.10.	The time schedule is listed in A 4.3	☑ The construction time table is listed in Chapter A.3.
<u>Clarification Request 4:</u> The yearly operation time of the proposed project is 2,667 hours which is much lower than the average operation hours of hydropower plants in Hubei province. Though the figure is from the feasibility report, additional official study evidence shall be delivered to DOE for review.	B.5.10.	The official evidence has been provided.	☑ See file cal_CEN_CH_200700802_luna.xls

The CDM registration will help to overcome the financial risks and technical barriers. <u>Clarification Request 5:</u> At the time of site visiting, most of construction has been accomplished and all the key equipments have been installed. Pls. clarify what will happen if the project could not be registered as per CDM.	B.5.18.	Because of its poor generating capacity and low economic gains, although began planning from the 1950s, the project has not been built until got loans from the World Bank under the name of 'Hydropower Projects in the Poor Area of Hubei Province'. But during the construction period, the lack of funds made the construction work stall and result in a delay of completing. The registration of the project activity as a CDM activity would provide additional revenues through CDM funding to compensate financial losses arising out of lack of water resources for power generation, infrastructure and technological difficulty. Successful implement of the project will ensure project's contribution to local sustainable development and reducing CO2 emissions. Without the CDM project activity registration, an equivalent quantum of anthropogenic GHG emission reductions will not be realized. The description has been showed in B.5 Substep 2b.	☑ See Step 2: Investment analysis

Yes, the justification has been fully discussed and demonstrated in the PDD based on the options provided from the latest methodology. All the data are referring to the latest available Chinese Electric Power Yearbook (2003-2005), the China Energy Statistical Yearbook (2000-2005), besides the following issues: <u>Clarification Request 6:</u> - Pls. kindly provide the data source of PGCC and COEFi,j y in Year 2002, 2003 and 2004; - The calculation process of grid EF in the spreadsheet is inconsistent with the content in Annex 3 of the PDD, pls. clarify.	B.6.1.2.	The data source of PGCC and COEFi,j y had been provide. The calculation process of grid EF had been updated. The new EF calculation sheet has been updated.	☑ Information about the Power Generation Coal Consumption (PGCC), see Annex 3 and for COEFi,j y see Table B6 in Chapter B.6.3. See e.g. $EF_{OM,\ Central\ China,\ 200x}$ See file cal_CEN_CH_200700802_luna.xls
<u>Clarification Request 7:</u> The calculation processes were verified by auditor on site. The results are used for emission reduction estimation and presented in Table B7 of the PDD. Whereas, in B.6.2 of the PDD, the data and OM, BM quoted from NDRC publish ones are used. Pls. clarify which data and results will be used for the emission reduction estimation of the proposed project.	B.6.2.5.	The data and results had been corrected.	☑

Clarification Request 8: - When the proposed project is not in operation, electricity supplied from the grid will be used to ensure the minimum requirement of running a plant. Pls. clearly describe the approach of measuring consumed electricity (including the accuracy of meter, QA/QC procedure, calibration process, etc.); - Pls. add a diagram which could clearly show the location of all the related meters into the revised PDD.	B.7.1.2.	The monitoring plan had been updated. The diagram about the location of the meters has been added. **DOE's first response:** There is given Figure B3. in Chapter 7.2 of the PDD, but a diagram should show the location/measuring point of an installed meter more detailed. **Project owner´s response:** The values of the parameters on page 28 have been corrected.	☑

Yes, EIA is a must in P. R. China for installation of a new hydropower plant. Besides the EIA survey which was carried out by the authorized organization and issued it on Dec., 1999 and approved by the EPB of Hubei Province on Jan. 7th, 2000. A 3rd-party organization authorized by World Bank executed another environmental assessment. All the documents have been reviewed by DOE. Clarification Request 9: Due to the installation of proposed project, hundreds of residents need to migrate to the nearby counties. The migration scheme was developed in Aug., 2001 by local government and approved by World Bank afterwards. Since the launch of project, the specialist dispatched by World Bank would inspect the plant site and the progress of migration in a fixed periodic period. A report includes all the finds and correction action will be issued to World Bank, project owner and local government. Moreover, an independently organization authorized by World Bank is responsible for monitoring the migration and release a monitoring report of migration every year. Pls. submit the latest migration report to DOE.	D.1.2.	The latest migration report to DOE had been provided.	☑
The Arreon Carbon UK Ltd. and Hubei Province Nanzhang Xiakou Power Company, Ltd. are the project participants. The related information has been verified on site. Open Issue: Pls. deliver the LoA issued by P.R. China and United Kingdom together with the MoC countersigned by all parties to the DOE before raising the request for registration.	A.3.2.		☑

Table 3 Unresolved Corrective Action and Clarification Requests (in case of denials)

Clarifications and / or corrective action requests by validation team	Id. of CAR/CR	Explanation of Conclusion for Denial
-	-	-

Annex 2: Information Reference List

Reference No.	Document or Type of Information
1	Project Design Document for CDM project "Hubei Xiakou Hydropower Project of Nanzhang County, Xiangfan City, Hubei province, P. R. China", version 1, submitted in Oct., 2006
2	Consolidated baseline methodology for grid-connected electricity generation from renewable sources, version 06
3	Tool for the demonstration and assessment of additionality, version 02 and version 03
4	Participant list of on-site interview, signed on Jan. 09th, 2007
5	Validation team: Sven Kolmetz –TÜV SÜD Industrie Service GmbH Cuiyun Zhang- Jiangsu TUV Product Service Ltd. Carl Zhou Jiangsu TUV Product Service Ltd On-site interviews and inspection at the office conducted on Jan. 09-10, 2007 by validators of TÜV SÜD. Interviewed persons: Mr. Dai Mingxiong — Hubei Province Nanzhang Xiakou Power Co., Ltd. — Project manager Ms. Lu Na — Arreon Carbon — CDM Specialist Mr. Liu Shubin — Hubei Province Nanzhang Xiakou Power Co., Ltd. — Financial Manager Mr. Liu Shangsong — Hubei Province Nanzhang Xiakou Power Co., Ltd. — Chief Engineer
6	Feasibility report of Hubei Xiakou Hydropower Project, dated in June, 1999, Hubei Irrigation and Electricity Research Institution, submitted on Jan. 10th, 2007
7	Approval of feasibility report of Hubei Xiakou Hydropower Project, dated on July 5th, 2000, Hubei Development and Reform Commission, submitted on Jan. 10th, 2007
8	Project design report (1.6MW power generation unit),- dated in Nov., 2004, Xiangfan Hydropower Design Institute, submitted on Jan. 10th, 2007

Reference No.	Document or Type of Information
9	Memo of directorate, dated on Nov. 20th, 2005, Hubei Province Nanzhang Xiakou Power Co., Ltd., submitted on Jan. 10th, 2007
10	Economical assessment and parameters for construction project, 3rd edition, China Planning Press, submitted on Jan. 10th, 2007
11	Notice on Strictly Prohibiting the Installation of Fuel-fired Generators with the Capacity of 135MW or below, State Council office, submitted on Jan. 10th, 2007
12	Assessment report of Loaning to Hydropower Projects in Poor Area of Hubei Province, P.R. China, dated on May 30th, 2002, World Bank, submitted on Jan. 10th, 2007
13	Project Agreement of Hubei Hydropower Development in Poor Areas Projects, dated on Jan. 21st, 2003, International Bank for Reconstruction and Development, submitted on Jan. 10th, 2007
14	Loan Agreement of Hubei Hydropower Development in Poor Areas Projects, dated on Jan. 21st, 2003, International Bank for Reconstruction and Development, submitted on Jan. 10th, 2007
15	Purchasing contract of 15 MW turbines and generators, dated on Mar, 2004, Hubei Province Nanzhang Xiakou Power Co., Ltd. and Sichuan Dongfeng Electrical Engine Manufacturer, submitted on Jan. 10th, 2007
16	Purchasing contract of 1600kW turbine and generator, dated in 2006, Hubei Province Nanzhang Xiakou Power Co., Ltd. and Zhuzhou Times Electrical Technology Co., Ltd., submitted on Jan. 10th, 2007
17	Agreement of electricity management in grid, dated in 2006, Xiangfan Grid Company, submitted on Jan. 10th, 2007
18	Power Purchasing Agreement, dated in Mar., 2006, Hubei Grid Company and Hubei Province Nanzhang Xiakou Power Co., Ltd., submitted on Jan. 10th, 2007
19	Year 2006 agreement of electricity purchasing, dated on Mar. 2nd, 2006, Hubei Grid Company and Hubei Province Nanzhang Xiakou Power Co., Ltd., submitted on Jan. 10th, 2007
20	Electricity Tariff Policy, dated on Nov. 22nd, 2006, Price Bureau of Hubei Province, submitted on Jan. 10th, 2007
21	Loan Agreement of Hubei Province Nanzhang Xiakou Hydropower Project, dated on Sept. 30th, 2005, Nanzhang County Rural Credit Cooperation (China Xinhe), the approval of releasing the loan was issuedXinhe, submitted on Sept. 29th, 2005Jan. 10th, 2007
22	Loan Agreement of Hubei Province Nanzhang Xiakou Hydropower Project, dated on Dec. 8th, 2004, Bank of China, submitted on Jan. 10th, 2007
23	Loan Agreement of Hubei Province Nanzhang Xiakou Hydropower Project, dated in 2003, Agricultural Bank of China, submitted on

Reference No.	Document or Type of Information
	Jan. 10th, 2007
24	The updated Feasibility Study Report,Re-Financial Assessment of Hubei Province Nanzhang Xiakou Hydropower Project, dated on Sept. 20th, 2006, Hubei Irrigation and Electricity Research Institution, submitted on Jan. 10th, 2007
25	Commitment of financial supports from local government, dated on July 11th, 2001, The People's Government of Nanzhang County and Hubei Water Resources Bureau, submitted on Jan. 10th, 2007
26	Confirmation letter of canceling the financial supports from local government, dated on Sept. 20th, 2006, The People's Government of Nanzhang County, submitted on Jan. 10th, 2007
27	Request for Issuance of No-objections by the World Bank to the Contract Prices Variation of Civil and Installation Works of the Xiakou Hydropower Project, dated on Sept. 8th, 2006, Hubei Province Nanzhang Xiakou Power Co., Ltd., submitted on Jan. 10th, 2007
28	Settlement Statement of the Civil and Installation Works of Xiakou Hydropower Project, dated on Sept. 8th, 2006, Hubei Province Nanzhang Xiakou Power Co., Ltd., submitted on Jan. 10th, 2007
29	Release of No-objections request, dated Sept. 21st, 2006, World Bank Group, submitted on Jan. 10th, 2007
30	Quotation of additional construction, dated on June 15th, 2006, No. 6 Construction Company, submitted on Jan. 10th, 2007
31	Training records of operation and maintenance at Danjiangkou Hydropower, Hubei Province Nanzhang Xiakou Power Co., Ltd., submitted on Jan. 10th, 2007
32	Carbon emission factor spreadsheet, Arreon Carbon UK Ltd., submitted on Dec. 26th, 2006
33	China Electric Power Yearbook 2003-2005, submitted on Jan. 10th, 2007
34	China Energy Statistical Yearbook 2000-2005, submitted on Jan. 10th, 2007
35	Financial analysis, Arreon Carbon UK Ltd., submitted on Jan. 10th, 2007
36	EIA of Hubei Xiakou Hydropower Project, dated in Dec., 1999, Wulanchabu Environmental Research Institution of Hubei Province, submitted on Jan. 10th, 2007
37	Approval of EIA, date on Jan. 7th, 2000, Hubei Environment Protection Bureau, submitted on Jan. 10th, 2007
38	Scheme of migration, dated in Aug., 2001, Huadong Design Institute, State Power Company and The People's Government of Nanzhang County, submitted on Jan. 10th, 2007
39	Agreement of migration management, dated on Dec. 1st, 2003, The People's Government of Nanzhang County and Hubei Province

Reference No.	Document or Type of Information
	Nanzhang Xiakou Power Co., Ltd., submitted on Jan. 10th, 2007
40	Payment evidence of migration action, Hubei Province Nanzhang Xiakou Power Co., Ltd., submitted on Jan. 10th, 2007
41	Questionnaire of local stakeholder comments, dated in July, 2006, China National Water Resources & Electric Power Materials & Equipment Co., Ltd., submitted on Dec. 26th, 2006
42	Yearly assessment report of project progress, dated in July, 2006, The World Bank Group, submitted on Jan. 10th, 2007
43	Monitoring report of migration, carried out by a 3rd party, submitted on July 2nd, 2007
44	Revised Project Design Document for CDM project "Hubei Xiakou Hydropower Project of Nanzhang County, Xiangfan City, Hubei province, P. R. China", version 3, submitted in Aug. 3rd, 2007
45	Recommendation of considering CDM from the Ministry of Science and Technology of People's Republic of China dated on March 23, 2005
46	Electricity tariff of Bajiaohe Hydropower, Changyang Zhaolaihe Hydropower and Enshi Datongtan Hydropower, issued by Price Bureau of Hubei Province
47	The Request for Issuance of No-objections by the World Bank to the Contract Prives Variation of Civil and Installation Works of the Xiakou Hydropower Project (the actual investments to the construction of water retaining/discharging works and headrace Words/power station have exceeded the estimated ones by 24.29% and 9.96%)
48	Report of electricity tariff of similar hydropower projects in Hubei Province, issued by Hubei Provincial Price Bureau
49	Meeting minute of stopping the construction due to the financial problem, hold by Gezhouba Sixth Engineering Co., Ltd and Hubei Province Nanzhang Xiakou Power Co., Ltd., dated on September 25th, 2005
50	Renewal loan agreement released by Nanzhang County Rural Credit Cooperation (NCRCC) considering the CDM revenue, dated on Sept. 29th, 2005
51	Meeting minute of continue the construction work with the newly approval of new loan, hold by Gezhouba Sixth Engineering Co., Ltd and Hubei Province Nanzhang Xiakou Power Co., Ltd., dated on Oct. 20th, 2005
52	Revised Project Design Document for CDM project "Hubei Xiakou Hydropower Project of Nanzhang County, Xiangfan City, Hubei province, P. R. China", version 4, completed on Nov. 21st, 2007
53	The notice to the project owner that the world bank loan was approved, dated on June 25th, 2002, issued by World Bank

Reference No.	Document or Type of Information
54	The application of loan to the construction (according to the later risk-assessment report, the application was rejected by the bank), dated on March 9th, 2005
55	Cancellation notice of the government grant issued by Hubei Water Resources Bureau, dated on July 28th, 2005
56	Agreement of developing project as per CDM with Arreon Carbon, dated on August 22nd, 2005
57	Meeting minute of stopping the construction because the cash flow broke and the ability of paying off the debt became weak, dated on Sept. 18th, 2005
58	The assessment report of the fixed assets which is required by the Nanzhang County Rural Credit Cooperation, dated on Sept. 19th, 2005
59	The assessment report of fix assets issued by Xiangzhou Xingda Capital Assessment Firm, dated on Sept. 22nd, 2005
60	Financial risk-analysis report, joint-developed by Nanzhang County Rural Credit Cooperation and project owner, dated on Sept. 27th, 2005
61	The approval of releasing an urgent loan to the project, issued by Nanzhang County Rural Credit Cooperation, dated on Sept. 29th, 2005
62	Comparison of the differences between 1999 FSR and updated report in 2006, pages copied from the updated report of 2006
63	The electricity tariff policy issued by Price Bureau of Hubei Province in 2001, the electricity tariff is 0.385 RMB/kWh
64	The electricity tariff approved by the Price Bureau of Hubei Province in 2006, the approved tariff is 0.36 RMB/kWh
65	Approval of the re-financial assessment of Hubei Province Nanzhang Xiakou Hydropower Project dated on Oct. 17th, 2006, issued by Water Resources Bureau of Hubei Province
66	Periodic financial report to World Bank (May – October, 2007), the total investment of the proposed project is 280 million RMB