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# Validation Report

ECO ASSET INC

VALIDATION OF THE CDM-PROJECT:  
Langxiang 30MW Hydro Power Project in Guizhou Province China

REPORT NO. 928077

**2008, July 04**

TÜV SÜD Industrie Service GmbH  
Carbon Management Service  
Westendstr. 199 - 80686 Munich – GERMANY

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<b>Subject:</b> Validation of a CDM Project	
<b>Accredited TÜV SÜD Unit:</b> TÜV SÜD Industrie Service GmbH Certification Body "climate and energy" Westendstr. 199 - 80686 Munich Federal Republic of Germany	<b>TÜV SÜD Contract Partner:</b> Jiangsu TÜV Product Service Ltd. Shenzhen Branch Room A01, B01 & B02, 28 <sup>th</sup> Floor Anlian Building No. 4018 Jintian Road, Futian District 518026 Shenzhen P.R. China
<b>Client:</b> Libo Lidu Hydro Power Development Co.Ltd. No.1 Zhangjiang West Road in Libo County of Qiannan Buyi & Miao Autonomous District Libo County Guizhou Province, ZIP 558400 People's Republic of China	<b>Project Site(s):</b> The geographical coordinates are 107°48'00' E and 25°10'30"N (dam), and 107°48'30" E and 25°10'54"N (powerhouse).
<b>Project Title:</b> Langxiang 30MW Hydro Power Project in Guizhou Province China	
<b>Applied Methodology / Version:</b> ACM0002 (version 6, May 19 <sup>th</sup> , 2006).	<b>Scope(s):</b> 1
<b>First PDD Version:</b> Date of issuance: 2006-12-01 Version No.: 1.0 Starting Date of GSP 2006-12-12	<b>Final PDD version:</b> Date of issuance: 2008-06-24 Version No.: 5.0
<b>Estimated Annual Emission Reduction:</b> 99,566 tons CO <sub>2</sub> e	
<b>Assessment Team Leader:</b> Dr. Sven Kolmetz	<b>Further Assessment Team Members:</b> Cuiyun Zhang Zhou Kai
<b>Summary of the Validation Opinion:</b> <p><input checked="" type="checkbox"/> 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.</p> <p><input type="checkbox"/> 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.</p>	



## Abbreviations

<b>ACM</b>	Approved Consolidated Methodology
<b>CAR</b>	Corrective Action Request
<b>CDM</b>	Clean Development Mechanism
<b>CER</b>	Certified Emission Reduction
<b>CR</b>	Clarification Request
<b>DNA</b>	Designated National Authority
<b>DOE</b>	Designated Operational Entity
<b>EB</b>	Executive Board
<b>EIA / EA</b>	Environmental Impact Assessment / Environmental Assessment
<b>ER</b>	Emission reduction
<b>GHG</b>	Greenhouse gas(es)
<b>IRR</b>	Internal Rate of Return
<b>KP</b>	Kyoto Protocol
<b>MP</b>	Monitoring Plan
<b>NGO</b>	Non Governmental Organisation
<b>PDD</b>	Project Design Document
<b>PP</b>	Project Participant
<b>TÜV SÜD</b>	TÜV SÜD Industrie Service GmbH
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>VVM</b>	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:  
Langxiang 30MW Hydro Power Project in Guizhou Province 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 Methodology (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.

<b>Validation Protocol Table 1: Conformity of Project Activity and PDD</b>				
<b>Checklist Topic / Question</b>	<b>Reference</b>	<b>Comments</b>	<b>PDD in GSP</b>	<b>Final PDD</b>
<i>The checklist is organised in sections following the arrangement of the applied PDD version. Each section is then further sub-divided. The lowest level constitutes a checklist question / criterion.</i>	<i>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.</i>	<i>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 <b>Request</b> has to be substantiated within this column</i>	<i>Conclusions are presented based on the assessment of the first PDD version. This is either acceptable based on evidence provided (☑), or a <b>Corrective Action Request (CAR)</b> due to non-compliance with the checklist question (See below). <b>Clarification Request (CR)</b> is used when the validation team has identified a need for further clarification.</i>	<i>Conclusions are presented in the same manner based on the assessment of the final PDD version.</i>

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

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

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

## 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 is written in bold letters):

Name	Qualification	Coverage of technical scope	Coverage of sectoral expertise	Host country experience
<b>Sven Kolmetz</b>	ATL	☑	☑	☑
CUIYUN ZHANG	GHG-A	☑	☑	☑
ZHOU KAI	GHG-A	☑	☑	☑

**Dr. Sven Kolmetz** is physicist and auditor 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.

**Zhou Kai** is an auditor for environmental management systems (according to ISO 14001) at TUV SUD China. He is based in Shenzhen. In his position he is responsible for the implementation of validation, verification and certifications audits for management systems. He has received training in the CDM validation process and participated already in several CDM project assessments.



## 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 December 30, 2006 TÜV SÜD performed an interview on-site with project participants 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 the on-site visit.

Name	Organisation
Yang Jie	Guizhou Libo Lidu hydro power development CO. Ltd.
Fan Zhengxiang	Guizhou Libo Lidu hydro power development CO. Ltd.
Huang Weiping	Guizhou Libo Lidu hydro power development CO. Ltd.
Dai Bing	Guizhou Libo Lidu hydro power development CO. Ltd
Deng Jun	Guizhou Libo Lidu hydro power development CO. Ltd
Tang Kai	Guizhou Zhongshui Hengyuan project consulting and management CO. Ltd .
Luo Gen	Guizhou Zhongshui Hengyuan project consulting and management 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 an 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 finding 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 May 2008 serves as the basis for the assessment presented herewith. As the project developer was involved in the development of 3 more similar projects the other projects have been prioritised. The other projects are registered meanwhile and the full attention has been paid to this last remaining project afterwards.

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**

Langxiang 30MW Hydro Power Project is located on Dagou River in Langxiang Village, Laocun Town Libo County of Qiannan Buyi & Miao Autonomous District, Guizhou Province China. It consists of a new hydropower plant of 30 MW installed capacity with reservoir. The project will displace electricity generated by mainly fossil fuel-fired power plants of the China Southern Power Grid. Expected annual GHG emission reductions are 99,566 tCO<sub>2</sub>e

#### **Findings**

In total the assessment team expressed 3 Clarification Request and 14 Corrective Action Requests.

The key findings during the validation process were related to the provision of information which was missing or not updated (CAR 1,2,3,4,5,6,8,9,10,11,12,13 and CR 2, 3). Some additional material regarding the IRR calculation, consideration of CDM for the project activity and the stakeholder consultation process had to be delivered to the DOE for clarification (CAR 7, 14 and CR 1).

Considering these findings the PDD has been revised and the actual PDD version is in compliance with the CDM requirements.

#### **Baseline calculation**

For the BM calculation the PDD adopts modified methods agreed by the EB for the approved methodology ACM0002. 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 the Revised 2006 IPCC Guidelines for National Greenhouse Gas Inventories and the Chinese yearbooks 2004-2006 as published by the Chinese DNA on August 09, 2007. These were the latest available data at the time of submission for registration. Although TUEV SUD has found some mistakes after checking input data and the calculated results of the Chinese DNA, the applied emissions factor may be accepted by the validation team, as it is more conservative as the emissions factor calculated by TUEV SUD.

## Additionality

The additionality has been evidenced by the investment analysis. The calculated project IRR (8.40 %) is clearly below the benchmark of 10 %. This shows that the project activity without CER revenues is financially not attractive. The IRR calculation has been verified by the validation team and the basic figures of the calculation have been evidenced by the feasibility study report and official documents issued by the government. The benchmark of 10 % has been proven by the document "*Economic Evaluation Code for Small Hydropower Projects (SL16-95)*". Both the evidence for the benchmark as well as the IRR calculation sheet will be uploaded together with the PDD.

Prior to begin of construction (in March 2004), an IRR calculation was made of the project activity within the Feasibility Design Report (April 2003). The IRR resulted in 11 % which was above the benchmark. However, after having commenced construction, total investment costs were increasing a lot, resulting in a decrease of the IRR to 8.40 % (see annex 2, ref. 26, dated 12/2005). The proposed project was at that time not financially attractive anymore, as below the benchmark of 10%. The increase in the investment costs has been caused by several reasons such as increased equipment costs, higher costs for the connection to the grid, reconstruction of a road to the site, geological reasons and flood damage that made it necessary to recalculate the financial situation of the project (see annex 2, ref. 26, dated 12/2005 – translation is available as well). The Directors Board decided to implement the project as CDM project which obtained the support from the DRC in Guizhou province. The consideration of CDM has been evidenced by the application letter for CDM of Langxiang hydro power to Guizhou province DRC, dated on January 10, 2006 and the Directors Board decision to implement the project as CDM project, dated on January 6, 2006 (see annex 2, ref. 25). Additional loan of 25.5 million project credit to save the project has been approved for Libo Lidu hydro power development Co. Ltd. from the Guizhou Branch of industry and business bank in China on Feb. 27, 2006 (see annex 2, ref. 22).

The assumptions of the input values have been substantiated by comparing them with the figures from other 247 CDM projects (registered and under validation).

Parameter	Project	Average
Investment/capacity [Mio. RMB/MW]	5,67	6.728
Op. Cost/capacity [Mio. RMB/MW]	0,116	0.193
Operational hours [h]	4 420	3 850
Net tariff [RMB/kWh]	0,215	0,242

As the economic figures used in the project are below the average and the operational hours are above the average it can be concluded that the IRR was not underestimated.

The sensitivity analysis has been substantiated reasonably in the PDD by discussing the impossibility of decreasing investment and O&M costs as well as increasing sales revenues. The documents referred to are available and have been verified.

Besides the investment analysis a barrier of finance has been identified. The justification of this barrier has been shown in the investment analysis.

The common practise analysis has been verified by the officially available statistics and yearbooks and it can be confirmed that state own companies have no financial risks compared to private owned companies. It can be further confirmed that the financial environment has been changed significantly in 2002 due to the deregulation of the electricity sector.

After closing all the open questions the PDD is in compliance with the CDM requirements.

#### 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:

<b>webpage:</b> <a href="http://www.netinform.de/KE/Wegweiser/Guide2_1.aspx?ID=2385&amp;Ebene1_ID=26&amp;Ebene2_ID=706&amp;mode=1">http://www.netinform.de/KE/Wegweiser/Guide2_1.aspx?ID=2385&amp;Ebene1_ID=26&amp;Ebene2_ID=706&amp;mode=1</a>	
<b>Starting date of the global stakeholder consultation process:</b> 2006-12-12	
<b>Comment submitted by:</b> None	<b>Issues raised:</b> -
<b>Response by TÜV SÜD:</b> -	

## 5 VALIDATION OPINION

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

Langxiang 30MW Hydro Power Project in Guizhou Province 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, 2008-07-04

Munich, 2008-07-04



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Certification Body "climate and energy"  
TÜV SÜD Industrie Service GmbH

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Assessment Team Leader



## **Annex 1: Validation Protocol**

## Validation Protocol

Project Title: Langxiang 30MW Hydro Power Project in Guizhou Province China

Date of Completion: July. 4<sup>th</sup> 2008

Number of Pages: 39



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**Table 1 Conformity of Project Activity and PDD**

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
<b>A. General description of project activity</b>					
<b>A.1. Title of the project activity</b>					
A.1.1.	Does the used project title clearly enable to identify the unique CDM activity?	1,2	The project is titled with the name of the project location, installed capacity and the energy source of the project. Hence, it can be clearly identified.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.1.2.	Are there any indication concerning the revision number and the date of the revision?	1,2	The available PDD for document review and on-site assessment is indicated as 1st version and has been completed in December of 2006.  <b><u>Corrective Action Request 1</u></b> The completing date should be written in dd/mm/yyyy format. Please extend this correction for the rest of the PDD.	CAR1	<input checked="" type="checkbox"/>
A.1.3.	Is this consistent with the time line of the project's history?	1,2	The same version has been published for GSP at the DOE's web-site, <a href="http://www.netinform.net">www.netinform.net</a> before the on site audit.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>A.2. Description of the project activity</b>					
A.2.1.	Is the description delivering a transparent overview of the project activities?	1,2	The proposed project is a hydropower project. The location of proposed project is on Dagou River in Langxiang Village, Laocun Town, Libo County of Qiannan Buyi & Miao Autonomous State, Guizhou Province. The construction comprises a dam, diversion penstock, a pressure adjustment well, the pressure pipeline and power house. Two generation units with the total installed capacity of 30MW will be installed at the project site. The generated power will be fed to Guizhou Provincial Power Grid, an integral part of the Southern China Grid, to displace the electricity mainly supplied by thermal power plants. During the on-site audit, the project activities described in the PDD have been proven to be correct by audit team.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
A.2.2. What proofs are available demonstrating that the project description is in compliance with the actual situation or planning?	1,2, 8, 9, 10, 11, 13, 23	<p>The following data deliver evidences for the project activity:</p> <ul style="list-style-type: none"> <li>- Purchasing contracts of turbines and generators (the supplier is: Tianjing Tianfa heavy Hydropower Devices Manufacturing Co. Ltd.);</li> <li>- Feasibility Study Report (approved by Guizhou Development and Reform Commission on Nov. 3<sup>rd</sup>, 2003)</li> <li>- Approval of the scale adjustment of Langxiang Hydropower project (Qianjinongjing(2003)820)</li> <li>- Environmental Impact Assessment of proposed project (approved by the EPB of Guizhou Province on Sept. 1, 2003)</li> <li>- Electricity purchasing contract countersigned with Guizhou Power Company</li> </ul>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.2.3. Is the information provided by these proofs consistent with the information provided by the PDD?	1,2, 25, 26	<p>The planning schedule in the past and for the future was clearly described by the directing manager of power plant. At the time of on site audit, 2 generation units (2*15MW) have been installed and are expected to be in operation soon.</p> <p><b><u>Corrective Action Request 2</u></b></p> <p>The time schedule of the implementation of the project should be included into the PDD.</p> <p><b><u>Clarification Request No. 1.</u></b></p> <p>Considering the fact that the project has started since the 4<sup>th</sup> quarter of 2003, pls. deliver the related evidence to present that the project owner has considered the possible CDM profits before launching the project activity.</p>	CAR 2 CR 1	<input checked="" type="checkbox"/>
A.2.4. Is all information presented consistent with details provided by further chapters of the PDD?	1,2	The information given in the PDD, such as, net electricity delivered to grid and annual emission reduction, are all consistent	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
			with the figures in the further chapters.		
<b>A.3. Project participants</b>					
A.3.1.	Is the form required for the indication of project participants correctly applied?	1,2	Yes. The required form is applied correctly.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.3.2.	Is the participation of the listed entities or Parties confirmed by each one of them?	1,2	<p>The project owner is Libo Lidu Hydropower Development Co., Ltd.. At the time of site visiting, the investment party has not been determined. Confirming with the project manager, it will be fixed before the request for registration.</p> <p><u>Open Issue:</u></p> <p>Pls. deliver the LoA issued by China and the DNA of investment party, as well as the MoC countersigned by both parties to the DOE before raising the request for registration.</p>	Open Issue	<input checked="" type="checkbox"/>
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)?	1,2	The detailed information of project owner presented in the annex 1 is consistent to the one in A.3.. However, refer to the Open Issue, the information of the investment party will be added into the final version of PDD for registration.	See Open Issue	<input checked="" type="checkbox"/>
<b>A.4. Technical description of the project activity</b>					
<b>A.4.1. Location of the project activity</b>					
A.4.1.1.	Does the information provided on the location of the project activity allow for a clear identification of the site(s)?	1,2	<p>It has been verified on site that the project is located on Dagou River in Langxiang Village, Laocun Town, Libo County of Qiannan Buyi &amp; Miao Autonomous State, Guizhou Province.</p> <p><b><u>Corrective Action Request 3</u></b></p> <ul style="list-style-type: none"> <li>- The exact geographical coordinates of the proposed project shall be presented in the revised PDD and be pre-</li> </ul>	CAR 3	<input checked="" type="checkbox"/>

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Project Title: Langxiang 30MW Hydro Power Project in Guizhou Province China

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
		<p>cise in second unit. Further, to increase transparency, the coordinates shall both be provided for the dam and the power house site.</p> <ul style="list-style-type: none"> <li>- For the purpose of better understanding by global reviewers, pls. use the maps in English in the revised PDD.</li> </ul>		
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.)?	1,2, 8, 9, 10, 11, 23	<p>According to the company license, the purchasing contract of devices, the approval of FSR provided by the PP, it can be ensured that the project owner can implement the project at this site.</p> <p>The more and detailed evidences are listed in the IRL.</p>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>A.4.2. Category(ies) of project activity</b>				
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 (electricity generation from renewable energy), which has been clearly identified in the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>A.4.3. Technology to be employed by the project activity</b>				
A.4.3.1. Does the technical design of the project activity reflect current good practices?	1,2	The domestic technology implemented at hydropower projects is mature in China. Therefore, all the equipments are developed and manufactured domestically. In this case, the supplier is Tianjing Tianfa heavy Hydropower Devices Manufacturing Co. Ltd. which is one of the big manufactures in China.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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?	1,2, 7	The project activity is a new hydro electric power project, which will produce power for the substitution of grid supplied electricity mainly from coal fired power plants. Doubtless, this technology will reduce GHG emissions significantly.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.3.3. Does the implementation of the project activity require any technology transfer from annex-I-countries to the host country(ies)?	1,2	In this case, the advanced domestic-made facilities are used, hence, there's no technology transfer from annex-I-countries to the host country.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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A.4.3.4. Is the technology implemented by the project activity environmentally safe?	1,2	Referring to the approved EIA, it will not cause any environmental impacts.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.3.5. Is the information provided in compliance with actual situation or planning?	1,2, 13, 14	<b><u>Corrective Action Request 4</u></b> According to the purchasing contract of generation unit, the type of generator is SF15-28/5500 and the turbine type is HLA551c-LJ-245. Pls. correct the related wrong description in Chapter 4.4.3 of PDD.	CAR 4	<input checked="" type="checkbox"/>
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?	1,2	The technology for installation of new hydropower plant has been fully developed and successfully implemented over China for decades, the technology applied in the proposed project has no difference compared to others applied in similar hydropower plants.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.3.7. Is the project technology likely to be substituted by other or more efficient technologies within the project period?	1,2	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 are under normal circumstances longer than the crediting period.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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?	1,2	To guarantee safe operation during the life time, the extensive training of maintenance of operation is required. Hence, the operators are dispatched to other hydropower plants for the on site training. The related training material has been reviewed by audit team on site.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.3.9. Is information available on the demand and requirements for training and maintenance?	1,2	Pls. kindly refer to A.4.3.8. of protocol.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.3.10. Is a schedule available for the implementation of the project and are there any risks for delays?	1,2	Referring to CAR 1, a time table of implementing the project shall be added. However, since the main construction has been accomplished, the risks of delays are insignificant.	Open	<input checked="" type="checkbox"/>
<b>A.4.4. Estimated amount of emission reductions over the chosen crediting period</b>				

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A.4.4.1. Is the form required for the indication of projected emission reductions correctly applied?	1,2	Yes, the required form is correctly applied in PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1. Are the figures provided consistent with other data presented in the PDD?	1,2	<p><b><u>Corrective Action Request 5</u></b></p> <p>The crediting period is expected to start on January. 1<sup>st</sup>, 2007, whereas, considering the on site audit is accomplished in the end of December of 2006, consequently, the registration day is impossible to be at day. Therefore, pls. modify the relative 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. Further, please confirm that the project participants don't want to commence the crediting period before registration in the PDD.</p>	CAR 5	<input checked="" type="checkbox"/>
<b>A.4.5. Public funding of the project activity</b>				
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?	1,2	According to the approved feasibility report, there's no public funding from Annex I parties. Project owner's equity capital (20%) and commercial loan from banks (80%) compose the investment of this project. The agreement approved by the Industrial and Commercial Bank of China has been submitted to audit team during the site visiting time.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.5.2. Is all information provided consistent with the details given in remaining chapters of the PDD (in particular annex 2)?	1,2	The same statement is made in both annex 2 and A.4.5.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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<b>B. Application of a baseline and monitoring methodology</b>				
<b>B.1. Title and reference of the approved baseline and monitoring methodology</b>				
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 19 <sup>th</sup> , 2006 is applied to this project. It is clearly indicated in Chapter B.1. of the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.1.2. Is the applied version the most recent one and / or is this version still applicable?	1,2	The 6 <sup>th</sup> version of ACM002 is the latest one.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>B.2. Justification of the choice of the methodology and why it is applicable to the project activity</b>				
B.2.1. Is the applied methodology considered the most appropriate one?	1,2	<p>The project activity fulfills the criteria of ACM002:</p> <ul style="list-style-type: none"> <li>- new hydro electric power projects with reservoirs having power densities of 115.8W/m<sup>2</sup> which is greater than 4 W/m<sup>2</sup></li> <li>- not involves switching from fossil fuels to renewable energy at project site;</li> <li>- the geographic and system boundaries of Southern China Grid can be clearly identified and the information of this grid is available.</li> </ul> <p>Thus, the baseline methodology is deemed to be the most applicable for this project among the existing approved baseline methodologies.</p>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Fill in the required amount of sub checklists for applicability criteria as given by the methodology applied and comment at least every line answered with "No"				
B.2.2. Criterion 1: Type of capacity addition by renewable	1,2	<div>Applicability checklist</div> <div>Yes / No</div>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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energy		Criterion discussed in the PDD?	Yes		
		Compliance provable?	Yes		
		Evidences provided in the PDD?	Yes		
		Compliance verified?	Yes		
B.2.3. Criterion 2: Exclusion of fuel switching activities	1,2	Applicability checklist	Yes / No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Criterion discussed in the PDD?	Yes		
		Compliance provable?	Yes		
		Evidences provided in the PDD?	Yes		
		Compliance verified?	Yes		
B.2.4. Criterion 3: Defined electricity grid boundaries	1,2	Applicability checklist	Yes / No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Criterion discussed in the PDD?	Yes		
		Compliance provable?	Yes		
		Evidences provided in the PDD?	Yes		
		Compliance verified?	Yes		
B.2.5. Criterion 4: Approved inclusion in other methodologies (if applied only)	1,2	Among the methodologies, ACM002 is the only one applied to this project activity. Thus, this section is not applicable.		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.3. Description of the sources and gases included in the project boundary					
Integrate the required amount of sub-checklists for sources and gases as given by the methodology applied and comment on at least every line answered with “No”					

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B.3.1. Source: Fugitive Emissions from non-condensable gases (geothermal activities only) Gas(es): CO <sub>2</sub> , CH <sub>4</sub> Type: Project Emissions		<table><tr><td>Boundary checklist</td><td>Yes / No</td></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> <p>Because the proposed project is a hydropower plant, this section not needs to be considered.</p>	Boundary checklist	Yes / No	Source and gas(es) discussed by the PDD?	N.A.	Inclusion / exclusion justified?	N.A.	Explanation / Justification sufficient?	N.A.	Consistency with monitoring plan?	N.A.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Boundary checklist	Yes / No													
Source and gas(es) discussed by the PDD?	N.A.													
Inclusion / exclusion justified?	N.A.													
Explanation / Justification sufficient?	N.A.													
Consistency with monitoring plan?	N.A.													
B.3.2. Source: Emissions from combustion of fossil fuels (geothermal activities only) Gas(es): CO <sub>2</sub> Type: Project Emissions		<table><tr><td>Boundary checklist</td><td>Yes / No</td></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> <p>Because the proposed project is a hydropower plant, this section not needs to be considered.</p>	Boundary checklist	Yes / No	Source and gas(es) discussed by the PDD?	N.A.	Inclusion / exclusion justified?	N.A.	Explanation / Justification sufficient?	N.A.	Consistency with monitoring plan?	N.A.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Boundary checklist	Yes / No													
Source and gas(es) discussed by the PDD?	N.A.													
Inclusion / exclusion justified?	N.A.													
Explanation / Justification sufficient?	N.A.													
Consistency with monitoring plan?	N.A.													
B.3.3. Source: Emissions from the reservoir (new hydroelectric activities only) Gas(es): CO <sub>2</sub> , CH <sub>4</sub> Type: Project Emissions	1,2	<table><tr><td>Boundary checklist</td><td>Yes / No</td></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>N.A.</td></tr></table> <p>Because the power density of proposed project is greater than 10 W/m<sup>2</sup>, the emission due to the reservoir not need to be considered.</p>	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.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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.													
B.3.4. Source: Emissions from electricity generation in	1,2	<table><tr><td>Boundary checklist</td><td>Yes / No</td></tr><tr><td>Source and gas(es) discussed by the PDD?</td><td>Yes</td></tr></table>	Boundary checklist	Yes / No	Source and gas(es) discussed by the PDD?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
Boundary checklist	Yes / No													
Source and gas(es) discussed by the PDD?	Yes													



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fossil fuel fired power plants of the project electricity system Gas(es): CO <sub>2</sub> Type: Baseline Emissions			Inclusion / exclusion justified?	Yes		
			Explanation / Justification sufficient?	Yes		
			Consistency with monitoring plan?	Yes		
B.3.5.	Source: Emissions from electricity generation in fossil fuel fired power plants of any connected electricity system Gas(es): CO <sub>2</sub> Type: Baseline Emissions	1,2	Boundary checklist	Yes / No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
			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 <sub>2</sub> Type: Baseline Emissions	1,2	Boundary checklist	Yes / No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
			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 not needs to be re-calculated in the 1 <sup>st</sup> 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 NDA), the connected electricity system is defined as Southern China Grid, which is also verified by auditor on site.		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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 the grid the activity will be connected to?	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 been generated by fossil-fuel-fired power plants which are con-		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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			nected to Southern 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.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>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>					
B.5.1.	In case of applying step 0 of the additionality tool: Is evidence provided, that the project's starting date is after Jan 01, 2000 and before Nov 18, 2004?	1,2,3	<b><u>Corrective Action Request 6</u></b> The 3rd version of additionality tool shall be used for the additionality analysis.	CAR 6	<input checked="" type="checkbox"/>
B.5.2.	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?	1,2,3	See B.5.1. of protocol.	Open	<input checked="" type="checkbox"/>
B.5.3.	Have realistic and credible alternatives been identified providing comparable outputs or services? (step 1a)	1,2,3	The following baseline scenarios are discussed: <ul style="list-style-type: none"> <li>- Business as usual (grid electricity supplied from Southern China Grid)</li> <li>- Installation of a coal-fired power plant with similar capacity</li> <li>- Installation of a power plant utilizing other renewable energy</li> </ul>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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			- The project itself without consideration of the CDM These are the most realistic and credible scenarios.		
B.5.4.	Is the project activity without CDM included in these alternatives? (step 1a)	1,2,3	Yes, the proposed project activity without CDM is considered as an alternative scenario.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.5.	Is a discussion provided for all identified alternatives concerning the compliance with applicable laws and regulations? (step 1b)	1,2,3	The relative regulations and laws are clearly discussed for each scenario one by one in the PDD. According to 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. On the other hand, the rest three alternatives are in compliance with the relevant Chinese laws and regulations. The Renewable Energy Law which effects on Jan. 1 <sup>st</sup> , 2006 encourages and supports renewable-based power generation.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.6.	In case the PDD argues that specific laws are not enforced in the country or region: Is evidence available concerning that statement? (step 1b)	1,2,3	All the laws quoted in PDD are enforced in this project, hence, this section is not applicable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.7.	In case of applying step 2 / investment analysis of the additionality tool: Is the analysis method identified appropriately (step 2a)?	1,2,3	3 analysis methods are provided according to the additionality tool (version 3). 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 Southern 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 "Interim Rules on the Installation and Management of Small-scale Fuel-fired Generators"	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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		is used. The IRR benchmark is set as 10%.		
B.5.8. In case of Option I (simple cost analysis): Is it demonstrated that the activity produces no economic benefits other than CDM income?	1,2,3	As described above, Option III is chosen for the investment analysis. So this section is not applicable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.9. 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)?	1,2,3	As described above, Option III is chosen for the investment analysis. This section is not applicable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.10. In case of Option III (benchmark analysis): Is the most suitable financial indicator clearly identified (IRR, NPV, cost benefit ratio, or (levelized) unit cost)?	1,2,3 , 6, 25	<p>The key parameters used for IRR calculation has been presented in Table 1 of PDD. The spreadsheet and related documents have been verified by the auditor on site. All the data are from the approved feasibility study report or the official documents issued by the government, besides the following issues:</p> <p><b><u>Corrective Action Request 7</u></b></p> <p>Unless there's additional official evidence, these policy shall be applied:</p> <ul style="list-style-type: none"> <li>- Since the CDM has been considered before implementing the project activity, the data available at that time shall be taken for the IRR calculation. In this case, the data from the approved feasibility report shall be used. Hence, the amount of total static investment, the IRR calculation period (30 years), the electricity tariff in the spreadsheet shall be revised.</li> <li>- According to the related national rules, the VAT of hydropower project with the capacity lower than 50MW is 6%.</li> </ul>	CAR 7	<input checked="" type="checkbox"/>
B.5.11. In case of Option II or Option III: Is the calculation of financial figures for this indicator correctly done for all alternatives	1,2,3	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. The IRR results are presented in the	Open	<input checked="" type="checkbox"/>

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and the project activity?		Table 2 of PDD. However, referring to the CAR 6, the calculation shall be updated with data from feasibility report.		
B.5.12. In case of Option II or Option III: Is the analysis presented in a transparent manner including publicly available proofs for the utilized data?	1,2,3	Pls. kindly see CAR 6.	Open	<input checked="" type="checkbox"/>
B.5.13. 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?	1,2,3	Besides the investment barrier, the project owner has to face the technology barrier due to the canyon terrain. In the flood season, the water level will be 5.91m higher than the outlet of tail water level. As described in PDD, a concrete flood wall around the plant will be built with drainage wells. Such problem increases the operation risks. <b><u>Clarification Request No. 2.</u></b> Pls. deliver the related evidence to audit team.	CR 2	<input checked="" type="checkbox"/>
B.5.14. In case of applying step 3 (barrier analysis): Is transparent and documented evidence provided on the existence and significance of these barriers?	1,2,3	Pls. see B.5.13. of protocol.	Open	<input checked="" type="checkbox"/>
B.5.15. 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?	1,2,3	The barrier could not present the baseline scenario.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.16. Have other activities in the host country / region similar to the project activity been identified and are these activities appropriately analyzed by the PDD (step 4a)?	1,2,3 , 36	<b><u>Corrective Action Request 8</u></b> The project listed in the Sub-step 4a of PDD is not complete. Pls. present all the similar project in Guizhou Province, which fulfills the following criteria: <ul style="list-style-type: none"><li>- is in the installed capacity range of 15MW – 100 MW, and</li><li>- has been on construction since Year 2000</li></ul>	CAR 8	<input checked="" type="checkbox"/>

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B.5.17. 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)?	1,2,3	Pls. kindly refer to B.5.16 of protocol.	Open	<input checked="" type="checkbox"/>
B.5.18. 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)?	1,2,3	Pls. kindly refer to CR 1.	Open	<input checked="" type="checkbox"/>
<b>B.6. Emissions reductions</b>				
<i>B.6.1. Explanation of methodological choices</i>				
B.6.1.1. Is it explained how the procedures provided in the methodology are applied by the proposed project activity?	1,2	<p>The ex-ante approach is chosen for the baseline emission calculation.</p> <p><b><u>Corrective Action Request 9</u></b></p> <p>The statistics yearbooks of Year 2006 have been published in April, according to the methodology, the baseline calculation shall be updated with these latest data.</p>	CAR 9	<input checked="" type="checkbox"/>
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	The justification of choosing the simple OM and option 1 for BM calculation has been clearly demonstrated in PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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	According to the methodology, the project emission due to the project activity needs not be considered. Hence, this section is not applicable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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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	Referring to Annex 3, the calculation process does strictly follow the approved methodology and clarification to BM. The quoted formulae and parameters are same to the ones from methodology and presented in the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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	Since the low-cost/must run resources constitute less than 50% of the total amount of power generation in the defined grid, furthermore, the detailed operation and dispatch data of power plants in the grid and the annual load duration curve of the grid are not available, Simple OM seems to be the only reasonable alternative for OM calculation. On the other hand, the 2 <sup>nd</sup> option for BM calculation is adopted. However, because of the limited availability of public data, an approved deviation for China is quoted and used.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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	The default weights for hydro power project ( $W_{OM}=0.5$ ; $W_{BM}=0.5$ ) defined in methodology (06 ver.) are used.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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	See B.6.1.6. of protocol.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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	According to the methodology, consideration of leakage is not required.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.1.9. Are formulae required for the determination of emission reductions correctly pre-	1,2	Formulae in the PDD are clearly presented for the determination of the emission reduction. As the project emission and leakage	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



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sented?		are both zero, the emission reduction is equal to the baseline emission.																				
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	The list is incomplete, furthermore, the latest data released in April of 2007 shall be used for the baseline calculation.  See CAR 9	Open	☑																		
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	The ex-ante approach is chosen, which is clearly stated in B.6.3 of PDD.	☑	☑																		
Fill in the required amount of sub checklists for monitoring parameter and comment any line answered with “No”																						
B.6.2.3. Parameter Title: Annual electricity supplied to the grid prior to retrofit (applicable only for retrofit and modification activities)	1	<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> The project activity is a newly installation of hydropower plant, hence this parameter is not applicable.	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.	☑	☑
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.																					
B.6.2.4. Parameter Title: Emission factor of the grid (CM)	1	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr></table>	Data Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Open	☑										
Data Checklist	Yes / No																					
Title in line with methodology?	Yes																					
Data unit correctly expressed?	Yes																					
Appropriate description of parameter?	Yes																					



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		Source clearly referenced?	Yes																				
		Correct value provided?	No																				
		Has this value been verified?	Yes																				
		Choice of data correctly justified?	Yes																				
		Measurement method correctly described?	Yes																				
		Pls. see CAR 9																					
B.6.2.5. Parameter Title: Operating margin (OM) emission factor of the grid	1	<table> <tr> <th>Data Checklist</th> <th>Yes / No</th> </tr> <tr> <td>Title in line with methodology?</td> <td>Yes</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>Yes</td> </tr> <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>No</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>		Data Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided?	No	Has this value been verified?	Yes	Choice of data correctly justified?	Yes	Measurement method correctly described?	Yes	Open	<input checked="" type="checkbox"/>
Data Checklist	Yes / No																						
Title in line with methodology?	Yes																						
Data unit correctly expressed?	Yes																						
Appropriate description of parameter?	Yes																						
Source clearly referenced?	Yes																						
Correct value provided?	No																						
Has this value been verified?	Yes																						
Choice of data correctly justified?	Yes																						
Measurement method correctly described?	Yes																						
		Pls. see CAR 9																					
B.6.2.6. Parameter Title: Build margin (BM) emission factor of the grid	1	<table> <tr> <th>Data Checklist</th> <th>Yes / No</th> </tr> <tr> <td>Title in line with methodology?</td> <td>Yes</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>Yes</td> </tr> <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>No</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> </table>		Data Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided?	No	Has this value been verified?	Yes	Choice of data correctly justified?	Yes	Open	<input checked="" type="checkbox"/>		
Data Checklist	Yes / No																						
Title in line with methodology?	Yes																						
Data unit correctly expressed?	Yes																						
Appropriate description of parameter?	Yes																						
Source clearly referenced?	Yes																						
Correct value provided?	No																						
Has this value been verified?	Yes																						
Choice of data correctly justified?	Yes																						

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		<table><tr><td>Measurement method correctly described?</td><td>Yes</td></tr></table>		Measurement method correctly described?	Yes																		
Measurement method correctly described?	Yes																						
		Pls. see CAR 9 .																					
B.6.2.7. Parameter Title: fuel consumption of each power source	1	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><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>No</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>		Data Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided?	No	Has this value been verified?	Yes	Choice of data correctly justified?	Yes	Measurement method correctly described?	Yes	Open	<input checked="" type="checkbox"/>
Data Checklist	Yes / No																						
Title in line with methodology?	Yes																						
Data unit correctly expressed?	Yes																						
Appropriate description of parameter?	Yes																						
Source clearly referenced?	Yes																						
Correct value provided?	No																						
Has this value been verified?	Yes																						
Choice of data correctly justified?	Yes																						
Measurement method correctly described?	Yes																						
		Pls. see CAR 9																					
B.6.2.8. Parameter Title: emission coefficient of each fuel	1	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><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>No</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>		Data Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided?	No	Has this value been verified?	Yes	Choice of data correctly justified?	Yes	Measurement method correctly described?	Yes	Open	<input checked="" type="checkbox"/>
Data Checklist	Yes / No																						
Title in line with methodology?	Yes																						
Data unit correctly expressed?	Yes																						
Appropriate description of parameter?	Yes																						
Source clearly referenced?	Yes																						
Correct value provided?	No																						
Has this value been verified?	Yes																						
Choice of data correctly justified?	Yes																						
Measurement method correctly described?	Yes																						
		Pls. see CAR 9																					
B.6.2.9. Parameter Title: electricity generation of each power source	1	<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></table>		Data Checklist	Yes / No	Title in line with methodology?	N.A.	Data unit correctly expressed?	N.A.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>												
Data Checklist	Yes / No																						
Title in line with methodology?	N.A.																						
Data unit correctly expressed?	N.A.																						

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		<table><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>	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.									
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.																						
		As mentioned in PDD, because the data on the five power plants built most recently are not available, an approved deviation 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.																					
B.6.2.10. Parameter Title: surface area of full reservoir level (for new hydroelectric activities only)	1	<table><tr><td>Data Checklist</td><td>Yes / No</td></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>No</td></tr><tr><td>Has this value been verified?</td><td>No</td></tr><tr><td>Choice of data correctly justified?</td><td>No</td></tr><tr><td>Measurement method correctly described?</td><td>No</td></tr></table>	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		CAR 10	<input checked="" type="checkbox"/>
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																						
		<b><u>Corrective Action Request 10</u></b> Pls. add the parameter of “surface area of full reservoir level” into the parameter list.																					
B.6.2.11. Parameter Title: fraction of time with low costs /must run	1	<table><tr><td>Data Checklist</td><td>Yes / No</td></tr></table>	Data Checklist	Yes / No		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																
Data Checklist	Yes / No																						

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plant at the margin (for simple adjusted OM only)		<table><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>	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.					
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.																						
		For this project, the simple OM is adopted as the most appropriate approach, hence, this parameter is not applicable.																					
B.6.2.12. Parameter Title: electricity imports	1	<table><tr><td>Data Checklist</td><td>Yes / No</td></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><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>	Data Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided?	Yes	Has this value been verified?	Yes	Choice of data correctly justified?	Yes	Measurement method correctly described?	Yes		CAR 11	<input checked="" type="checkbox"/>
Data Checklist	Yes / No																						
Title in line with methodology?	Yes																						
Data unit correctly expressed?	Yes																						
Appropriate description of parameter?	Yes																						
Source clearly referenced?	Yes																						
Correct value provided?	Yes																						
Has this value been verified?	Yes																						
Choice of data correctly justified?	Yes																						
Measurement method correctly described?	Yes																						
		<b><u>Corrective Action Request 11</u></b> Pls. add the parameter of “electricity imports” into the list in Chapter B.6.2. of PDD.																					
B.6.2.13. Parameter Title: CO <sub>2</sub> emission coefficient of fuels used in connected grids	1	<table><tr><td>Data Checklist</td><td>Yes / No</td></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></table>	Data Checklist	Yes / No	Title in line with methodology?	No	Data unit correctly expressed?	No	Appropriate description of parameter?	No		CAR 12	<input checked="" type="checkbox"/>										
Data Checklist	Yes / No																						
Title in line with methodology?	No																						
Data unit correctly expressed?	No																						
Appropriate description of parameter?	No																						

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		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		
		<b><u>Corrective Action Request 12</u></b> Pls. add the parameter of “CO2 emission coefficient of fuels used in connected grids” into the parameter list.			
<b>B.6.3. Ex-ante calculation of emission reductions</b>					
B.6.3.1. Is the projection based on the same procedures as used for future monitoring?	1,2	Yes, because the ex-ante approach is adopted for calculation, the emission factor of the defined grid will not be changed in the 1 <sup>st</sup> crediting period. Therefore, the net electricity fed to grid will be the key parameter to determine the annual baseline emission, namely, the annual projection.		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.3.2. Are the GHG calculations documented in a complete and transparent manner?	1,2	Yes, the calculation processes are completely demonstrated and consistent with the ones of Annex 3. Whereas, the calculation shall be updated with the latest data.  Pls. see CAR 9		Open	<input checked="" type="checkbox"/>
B.6.3.3. Is the data provided in this section consistent with data as presented in other chapters of the PDD?	1,2	The emission factor of defined grid and annual emission reduction are consistent with the figures in other chapters of PDD.		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>B.6.4. Summary of the ex-ante estimation of emission reductions</b>					
B.6.4.1. Will the project result in fewer GHG emissions than the baseline scenario?	1,2	Demonstrated in the PDD, being a hydropower plant, the project emission is much lower than the baseline emission.		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.4.2. Is the form/table required for the indication of projected emission reductions correctly applied?	1,2	Yes, the table is complete, which includes the emission due to the project activity, baseline emission, leakage emission and the overall emission reduction. However, refer to CAR 5, the starting		Open	<input checked="" type="checkbox"/>

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		date of crediting period shall be revised.										
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	The life time of the project is expected to be 30 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. table in PDD.	☑	☑								
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	The yearly baseline emission is equal to the annual emission reduction. A same figure is in consistency in the entire PDD.	☑	☑								
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?	1,2, 32	Because the ex-ante approach is implemented, the net electricity fed to the grid is the only one parameter required to be monitored.  <b><u>Corrective Action Request 13</u></b> <ul style="list-style-type: none"><li>- Pls. add a diagram which could clearly show the location of all the related meters and the accuracy of meters into the revised PDD.</li><li>- Pls. present the accuracy of electricity meters in the related description in PDD.</li><li>- The exact calibration of meters shall be included in the chapter B.7.2.</li></ul>	CAR 13	☑								
Integrate the required amount of sub-checklists for monitoring parameter and comment on any line answered with “No”												
B.7.1.2. Parameter Title: Electricity supplied to the grid	1,2	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr></table>	Monitoring Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Open	☑
Monitoring Checklist	Yes / No											
Title in line with methodology?	Yes											
Data unit correctly expressed?	Yes											
Appropriate description of parameter?	Yes											

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		<table><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided for estimation?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>No</td></tr><tr><td>Correct reference to standards?</td><td>Yes</td></tr><tr><td>Indication of accuracy provided?</td><td>Yes</td></tr><tr><td>QA/QC procedures described?</td><td>Yes</td></tr><tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr></table>	Source clearly referenced?	Yes	Correct value provided for estimation?	Yes	Has this value been verified?	Yes	Measurement method correctly described?	No	Correct reference to standards?	Yes	Indication of accuracy provided?	Yes	QA/QC procedures described?	Yes	QA/QC procedures appropriate?	Yes											
Source clearly referenced?	Yes																												
Correct value provided for estimation?	Yes																												
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Measurement method correctly described?	No																												
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Indication of accuracy provided?	Yes																												
QA/QC procedures described?	Yes																												
QA/QC procedures appropriate?	Yes																												
		Pls. see CAR 13																											
B.7.1.3. Parameter Title: Quantity of steam produced (for geothermal projects only)	1,2	<table><tr><td>Monitoring Checklist</td><td>Yes / No</td></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 for estimation?</td><td>N.A.</td></tr><tr><td>Has this value been verified?</td><td>N.A.</td></tr><tr><td>Measurement method correctly described?</td><td>N.A.</td></tr><tr><td>Correct reference to standards?</td><td>N.A.</td></tr><tr><td>Indication of accuracy provided?</td><td>N.A.</td></tr><tr><td>QA/QC procedures described?</td><td>N.A.</td></tr><tr><td>QA/QC procedures appropriate?</td><td>N.A.</td></tr></table>	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.		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Monitoring Checklist	Yes / No																												
Title in line with methodology?	N.A.																												
Data unit correctly expressed?	N.A.																												
Appropriate description of parameter?	N.A.																												
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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 <sub>2</sub> in steam produced (for geothermal projects only)	1,2	<table><tr><td>Monitoring Checklist</td><td>Yes / No</td></tr><tr><td>Title in line with methodology?</td><td>N.A.</td></tr></table>	Monitoring Checklist	Yes / No	Title in line with methodology?	N.A.		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																				
Monitoring Checklist	Yes / No																												
Title in line with methodology?	N.A.																												

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		<table><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 for estimation?</td><td>N.A.</td></tr><tr><td>Has this value been verified?</td><td>N.A.</td></tr><tr><td>Measurement method correctly described?</td><td>N.A.</td></tr><tr><td>Correct reference to standards?</td><td>N.A.</td></tr><tr><td>Indication of accuracy provided?</td><td>N.A.</td></tr><tr><td>QA/QC procedures described?</td><td>N.A.</td></tr><tr><td>QA/QC procedures appropriate?</td><td>N.A.</td></tr></table>	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.							
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 <sub>4</sub> in steam produced (for geothermal projects only)	1,2	<table><tr><th>Monitoring 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 for estimation?</td><td>N.A.</td></tr><tr><td>Has this value been verified?</td><td>N.A.</td></tr><tr><td>Measurement method correctly described?</td><td>N.A.</td></tr><tr><td>Correct reference to standards?</td><td>N.A.</td></tr><tr><td>Indication of accuracy provided?</td><td>N.A.</td></tr><tr><td>QA/QC procedures described?</td><td>N.A.</td></tr><tr><td>QA/QC procedures appropriate?</td><td>N.A.</td></tr></table>	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.		☑	☑
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.7.1.6. Parameter Title:	1,2			☑	☑																								



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Quantity of steam generated during well testing (for geothermal projects only)		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 <sub>2</sub> in steam during well testing (for geothermal projects only)	1,2	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			

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD																								
		hydropower plant.																										
B.7.1.8. Parameter Title: Fraction of CH <sub>4</sub> in steam during well testing (for geothermal projects only)	1,2	<table><tr><th>Monitoring 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 for estimation?</td><td>N.A.</td></tr><tr><td>Has this value been verified?</td><td>N.A.</td></tr><tr><td>Measurement method correctly described?</td><td>N.A.</td></tr><tr><td>Correct reference to standards?</td><td>N.A.</td></tr><tr><td>Indication of accuracy provided?</td><td>N.A.</td></tr><tr><td>QA/QC procedures described?</td><td>N.A.</td></tr><tr><td>QA/QC procedures appropriate?</td><td>N.A.</td></tr></table> <p>This parameter needs not be considered, because the activity is a hydropower project.</p>	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.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Monitoring Checklist	Yes / No																											
Title in line with methodology?	N.A.																											
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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.																											
B.7.1.9. Parameter Title: CO <sub>2</sub> emission coefficient of fuel used by the geothermal plant (for geothermal projects only)	1,2	<table><tr><th>Monitoring 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 for estimation?</td><td>N.A.</td></tr><tr><td>Has this value been verified?</td><td>N.A.</td></tr><tr><td>Measurement method correctly described?</td><td>N.A.</td></tr><tr><td>Correct reference to standards?</td><td>N.A.</td></tr><tr><td>Indication of accuracy provided?</td><td>N.A.</td></tr><tr><td>QA/QC procedures described?</td><td>N.A.</td></tr><tr><td>QA/QC procedures appropriate?</td><td>N.A.</td></tr></table>	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.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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QA/QC procedures appropriate?	N.A.																											

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		This parameter needs not be considered, because the activity is a hydropower project.		
<b>B.7.2. Description of the monitoring plan</b>				
B.7.2.1. Is the operational and management structure clearly described and in compliance with the envisioned situation?	1,2	The project owner will organize the special CDM project department and authorize the CDM project manager to take charge of the monitoring activity. The structure of the CDM project department is shown in PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.7.2.2. Are responsibilities and institutional arrangements for data collection and archiving clearly provided?	1,2	The management structure of monitoring the electricity fed to grid is clearly presented in PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.7.2.3. Does the monitoring plan provide current good monitoring practice?	1,2	The calibration process and standard fulfil the industry standard in China and the monitoring process is a common procedure which is generally adopted by local companies.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.7.2.4. If applicable: Does annex 4 provide useful information enabling a better understanding of the envisioned monitoring provisions?	1,2	There's no additional information provided in annex 4, so this section is not applicable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>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>				
B.8.1. Is there any indication of a date when the baseline was determined?	1,2	The baseline is determined on 01/12 2006.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.8.2. Is this consistent with the time line of the PDD history?	1,2	This is the date before completing the 1st version of PDD which is also used for GSP and on site audit.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.8.3. Is the information on the person(s) / entity(ies) responsible for the application of the baseline and monitoring methodology	1,2	Yes. The responsible persons indicated in PDD are also the ones being interviewed for baseline verification during the on site audit.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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provided consistent with the actual situation?				
B.8.4. Is information provided whether this person / entity is also considered a project participant?	1,2	Beijing Haohua Rivers International Water engineering consulting Co., Ltd. is not the participants, but CDM developer and consultants.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>C. Duration of the project activity / crediting period</b>				
<b>C.1. Duration of the project activity</b>				
C.1.1. Are the project's starting date and operational lifetime clearly defined and reasonable?	1,2	The starting date of construction and the lifetime are clearly presented in the C section of PDD. Whereas, pls. kindly check the CAR 5 for revision.	Open	<input checked="" type="checkbox"/>
<b>C.2. Choice of the crediting period and related information</b>				
C.2.1. Is the assumed crediting time clearly defined and reasonable (renewable crediting period of max 7 years with potential for 2 renewals or fixed crediting period of max. 10 years)?	1,2	The life time of the project is 30 years. Confirming with the provided evidence, such as purchasing contract, business plan, validator has the confidence that it's reasonable. Therefore, the max. 7 years with potential for 2 renewals is chosen as the crediting period.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>D. Environmental impacts</b>				
<b>D.1. Documentation on the analysis of the environmental impacts, including transboundary impacts</b>				
D.1.1. Has the analysis of the environmental impacts of the project activity been sufficiently described?	1,2	Yes, the environmental impacts of the project activity such as noise, visual impacts, ecosystem, land use, air quality and water usage have been clearly described in the EIA and fully presented in the PDD. <b>Clarification Request No. 3.</b>	CR 3	<input checked="" type="checkbox"/>

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			According to the approved EIA, the project activity shall guarantee the minimal ecology flow of 0.26m <sup>3</sup> /s. Pls. kindly give the detailed explanation on what kind of action or plan is taken to fulfill this requirement.		
D.1.2.	Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, has an EIA been approved?	1,2, 24	Yes, EIA is a must in P. R. China for installation of a new hydro-power plant. The EIA survey which was carried out by the authorized organization was approved by the EPB of Guizhou Province in 2003. All the documents have been reviewed by DOE.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.1.3.	Will the project create any adverse environmental effects?	1,2, 24	Referred to the approved EIA, the project will create no negative environmental impacts.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.1.4.	Were transboundary environmental impacts identified in the analysis?	1,2, 24	The proposed plant locates within China, hence, this section is not applicable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>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</b>					
D.2.1.	Have the identified environmental impacts been addressed in the project design sufficiently?	1,2, 24	Referred to the EIA and the approved document, the impacts on the environment are not significant.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.2.2.	Does the project comply with environmental legislation in the host country?	1,2, 24	Yes, it does.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>E. Stakeholders' comments</b>					
<b>E.1. Brief description how comments by local stakeholders have been invited and compiled</b>					
E.1.1.	Have relevant stakeholders been consulted?	1,2, 30	<b><u>Corrective Action Request 14</u></b> A survey was carried out while preparing the EIA, however, be-	CAR 14	<input checked="" type="checkbox"/>

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			cause it only concentrates on the environmental impacts due to the project activity. In other words, the stakeholders had not been consulted with CDM issues, the local stakeholder process is not complete. An additional introduction of CDM and the relevant impacts of the proposed project shall be delivered to the stakeholders by appropriate media. And the feedbacks shall be collected, analyzed and documented.		
E.1.2.	Have appropriate media been used to invite comments by local stakeholders?	1,2	Pls. kindly refer to E.1.1. of protocol.	Open	<input checked="" type="checkbox"/>
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?	1,2	There are no regulations/laws in China for carrying out the stakeholder consultation process for this project activity.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.1.4.	Is the undertaken stakeholder process that was carried out described in a complete and transparent manner?	1,2	Pls. kindly refer to E.1.1. of protocol.	Open	<input checked="" type="checkbox"/>
<b>E.2. Summary of the comments received</b>					
E.2.1.	Is a summary of the stakeholder comments received provided?	1,2	Pls. kindly refer to E.1.1. of protocol.	Open	<input checked="" type="checkbox"/>
<b>E.3. Report on how due account was taken of any comments received</b>					
E.3.1.	Has due account been taken of any stakeholder comments received?	1,2	Pls. kindly refer to E.1.1. of protocol.	Open	<input checked="" type="checkbox"/>

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<b>F. Annexes 1 - 4</b>					
<b>Annex 1: Contact Information</b>					
F.1.1.	Is the information provided consistent with the one given under section A.3?	1,2	Please see A.3.2. of protocol	Open Issue	<input checked="" type="checkbox"/>
F.1.2.	Is the information on all private participants and directly involved Parties presented?	1,2	Please see A.3.2. of protocol	Open Issue	<input checked="" type="checkbox"/>
<b>Annex 2: Information regarding public funding</b>					
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?	1,2	Yes. Please see the A.4.5.1 of protocol.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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?	1,2	Not applicable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Annex 3: Baseline information</b>					
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?	1,2	All the data source and applied formulae are completely demonstrated in Chapter B of the PDD, hence, there's no additional background information provided in Annex 3. During the on site assessment, the spreadsheet has been completely verified by the auditor. However, since the statistics yearbooks in 2006 have been published in April of 2007, the calculation shall be updated. See CAR 9	Open	<input checked="" type="checkbox"/>

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F.1.6.	Is the data provided verifiable? Has sufficient evidence been provided to the validation team?	1,2	Yes. The detailed calculation processes and related data source have been given to audit team for verification.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.1.7.	Does the additional information substantiate / support statements given in other sections of the PDD?	1,2	The information from Annex 3 is consistent with the statements given in other sections of the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Annex 4: Monitoring information</b>					
F.1.8.	If additional background information on monitoring is provided: Is this information consistent with data presented in other sections of the PDD?	1,2	Pls. kindly refer to CAR 13	Open	<input checked="" type="checkbox"/>
F.1.9.	Is the information provided verifiable? Has sufficient evidence been provided to the validation team?	1,2	Pls. kindly refer to CAR 13	Open	<input checked="" type="checkbox"/>
F.1.10.	Do the additional information and / or documented procedures substantiate / support statements given in other sections of the PDD?	1,2	Pls. kindly refer to CAR 13	Open	<input checked="" type="checkbox"/>



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**Table 2 Resolution of Corrective Action and Clarification Requests**

Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
CARs			
<p>The available PDD for document review and on-site assessment is indicated as 1st version and has been completed in December of 2006.</p> <p><b><u>Corrective Action Request 1</u></b></p> <p>The completing date should be written in dd/mm/yyyy format. Please extend this correction for the rest of the PDD.</p>	A.1.2	The date is written in dd/mm/yy format in Section A.1 of revised PDD.	<p>☑</p> <p>In A.1, B.8 and C.2.1 the format is revised.</p>
<p>The planning schedule in the past and for the future was clearly described by the directing manager of power plant. At the time of on site audit, 2 generation units (2*15MW) have been installed and are expected to be in operation soon.</p> <p><b><u>Corrective Action Request 2</u></b></p> <p>The time schedule of the implementation of the project should be included into the PDD.</p>	A.2.3	The time schedule of the implementation has been added in section A.4.3. table 2	<p>☑</p> <p>In the table 2 of the section A.4.3 the time schedule has been added. The related evidences have been provided and verified.</p>
<p>It has been verified on site that the project is located on Dagou River in Langxiang Village, Laocun Town, Libo County of Qiannan Buyi &amp; Miao Autonomous State, Guizhou Province.</p> <p><b><u>Corrective Action Request 3</u></b></p> <ul style="list-style-type: none"> <li>- The exact geographical coordinates of the proposed project shall be presented in the revised PDD and be precise in second unit. Further, to in-</li> </ul>	A.4.1.1	The exact geographical coordinates of the proposed project have been added in section A.4.1.1. The geographical coordinates of the dam are 107°48'00' E and 25°10'30"N, and the geographical coordinates of the powerhouse are 107°48'30" E and 25°10'54"N. The map in English has been appended in section A4.1.	<p>☑</p> <p>It has been verified by the local auditor.</p>

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crease transparency, the coordinates shall both be provided for the dam and the power house site.  - For the purpose of better understanding by global reviewers, pls. use the maps in English in the revised PDD.			
<b><u>Corrective Action Request 4</u></b> According to the purchasing contract of generation unit, the type of generator is SF15-28/5500 and the turbine type is HLA551c-LJ-245. Pls. correct the related wrong description in Chapter 4.4.3 of PDD.	A.4.3.5	All the information has been revised in section A.4.3.	<input checked="" type="checkbox"/>  No. 13 and 14 of IRL
<b><u>Corrective Action Request 5</u></b> The crediting period is expected to start on January. 1 <sup>st</sup> , 2007, whereas, considering the on site audit is accomplished in the end of December of 2006, consequently, the registration day is impossible to be at day. Therefore, pls. modify the relative 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. Further, please confirm that the project participants don't want to commence the crediting period before registration in the PDD.	A.4.4.2	The starting date of the first crediting period on 01/08/2008 or after the date of registration whatever is later. The related information is revised in section A.4.3 and B.6.4 and C.2.1.1.	<input checked="" type="checkbox"/>  revised
<b><u>Corrective Action Request 6</u></b> The 3rd version of additionality tool shall be used for the additionality analysis.	B.5.1	The version 3 of "Tool for the demonstration and Assessment of Additionality" is updated in Section B.5 of revised PDD.	<input checked="" type="checkbox"/>  revised
The key parameters used for IRR calculation has been presented in Table 1 of PDD. The spreadsheet and related documents have	B.5.10	The Small Hydropower Projects operation period is 20 years, which is stipulated in the <i>Economic Evaluation Code for Small Hydropower Projects</i> (SL16-95).	<input checked="" type="checkbox"/>  The operational period 30years has been adopted

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<p>been verified by the auditor on site. All the data are from the approved feasibility study report or the official documents issued by the government, besides the following issues:</p> <p><b><u>Corrective Action Request 7</u></b></p> <p>Unless there's additional official evidence, these policy shall be applied:</p> <ul style="list-style-type: none"> <li>- Since the CDM has been considered before implementing the project activity, the data available at that time shall be taken for the IRR calculation. In this case, the data from the approved feasibility report shall be used. Hence, the amount of total static investment, the IRR calculation period (30 years), the electricity tariff in the spreadsheet shall be revised.</li> <li>- According to the related national rules, the VAT of hydropower project with the capacity lower than 50MW is 6%.</li> </ul>		<p>The starting date of the project was on March of 2004. The date of the project owner considered CDM is on Jan. 6 2007. according to the records of directorate. And on Jan. 13 the DRC of Guizhou province approved the CDM application of the proposal project. The reason for applying CDM is the barrier of investment. The barrier evidence have been delivered to the DOE.</p> <p>The value added tax document of Hydropower station will provide to DOE together with the revised PDD. It has been delivered to the DOE.</p>	<p>according to the FSR.</p> <p>The evidences have been verified by the local auditor.</p> <p>Please refer to No. 6, 25,</p>
<p><b><u>Corrective Action Request 8</u></b></p> <p>The project listed in the Sub-step 4a of PDD is not complete. Pls. present all the similar project in Guizhou Province, which fulfills the following criteria:</p> <ul style="list-style-type: none"> <li>- is in the installed capacity range of 15MW – 100 MW, and</li> <li>- has been on construction since Year 2000</li> </ul>	B.5.16	<p>The section B.5 has already been revised in the revised PDD.</p> <p>According to China Hydro Electric Project Classification Standard which claims that the projects with the installed capacity(0.5MW-50MW) falls into the small scale hydropower ones and small scale CDM project methodology for grid-connected electricity generation from renewable sources which claims that the projects with the installed capacity &gt;15MW falls into the large scale hydropower ones, the hydropower plant with the installed capacity(15MW-50MW) is adopted to make the common practice analysis,</p>	<p><input checked="" type="checkbox"/></p> <p>No. 36 of IRL</p>
The ex-ante approach is chosen for the base-	B.6.1.1	The emission factor of China Southern Power Grid is	<input checked="" type="checkbox"/>

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line emission calculation.  <b><u>Corrective Action Request 9</u></b>  The statistics yearbooks of Year 2006 have been published in April, according to the methodology, the baseline calculation shall be updated with these latest data.		recalculated in Section B.6 and Annex 3 of revised PDD by using the latest data.	It has been verified.
<b><u>Corrective Action Request 10</u></b> Pls. add the parameter of "surface area of full reservoir level" into the parameter list.	B.6.2.10	The parameter table of the surface area of full reservoir level has been listed in section B.6.2.	<input checked="" type="checkbox"/>
<b><u>Corrective Action Request 11</u></b> Pls. add the parameter of "electricity imports" into the list in Chapter B.6.2. of PDD.	B.6.2.12	The parameter table of the electricity imports has been listed in section B.6.2.	<input checked="" type="checkbox"/>
<b><u>Corrective Action Request 12</u></b> Pls. add the parameter of "CO2 emission coefficient of fuels used in connected grids" into the parameter list.	B.6.2.13	The parameter table of the CO2 emission coefficient of fuels used in connected grids has been listed in section B.6.2.	<input checked="" type="checkbox"/>
Because the ex-ante approach is implemented, the net electricity fed to the grid is the only one parameter required to be monitored.  <b><u>Corrective Action Request 13</u></b>  <ul style="list-style-type: none"> <li>- Pls. add a diagram which could clearly show the location of all the related meters and the accuracy of meters into the revised PDD.</li> <li>- Pls. present the accuracy of electricity meters in the related description in PDD.</li> <li>- The exact calibration of meters shall be included in the chapter B.7.2.</li> </ul>	B.7.1.1	The detailed monitoring procedures, calibration and measurement plan of the instruments and equipments has been bewrited in the monitoring handbook. The monitoring handbook is provided to the DOE.	<input checked="" type="checkbox"/>  The evidence has been verified.  No. 32 of IRL.

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<p><b><u>Corrective Action Request 14</u></b></p> <p>A survey was carried out while preparing the EIA, however, because it only concentrates on the environmental impacts due to the project activity. In other words, the stakeholders had not been consulted with CDM issues, the local stakeholder process is not complete. An additional introduction of CDM and the relevant impacts of the proposed project shall be delivered to the stakeholders by appropriate media. And the feedbacks shall be collected, analyzed and documented.</p>	<p>E.1.1</p>	<p>In order to know the public's opinions and suggestions about the proposed project, the project owner held a symposium with local government and local residents to consult the stakeholders in January 2006. the project owner handed out the questionnaires of the public opinions about the proposed project in March 2006. Furthermore, The project owner published the <i>Suggestion Consultation of langxiang Hydropower Plant CDM Project on Qiannan Daily</i> on 8 January, 2007. All the documents will provide to DOE together with the revised PDD.</p>	<p><input checked="" type="checkbox"/></p> <p>The evidences have been provided and verified.</p> <p>No. 30 of IRL</p>
<p>CRs</p>			
<p><b><u>Clarification Request No. 4.</u></b></p> <p>Considering the fact that the project has started since the 4<sup>th</sup> quarter of 2003, pls. deliver the related evidence to present that the project owner has considered the possible CDM profits before launching the project activity.</p>	<p>A.2.3</p>	<p>The starting date of construction on March 2004, afterward the owner found the fact total investment maybe exceed the intending total investment, the project IRR is much lower and the project owner had to suspend the development of the proposed project. In order to solve the financing barriers, the project owner applied for the CDM project to the local DRC and obtained the approval in January 2006. The document of consideration CDM will provide to DOE.</p>	<p><input checked="" type="checkbox"/></p> <p>The evidences have been provided and verified.</p> <p>No. 25, 26 of IRL</p>
<p>Besides the investment barrier, the project owner has to face the technology barrier due to the canyon terrain. In the flood season, the water level will be 5.91m higher than the outlet of tail water level. As described in PDD, a concrete flood wall around the plant will be built with drainage wells. Such problem increases the operation risks.</p> <p><b><u>Clarification Request No. 5.</u></b></p>	<p>B.5.13</p>	<p>All the descriptions have been revised in the section B.5, No new evidence have to be provided to DOE.</p>	<p><input checked="" type="checkbox"/></p>

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Pls. deliver the related evidence to audit team.			
<p>Yes, the environmental impacts of the project activity such as noise, visual impacts, eco-system, land use, air quality and water usage have been clearly described in the EIA and fully presented in the PDD.</p> <p><b><u>Clarification Request No. 6.</u></b></p> <p>According to the approved EIA, the project activity shall guarantee the minimal ecology flow of 0.26m<sup>3</sup>/s. Pls. kindly give the detailed explanation on what kind of action or plan is taken to fulfill this requirement.</p>	D.1.1	The proposed project activity shall guarantee the minimal ecology flow of 0.26m <sup>3</sup> /s. There is a drainage hole on the dam, when the downstream flow less than 0.26m <sup>3</sup> /s, the station operational staffer will open the drainage hole to guarantee the ecology flow.	<p>☑</p> <p>Has been checked by the auditor and has to be confirmed by the verifier.</p>




## **Annex 2: Information Reference List**


Final Report 2008-07-04	Validation of the “Langxiang 30MW Hydro Power Project in Guizhou Province China “ Information Reference List	Page 1 of 4	
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Reference No.	Document or Type of Information																									
1	Project Design Document for CDM project “Langxiang 30MW Hydro Power Project in Guizhou Province China”, finalized on Dec. 1, 2006, submitted on Dec. 4 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 03																									
4	Participant list of on-site interview, signed on Dec. 30 <sup>th</sup> , 2006																									
5	<div>On-site interviews and inspection at the office conducted on Dec. 30, 2006 by validators of TÜV SÜD.</div> <div>Validation team:</div> <table><tr><td>Cuiyun Zhang</td><td>Jiangsu TUV Product Service Ltd.</td></tr><tr><td>Kai Zhou</td><td>Jiangsu TUV Product Service Ltd.</td></tr></table> <div>Interviewed persons:</div> <table><tr><td>Yang Jie</td><td>Guizhou Llbo Lidu hydro power development CO. Ltd</td><td>General manager</td></tr><tr><td>Fan Zhengxiang</td><td>Guizhou Llbo Lidu hydro power development CO. Ltd</td><td>General engineer</td></tr><tr><td>Huang Weiping</td><td>Guizhou Llbo Lidu hydro power development CO. Ltd</td><td>Leader of finance department</td></tr><tr><td>Dai Bing</td><td>Guizhou Llbo Lidu hydro power development CO. Ltd</td><td>Leader of construction management</td></tr><tr><td>Deng Jun</td><td>Guizhou Llbo Lidu hydro power development CO. Ltd</td><td>Leader of office</td></tr><tr><td>Tang Kai</td><td>Guizhou Zhongshui Hengyuan project consulting and management CO. Ltd</td><td>Engineer</td></tr><tr><td>Luo Gen</td><td>Guizhou Zhongshui Hengyuan project consulting and management CO. Ltd</td><td>Vice-general manager</td></tr></table>	Cuiyun Zhang	Jiangsu TUV Product Service Ltd.	Kai Zhou	Jiangsu TUV Product Service Ltd.	Yang Jie	Guizhou Llbo Lidu hydro power development CO. Ltd	General manager	Fan Zhengxiang	Guizhou Llbo Lidu hydro power development CO. Ltd	General engineer	Huang Weiping	Guizhou Llbo Lidu hydro power development CO. Ltd	Leader of finance department	Dai Bing	Guizhou Llbo Lidu hydro power development CO. Ltd	Leader of construction management	Deng Jun	Guizhou Llbo Lidu hydro power development CO. Ltd	Leader of office	Tang Kai	Guizhou Zhongshui Hengyuan project consulting and management CO. Ltd	Engineer	Luo Gen	Guizhou Zhongshui Hengyuan project consulting and management CO. Ltd	Vice-general manager
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Luo Gen	Guizhou Zhongshui Hengyuan project consulting and management CO. Ltd	Vice-general manager																								
6	Feasibility report of Langxiang 30MW hydro power project, dated in April 2003, Guizhou province survey design and research institute for water source and hydro power, submitted on Dec. 30 2006																									
7	preliminary design report of Langxiang 30MW hydro power project, dated in Oct. 2003, Guizhou province survey design and research institute for water source and hydro power, submitted on Dec. 30 200f6																									
8	Approval of feasibility report, released by Development and Reform Commission of Guizhou Province, submitted on Sept. 15 <sup>th</sup> , 2006																									




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Reference No.	Document or Type of Information
9	Approval of suggestion letter of Langxiang hydro power project, dated on Sept. 18, 2002, the development and plan committee in Guizhou, Qianjinongjing(2002)922, submitted on Dec. 30 2006
10	Approval of the scale adjustment of Langxiang hydro power project, dated on August 8, 2003, the development and plan committee in Guizhou, Qianjinongjing(2003)820, submitted on Dec. 30 2006
11	Approval of the feasibility report of Langxiang hydro power project. Dated on Nov. 3, 2003, the development and plan committee in Guizhou, Qianjinongjing(2003)1107, submitted on Dec. 30 2006
12	Assessment suggestion of general outline of EIA of Langxiang hydro power project, dated March 17, 2003, Guizhou environmental engineering evaluation centre, Qianhuanpinggugang(2003)12, submitted on Dec. 30 2006.
13	The purchasing contract of generator unit of Langxiang hydro power project, dated on Feb. 6, 2004, the supplier of the devices is Tianjing Tianfa heavy hydro power devices manufacturing Co. Ltd. Submitted on Dec. 30 2006.
14	The purchasing contract of transform of Langxiang hydro power project, dated on August 17 2004, the supplier of the devices is Chongqing Bolian transform Co. Ltd.
15	Approval of connection to Guizhou electricity grid of Langxiang hydro power project, dated on May 8, 2003, the plan and development department of Guizhou electricity power company, Dianliji(2003)27, submitted on Dec. 30 2006
16	Agreement of connection to Guizhou electricity grid with Guizhou electricity power company, dated in Feb. 2006, Guizhou electricity power company, submitted on Dec. 30 2006.
17	Training material of employees of Langxiang hydro power project, submitted on Dec. 30 2006
18	Permission certificate of construction engineering programming, dated on Sept. 10 2003, Programming management office in Libo county, submitted on Dec. 30 2006
19	Permission certificate of construction ground, dated on Sept. 10 2003, Programming management office in Libo county, submitted on Dec. 30 2006
20	Agreement of commission assart, dated on April 9, 2004, development centre of country sources in Libo county, submitted on Dec. 30 2006.
21	Notice letter of credit approval from Guizhou Branch of industry and business bank in China, Gongyingqianxinshen(2003)1126, on Dec.17, 2003, submitted on Dec. 30 2006

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Reference No.	Document or Type of Information
22	Approval of 25.5 million project credit about Libo Lidu hydro power development Co. Ltd. From Guizhou Branch of industry and business bank in China. Gongyingqianshenpi(2006)65, on Feb. 27, 2006, submitted on Dec. 30 2006
23	Approval of EIA about Libo county Dagou river Langxiang hydro power project, Qianhuanhan(2003)152, approved by environmental protection bureau in Guizhou, dated on Sept. 1, 2003, submitted on Dec. 30 2006
24	EIA, dated in July, 2003, Guizhou province survey design and research institute for water source and hydro power, submitted on Dec. 30 2006
25	The evidence of CDM consideration: application letter for CDM of Langxiang hydro power to Guizhou province DRC, dated on Jan. 10 2006, the directorate of consideration CDM, dated on Jan, 6 2006,
26	The report of total investment increasing, Changjiang water power committee supervising central Langxiang hydropower station engineering construction supervising station, dated on Dec. 30, 2004, submitted on October 18 2007.
27	The license of starting to construct, dated on March 1, 2004, submitted on October 18 2007.
28	The evidence of no resettlement due to the proposal project, Changjiang water power committee supervising central Langxiang hydropower station engineering construction supervising station, dated on Sept. 30 2007, submitted on October 18 2007.
29	The evidence of electricity price for the proposal project, dated in June 2004, the NDRC, submitted on October 18 2007.
30	The evidences of the stakeholders' comments: including the records and summary of the stakeholder comments meeting, dated on Jan. 5 2006, the questionnaires, and the newspaper, submitted on October 18 2007,
31	Economic Evaluation Code for Small Hydropower Projects (SL16-95), submitted on October 18 2007
32	Monitoring handbook of Langxiang project, submitted on October 18 2007
33	Final Project Design Document for CDM project “Langxiang 30MW Hydro Power Project in Guizhou Province China, submitted on July 4 2008
34	The CDM consultation contract was signed., Jan, 12 of 2006, with the Guizhou Zhongshui Hengyuan project management and consulting Co. Ltd
35	The Memorandum of Understanding about the CERs was signed by the project owner and the buyer (Eco Asset Inc.). August 17 of 2006

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Reference No.	Document or Type of Information
36	China Power System Reform Program issued by State Council on 10/02/2002, file number:GUOFA[2002]5)