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# Validation Report

**ENEL Trade S.p.A.**

VALIDATION OF THE CDM-PROJECT:  
YUNNAN DAYINGJIANG MENG'E HYDRO POWER  
STATION

REPORT NO. 1016661

**2008, August 8<sup>th</sup>**

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> TÜV Italia Srl Via Carducci, 125 20099 Sesto San Giovanni (MI) Italy	
<b>Client:</b> ENEL Trade S.p.A. Viale Regina Margherita, 125 00198 Rome Italy		<b>Project Site(s):</b> Mangyun Town, Yingjiang County, Dehong Dai-Jingpo Autonomous Prefecture Yunnan Province P.R. of China Longitude: 97°43'00"E Latitude: 24°28'13.5"N	
<b>Project Title:</b> Yunnan Dayingjiang Meng'e Hydro Power Station			
<b>Applied Methodology / Version:</b> ACM0002 version 6		<b>Scope(s):</b> 1	
<b>First PDD Version:</b> Date of issuance: 2006-12-19 Version No.: 3.0 Starting Date of GSP 2007-04-11		<b>Final PDD version:</b> Date of issuance: 2008-04-07 Version No.: 6.0	
<b>Estimated Annual Emission Reduction:</b>		321,519 tons CO <sub>2e</sub>	
<b>Assessment Team Leader:</b> Dr. Sven Kolmetz		<b>Further Assessment Team Members:</b> Luciano Grugni Xiong Rencheng	
<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>AM</b>	Approved 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>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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Annex 1: Validation Protocol

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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:  
Yunnan Dayingjiang Meng'e Hydro Power Station.

### 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 subdivided. 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 in written in bold letters):

Name	Qualification	Coverage of technical scope	Coverage of sectoral expertise	Host country experience
<b>Dr. Sven Kolmetz</b>	ATL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Mr. Luciano Grugni	A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Mr. Xiong Rencheng	A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**Dr. Sven Kolmetz** is physicist and ATL at the department “TÜV Carbon Management Service” located in the head office of TÜV SÜD 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.

**Mr. Luciano Grugni** is an auditor for environmental management systems and JI/CDM at the department “Climate, Energy and Environment” of the Italian branch of TÜV SÜD Group. He has been involved in the topic of environmental auditing, monitoring and verification due to the requirements of the Kyoto Protocol. His main focus lies on emissions trading audits and renewable energies.

**Mr. Xiong Rencheng** is a CDM auditor for environmental management systems at TÜV SÜD China. He is based in Shenzhen. 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

In the period of April 20, 2007 TÜV SÜD performed interviews on-site with project stakeholders to confirm selected information and to resolve issues identified in the first document review. The table below provides a list of all persons interviewed in the context of this on-site visit.

Name	Organisation
Mr. Yang Biannan	Hydropower Association of Dehong Dai-Jingpo Autonomous Prefecture
Ms. Ling Po	Dehong Furong Dayingjiang Hydroelectric Power Development Co., Ltd.
Mr. Ling Xingyu	Dehong Furong Dayingjiang Hydroelectric Power Development Co., Ltd.
Mr. Xiong Hui	Dehong Furong Dayingjiang Hydroelectric Power Development Co., Ltd.
Mr. Zou Yonghe	Dehong Furong Dayingjiang Hydroelectric Power Development Co., Ltd.
Mr. Yang Aimin	Beijing Tianqing Power International CDM Consulting, Co., Ltd.
Mr. Jiang Dongkui	Beijing Tianqing Power International CDM Consulting, 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 re-requesting registration by the EB or not.

### 3 SUMMARY OF FINDINGS

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

#### History of the validation process

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

#### Project description

The project is a run-of-river diversion type hydro power station with a small reservoir.

With a total installed capacity of 99MW and a surface area at full reservoir level of 0.58km<sup>2</sup>, the power density of the hydropower station is 171W/m<sup>2</sup>.

The proposed project will provide an annual average generation of 531,980MWh and the annual average electricity supplied to the grid is expected to be 381,240MWh, on a basis of an average operating time of 5,373 hours.

The power generated by the station will be connected to the Yingjiang transformer substation, then to the Yunnan Grid and, finally, to the Southern Grid.

The electricity generated by the project will replace the correspondent amount of coal-based electricity as supplied by Southern China Grid, reducing in this way GHG emissions for an amount of 321,519 tCO<sub>2</sub>e annually.

#### Findings

As informed above all finding are summarized in table 2 of the attached validation protocol. In total the assessment team expressed 4 Clarification Requests and 14 Corrective Action Requests.

More information were requested on the exact location of the project, on the project schedule and about the training to be planned and provided to the operators of the plant.

Also a better graphic description of the power connection was requested, together with more information on the metering system. All the documentation supporting the clarifications and corrections requests, including evidences on the accuracy of the meters, were satisfactorily provided to the DOE.

Further on, some inconsistency on technical datas between the PDD and the power unit purchasing had to be clarified; since it is a new hydro electric power projects with reservoir the power densities had to be calculated and the parameter surface area at full reservoir level had to be included in the PDD.

Other findings were related to additionality proofs and argumentation. The additionality proofs at first lacked sufficient evidence for the common practice analysis. Similar project activities were identified which could be implemented without the CDM.

Besides some further minor corrections these were the main findings. After closing all the open questions the PDD is in compliance with the CDM requirements.

### Baseline calculation

According to methodology ACM0002, baseline emission are equal to the power supplied to grid, multiplied by baseline emission factor  $EF_y$ . The baseline emission factor is calculated as a combined margin (CM): a weighted average of the Operating Margin Emission Factor ( $EF_{OM,y}$ ) and the Build Margin Emission Factor ( $EF_{BM,y}$ ).

The OM Emission Factor has been calculated on the basis of the Bulletin on Baseline Emission Factors of China Grid renewed by the Director Office of National Climate Change Coordination of NDRC (Chinese DNA) on August 9, 2007, deviating at some points by using the original data published in the China Energy Statistical Yearbook, China Electric Power Yearbook and IPCC 2006.

The Build Margin Emission Factor  $EF_{BM,y}$  adopts modified methods agreed by the EB for the approved methodologies AM0005 and AMS I.D. because plant specific data are not available in China. The Build Margin calculations is derived from the "Bulletin on the Baseline Emission Factor of the China Grid", which was renewed by the Chinese DNA (Director Office of National Climate Change Coordination of NDRC) on August 9, 2007.

It has been verified that the ex-ante baseline emission factor calculation, leads to a conservative estimation of the value: the Combined Baseline Emission Factor of the Southern China Grid used by project participants corresponds to 0.84335 tCO<sub>2</sub>e/MWh.

As greenhouse gases emission from the project can be considered to be zero and no leakage calculation is required according to ACM0002 methodology, the emission reductions are equal to baseline emissions.

### Additionality

The assessment team has verified the consideration for CDM before the starting of the project activities: the project owner have demonstrated to be in an early stage aware about the potential of CDM to support its activities before the beginning of the main construction; this has been confirmed by a directorate decision taken in a board meeting of the Project Participant's company dated July 15<sup>th</sup>, 2004. Evidences of the milestones that precede the CDM decision have been checked: the Feasibility Study Report, dated May 2004 has been followed by the Environmental Impact Analysis (June 2004). The former got approval on 20<sup>th</sup> July 2004 by the Development and Reform Commission of Yunnan Province. The main construction started on early April 2005 after the project owner signed the cooperation agreement of CDM with the Power Enterprises Association of Dehong Prefecture. The timeline history has been verified through the documents provided and the DOE is very confident that CDM has been considered before the starting date of the project. Furthermore the

In step one of applying the tool for the demonstration and assessment of additionality (hereafter: additionality tool) it is concluded that there exist alternatives to the proposed project activity and the additionality criteria is fulfilled. Step two of the additionality tool, investment analysis through benchmark analysis, describes in detail that the proposed project is not financially attractive without CER revenues. This approach has been demonstrated to be the most appropriate for the project and furthermore it has been used in other PDDs of the similar projects in China. The relevant benchmark has been taken in accordance with the Economical Assessment Temporary Regulation on Electrical Technology Improvement Project, published in 2002 by the China Plan Press of Nation Development and Reform Commission, Ministry of Construction of P.R. of China.

The IRR calculated starting from the financial basic parameters as in Feasibility Study Report, is equal to 6.90% which is lower than the 8% benchmark. The assessment team has checked all sources of the IRR calculation, as presented in Sub-step 2c. in the PDD.

The values from the Feasibility Study Report (FSR), approved by the National Authority have been the basis of the decision to proceed with the investment in the project and all the evaluations and calculation have been done using the FSR values.

The period of time between the finalization of the FSR and the investment decision is sufficiently short for the DOE to confirm that it is unlikely in the context of the underlying project activity that the input values would have materially changed.

It has been verified that the values used in the PDD and associated annexes are fully consistent with the Feasibility Study Report. In particular the total investment cost and the operating cost have been considered acceptable because within the range of other similar plants.

In the validation process the main assumptions have been verified: regarding the Annual operating cost, as stated in PDD, the relevant value has been calculated on the basis of the figures from the FSR; this calculation has been verified: each of the different parameters (fixing cost rate, payroll and welfare fund, material costs), influencing the estimation of the annual operating costs have been cross-checked with the same contained in Feasibility Study Report. According to this assessment and on the basis of the expertise reached by the assessment team in hydropower CDM project in China, such Operating and Margin costs as presented by PPs well represent the actual costs for the project operation. The annual utilization hours and, thus, the power generation indicated in FSR is considered consistent with the context emerged through the on-site audit and confirmed by the experience in the sector and in this region. It's expected that the power generation as in FSR, taking into account the uncertainties related to this kind of estimations, will represent in a good way the annual average production by the hydropower plant during the crediting period. According to the PDD the effective electricity delivered to the local grid is 71%; the validation team has verified the validity of this figure basing the assessment on different sources and crosschecks. The FSR issued by the Yunnan Province Hydropower and Design Institute in May 2004 explicitly mentions that, according to the Electricity Balance Analysis in Dehong prefecture, an effective electricity coefficient of 0.66 should be applied as design parameter and it's therefore clear that, at the time of the CDM decision, this value was known; furthermore has been verified that there are no legal requirements regarding the value to be chosen, as according to the Hydro Energy Design Code for Hydro Power Projects (SL76-94), for the normal scale hydropower stations the coefficient of effective electricity could be calculated with reference to the electricity balance of the local grid. Furthermore, confirmations of the assumptions done in the FSR regarding the effective power factor have been found in two different documents: a letter from the local grid company, dated August, 6<sup>th</sup> 2008 confirms that the average coefficient of effective electricity of the local grid system is 0.66; moreover, the dispatch data obtained from the local grid company, which report the daily power generated by the hydropower stations connected to the grid and the actual value of the coefficient of effective electricity, support the fact that the value of 0.66 in FSR was reasonable.

As a result of these crosschecks the DOE is confident that the net electricity delivered to the grid, as stated in the PDD, has been estimated according to a valid and even conservative coefficient of effective electricity.

The grid price of 0.125 Yuan RMB/kWh (without VAT) has been also verified as the most reasonable and conservative value to be used at the time of the CDM decision. Even if a slightly higher price was agreed with the Temporary Grid Connection Agreement (0.1325 Yuan RMB/kWh) signed on August 2004 and with a commissioning period of two months, the final grid price received by the power plant is 0.128205 Yuan RMB/kWh (without VAT); according to the operational grid price, as verified through the official invoices as issued by the Yunnan Power Grid Corporation, it's confirmed that the CDM decision has been based on a valid estimation of the grid price. Therefore, we can state that the range of -10%~+10% is sufficient to run a sensitivity analysis on the project. The varia-

tions of critical assumptions conducted within the sensitivity analysis, has then permitted to conclude that the identified benchmark of 8% is never met. We thus conclude the project is financially unattractive without CER revenues.

The common practice analysis has been performed considering the Yunnan Province as the relevant geographical extension. To verify the appropriateness of this choice, has been requested to project participants to demonstrate why, as written in the PDD, the projects located in different provinces cannot be included in the analysis; with this perspective, the differences of Yunnan Province in terms of investment conditions and water resources availability have been demonstrated considering the amounts of the total investment in water resources projects among the different provinces in Southern China Grid.

To verify the information given by PP to define the relevant common practice extension on the basis of the differences among provinces, the validation team have examined the Yearbook of China Water Resources 2006 (information on different investment) and the websites of Chinese industries operating in the hydropower sector (different development of water resources). DOE is confident that the differences of Yunnan Province with the surrounding provinces under Southern China Grid are real and reliable and lead to consider it as the relevant extension for the common practice analysis.

Ten hydropower station projects located in Yunnan Province were assessed as "similar scale" projects. Six stations have been developed before 2002, when the first Power System Reform Blue Print have changed the regulatory framework and the market environment. Of the remaining four projects, has been demonstrated that one have been developed by state owned companies and under different conditions in terms of grid price, annual utilization hours and unit investment. The remaining three projects unless not supported by the government, have also been demonstrated to have a stronger liability due to better conditions in prices and utilization hours.

The validation team has verified the information given by project participants that had to provide the relevant documents and evidences.

To conclude the additionality assessment we can state that, according to all the documents we have reviewed, the additionality of the project based on the available information is fulfilled.

#### 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=2831&amp;Ebene1_ID=26&amp;Ebene2_ID=859&amp;mode=1">http://www.netinform.de/KE/Wegweiser/Guide2_1.aspx?ID=2831&amp;Ebene1_ID=26&amp;Ebene2_ID=859&amp;mode=1</a>	
<b>Starting date of the global stakeholder consultation process:</b> 2007-04-11	
<b>Comment submitted by:</b> -	<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:

Yunnan Dayingjiang Meng'e Hydro Power Station.

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, 2008-08-08



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

Munich, 2008-08-08



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Assessment Team Leader





## **Annex 1: Validation Protocol**

## Validation Protocol

Project Title: Yunnan Dayingjiang Meng'e Hydro Power Station

Date of Completion: 2008-08-08

Number of Pages: 36



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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, 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 is indicated as 03 <sup>rd</sup> version dated December 19, 2006.  <b><u>Corrective Action Request 1:</u></b> A revision history of the PDD should be included.	CAR 1	<input checked="" type="checkbox"/>
A.1.3.Is this consistent with the time line of the project's history?	1, 2	The GSP has been started with the former version.	<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 project is described transparently.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.2.2.What proofs are available demonstrating that the project description is in compliance with the actual situation or planning?	1, 2, 6, 7, 8, 9, 10, 14, 15	The project activity is the displacement of electricity generated by coal fired power plants with electricity generated by hydro power. The following data deliver evidences for the project activity: <ul style="list-style-type: none"> <li>- Feasibility study and its approval</li> <li>- EIA and EIA approval</li> <li>- Agreement of Connection to Grid</li> <li>- Land Expropriation authorization</li> </ul> These data have been evidenced during the audit.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.2.3.Is the information provided by these proofs consistent with the information provided	1, 2, 3, 4,	The project activity is the displacement of electricity generated by coal fired power plants with electricity generated by hydro power.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

# Validation Protocol

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
by the PDD?	17,18	The required data are delivered in the PDD.		
A.2.4.Is all information presented consistent with details provided by further chapters of the PDD?	1,2	Yes, there are no contradictions in the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>A.3. Project participants</b>				
A.3.1.Is the form required for the indication of project participants correctly applied?	1,2	The form is correctly applied.	<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, 24, 42	<b>Open Issue</b> The letter of approval from the Dutch DNA has not been emitted yet.	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 information provided in consistency with further chapters of the PDD.	<input checked="" type="checkbox"/>	<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, 5, 7	<b>Corrective Action Request 2:</b> The information provided on the location of the project activity should be in compliance with the actual situation, and more detailed.	CAR 2	<input checked="" type="checkbox"/>
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, 6, 9, 13, 14, 15, 34	The project was approved by the local Development and Reformation Committee and the EIA of the proposed project was approved by the local Environmental Protection Bureau.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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<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	Yes, the project falls into scope 1.	<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, 2,5, 7, 34, 39	Yes, the project design reflects the current good practices based on the description in feasibility study report and investigation on site. It is a state-of-the-art hydropower station.	<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?	1,2,5, 7,9	Yes, the project activity comprises the use of water power for the substitution of grid supplied electricity mainly from coal fired plants. There is no doubt that this technology will reduce the 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, 39	No, it doesn't. There is no technology transfer from annex-I countries to China by the proposed project.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.3.4. Is the technology implemented by the project activity environmentally safe?	1, 2, 5, 9,10	Yes. The main possible environmental problem produced by the technology implemented is water pollution. According to the PDD, water from the power station will be treated well before discharged into the river, so the technology implemented by the project activity is environmentally safe.	<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, 5, 10	The type of generator and turbine provided by PDD does not match with the actual data of installed components. <b><u>Corrective Action Request 3:</u></b> Clarify the mismatch between actual data and PDD data	CAR 3	<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	1, 2, 27	Because the technology of installing a new hydropower plant has been fully developed and successfully implemented over China for decades, the technology applied in the proposed project is not	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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any commonly used technologies in the host country?		different compared to that of other similar hydropower plants.		
A.4.3.7. Is the project technology likely to be substituted by other or more efficient technologies within the project period?	1, 2, 9,10	We do not expect that there will be a substitution because equipments have not been installed and the expected starting date of electricity generation is June 1 <sup>st</sup> , 2007. The life time of the project is 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, 43	<b><u>Corrective Action Request 4:</u></b> Information should be provided about the relevant trainings to be planned and executed for the correct implementation of the project.	CAR 4	<input checked="" type="checkbox"/>
A.4.3.9. Is information available on the demand and requirements for training and maintenance?	1, 2, 43	See CAR 4	See CAR 4	<input checked="" type="checkbox"/>
A.4.3.10. Is a schedule available for the environment of the project and are there any risks for delays?	1, 2, 43	The planning schedule in the past and for the future was clearly described by the project owner during the audit, but is not included in PDD. <b><u>Corrective Action Request 5:</u></b> The time schedule of the implementation of the project should be included in the PDD.	CAR 5	<input checked="" type="checkbox"/>
<b>A.4.4. Estimated amount of emission reductions over the chosen crediting period</b>				
A.4.4.1. Is the form required for the indication of projected emission reductions correctly applied?	1, 2, 7, 8, 43	The project emission reductions are shown in chapter A.4.4 according to the guidelines.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.4.2. Are the figures provided consistent with other data presented in the PDD?	1, 2, 43	Yes, the figures provided consistent with other data presented in the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>A.4.5. Public funding of the project activity</b>				

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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 statement in A.4.5. of the PDD there is no public funding for the project activity.	<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	Yes, it is consistent with the information provided in Annex 2.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<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, 2,3, 43	<b><u>Corrective Action Request 6:</u></b> Version 3 of the Tool for Demonstration and Assessment of Additionality should be applied. The PDD needs to be update with the newer version.	CAR 6	<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 applied version is the most recent 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	The approved methodology version 06 of ACM0002: "Consolidated baseline methodology for grid-connected electricity generation from renewable source".	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.2.2.Criterion 1: Type of capacity addition by renewable energy	1, 2, 43		CAR 7	<input checked="" type="checkbox"/>

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		Applicability checklist			Yes / No	
		Criterion discussed in the PDD?			Yes	
		Compliance provable?			No	
		Evidences provided in the PDD?			No	
		Compliance verified?			No	
		<b><u>Corrective Action Request 7:</u></b>				
		This is a new hydro electric power projects with reservoir, hence, the power densities should be calculated				
B.2.3.Criterion 2: Exclusion of fuel switching activities	1, 2				☑	☑
		Applicability checklist			Yes / No	
		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	
		Criterion discussed in the PDD?			Yes	
		Compliance provable?			Yes	
		Evidences provided in the PDD?			Yes	
		Compliance verified?			Yes	

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B.2.5.Criterion 4: Approved inclusion in other methodologies (if applied only)	1, 2	N.A												
B.3. Description of the sources and gases included in the project boundary														
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	1 ,2	<table><tr><th>Boundary checklist</th><th>Yes / No</th></tr><tr><td>Source and gas(es) discussed by the PDD?</td><td>N/A</td></tr><tr><td>Inclusion / exclusion justified?</td><td>N/A</td></tr><tr><td>Explanation / Justification sufficient?</td><td>N/A</td></tr><tr><td>Consistency with monitoring plan?</td><td>N/A</td></tr></table>	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	1, 2	<table><tr><th>Boundary checklist</th><th>Yes / No</th></tr><tr><td>Source and gas(es) discussed by the PDD?</td><td>N/A</td></tr><tr><td>Inclusion / exclusion justified?</td><td>N/A</td></tr><tr><td>Explanation / Justification sufficient?</td><td>N/A</td></tr><tr><td>Consistency with monitoring plan?</td><td>N/A</td></tr></table>	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)	1, 2	<table><tr><th>Boundary checklist</th><th>Yes / No</th></tr><tr><td></td><td></td></tr></table>	Boundary checklist	Yes / No			See CAR 7	<input checked="" type="checkbox"/>						
Boundary checklist	Yes / No													



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Gas(es): CO <sub>2</sub> , CH <sub>4</sub> Type: Project Emissions		Source and gas(es) discussed by the PDD?	Yes		
		Inclusion / exclusion justified?	Yes		
		Explanation / Justification sufficient?	No		
		Consistency with monitoring plan?	N/A		
		See CAR 7.			
B.3.4.Source: Emissions from electricity generation in fossil fuel fired power plants of the project electricity system Gas(es): CO <sub>2</sub> Type: Baseline Emissions	1, 2			☑	☑
		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.3.5.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		
		Source and gas(es) discussed by the PDD?	Yes		
		Inclusion / exclusion justified?	Yes		
		Explanation / Justification sufficient?	Yes		
		Consistency with monitoring plan?	Yes		

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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	<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>Yes</td></tr></table>	Boundary checklist	Yes / No	Source and gas(es) discussed by the PDD?	Yes	Inclusion / exclusion justified?	Yes	Explanation / Justification sufficient?	Yes	Consistency with monitoring plan?	Yes	<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?	Yes													
B.3.7.Do the spatial and technological boundaries as verified on-site comply with the discussion provided by the PDD?	1, 2, 5	Yes. The project boundary for the proposed project is represented by the South China Power Grid.	<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	Yes, the baseline is represented by the combined margin of the grid the activity will be connected to.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
B.4.2.In case of any modification or retrofit of existing facilities: Is data available to determine the historic production level?	1, 2	N/A	<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	1, 2	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										

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replaced?				
<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. Is evidence provided, that the project's starting date is after Jan 01, 2000 and before Nov 18, 2005?	1, 2, 3	The project participants will not claim emission reductions resulting from power generation dating from before the date of registration of the CDM activity, so this question is not applicable. See CAR 6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.2. Is evidence provided, that CDM has been considered seriously in the decision to proceed with the project activity?	1, 2, 3, 5, 24, 33	See B.5.1. <b><u>Corrective Action Request 8:</u></b> There are some inconsistencies about the date of Key Event "The project has started to know CDM", "The stakeholder consultation meeting was organized" as well as "received approval of Chinese DNA" between Table B.2 and the proofs provided on site. The above inconsistency should be resolved.	CAR 8	<input checked="" type="checkbox"/>
B.5.3. Have realistic and credible alternatives been identified providing comparable outputs or services? (step 1a)	1, 2	The project sponsor is a hydro project developer, then the possible alternatives to the project includes: <ul style="list-style-type: none"> <li>- The proposed hydropower activity, undertaken without being registered as a CDM project activity;</li> <li>- Thermal power generation plant with equivalent annual power generation;</li> <li>- Other renewable energy power plant with equivalent annual power generation or equivalent installed capacity;</li> <li>- The equivalent annual electricity is supplied by the Southern Grid.</li> </ul>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.4. Is the project activity without CDM included in	1, 2	Yes, it is included as first option.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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these alternatives? (step 1a)				
B.5.5. Is a discussion provided for all identified alternatives concerning the compliance with applicable laws and regulations? (step 1b)	1, 2	Yes.	<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	Yes, there is no forced obligation for the project sponsor.	<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	Yes, the benchmark analysis is applied as suitable analysis method.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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	The simple cost analysis is not applicable for the proposed project because the project activity will produce economic benefit (from electricity sale) other than CERs income.	<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	Option III is chosen for the investment analysis. So 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, 25	Yes, the IRR is the most suitable financial indicator. The Financial Internal Return Rate in this project is better than the relevant benchmark value.	<input checked="" type="checkbox"/>	<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 and the project activity?	1, 2, 25	The calculation of IRR and NPV is done for the project activity without the revenues from the sales of CERs and with the revenues from the sales of CERs. The calculation has been checked by the DOE.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.12. In case of Option II or Option III: Is the analysis presented in a transparent man-	1, 2, 43	Yes, it is.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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ner including publicly available proofs for the utilized data?				
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, 23, 43	<b><u>Clarification Request 1:</u></b> The argumentations to support these analysis are not project specific and they are valid for all projects, moreover the explanation of the investment barriers is based on a regulation which has been published later than the decision to apply for CDM was taken. Please provide more detailed information on this barrier analysis.	CR 1	<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, 43	See B.5.13	See CR1	<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, 43	See B.5.13	See CR1	<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, 43	The common practice analysis is not sufficient and related proofs are not available. <b><u>Corrective Action Request 9:</u></b> 1) Please explain how the definition of similar projects for the common practice analysis has been chosen. 2) Please describe in detail how many hydropower plants are installed in project region and whether these plants are economically feasible without CDM. 3) What is the difference of the proposed project and these plants without CDM? 4) Reference documents and data sources must be delivered to DOE.	CAR 9	<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, 43	See CAR 9	See CAR 9	<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?	1, 2, 25	<p>If the proposed project could be approved and registered successfully, the following positive benefits can be predicted:</p> <ul style="list-style-type: none"> <li>- The income from CERs sales would greatly improve the financial indicators of the proposed project and overcome the investment barriers.</li> <li>- The project sponsor would be more confident in successful implementation of the proposed project.</li> </ul>	<input checked="" type="checkbox"/>	<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, 32	<p>The calculation of the emission reduction is applied according to the steps described in ACM0002:</p> <ul style="list-style-type: none"> <li>- Calculation of the Operating Margin Emission Factor</li> <li>- Calculation of the Build Margin Emission Factor</li> <li>- Calculation of the Combined Margin Emission Factor</li> </ul> <p>These steps are described in a transparent manner.</p> <p><b><u>Corrective Action Request 10:</u></b></p> <p>Where applicable the parameter should be updated using as a source of data also the "China Electric Power Yearbook 2006" that has been already published.</p>	CAR10	<input checked="" type="checkbox"/>
B.6.1.2. Is every selection of options offered by the	1, 2	<b><u>Clarification Request 2:</u></b>	CR 2	<input checked="" type="checkbox"/>

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methodology correctly justified and is this justification in line with the situation nvified on-site?		Please justify why and may use simple OM.		
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	Yes, all parameter are clearly described and identified.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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	Yes, formulae to calculate the baseline emissions are correctly presented.	<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	Yes, the choice of options to determine the Emission Factor are fully justified in the PDD.	<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	Not applicable. The default weights for hydro power projects in the 6 <sup>th</sup> version of ACM0002 (OM 0.5 and BM 0.5 respectively) 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.	<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	No leakage is considered according to the methodology.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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B.6.1.9. Are formulae required for the determination of emission reductions correctly presented?	1, 2	Yes.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																		
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, 43	Yes. A list of parameters is presented according to ACM0002. See also CAR10	See CAR10	<input checked="" type="checkbox"/>																		
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	For the calculation of the emission reductions the ex-ante approach has been used.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																		
B.6.2.3. Parameter Title: Annual electricity supplied to the grid prior to retrofit (applicable only for retrofit and modification activities)		<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>	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	<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																					
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, 2, 43	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr></table>	Data Checklist	Yes / No	Title in line with methodology?	Yes	See CAR10	<input checked="" type="checkbox"/>														
Data Checklist	Yes / No																					
Title in line with methodology?	Yes																					



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		Data unit correctly expressed?	Yes																				
		Appropriate description of parameter?	Yes																				
		Source clearly referenced?	No																				
		Correct value provided?	No																				
		Has this value been verified?	Yes																				
		Choice of data correctly justified?	Yes																				
		Measurement method correctly described?	Yes																				
		See CAR10																					
B.6.2.5. Parameter Title: Operating margin (OM) emission factor of the grid	1, 2	<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?</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?	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	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Data Checklist	Yes / No																						
Title in line with methodology?	Yes																						
Data unit correctly expressed?	Yes																						
Appropriate description?	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																						

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B.6.2.6. Parameter Title: Build margin (BM) emission factor of the grid	1,2	<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>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	<input checked="" type="checkbox"/>	<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.6.2.7. Parameter Title: fuel consumption of each power source	1,2	<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>Yes</td></tr><tr><td>Has this value been verified?</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	<input checked="" type="checkbox"/>	<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																					

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		Choice of data correctly justified?	Yes																				
		Measurement method correctly described?	Yes																				
B.6.2.8. Parameter Title: emission coefficient of each fuel		<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>		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	<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																						
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.6.2.9. Parameter Title: electricity generation of each power source	1,2	<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	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
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?	Yes																				
		Has this value been verified?	Yes																				
		Choice of data correctly justified?	Yes																				
		Measurement method correctly described?	Yes																				
B.6.2.10. Parameter Title: surface area of full reservoir level (for new hydroelectric activities only)	1, 2	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>No</td></tr><tr><td>Data unit correctly expressed?</td><td>No</td></tr><tr><td>Appropriate description of parameter?</td><td>No</td></tr><tr><td>Source clearly referenced?</td><td>No</td></tr><tr><td>Correct value provided?</td><td>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> <p><b><u>Corrective Action Request 11:</u></b></p> <p>The parameter of surface of full reservoir level should be pre- sented.</p>		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	CAR11	☑
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																						

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B.6.2.11. Parameter Title: fraction of time with low costs /must run plant at the margin (for simple adjusted OM only)	1, 2		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Data Checklist		
		Title in line with methodology?		
		Data unit correctly expressed?		
		Appropriate description of parameter?		
		Source clearly referenced?		
		Correct value provided?		
		Has this value been verified?		
		Choice of data correctly justified?		
		Measurement method correctly described?		
B.6.2.12. Parameter Title: electricity imports	1, 2		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Data Checklist		
		Title in line with methodology?		
		Data unit correctly expressed?		
		Appropriate description of parameter?		
		Source clearly referenced?		
		Correct value provided?		
		Choice of data correctly justified?		

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		PDD in GSP	Final PDD																		
		<table><tr><td>Measurement method correctly described?</td><td>N/A</td></tr></table>		Measurement method correctly described?	N/A																		
Measurement method correctly described?	N/A																						
B.6.2.13. Parameter Title: CO <sub>2</sub> emission coefficient of fuels used in connected grids	1, 2	<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>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	<input checked="" type="checkbox"/>	<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.6.3. Ex-ante calculation of emission reductions																							
B.6.3.1. Is the projection based on the same procedures as used for future monitoring?	1, 2	Yes		<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		<input checked="" type="checkbox"/>	<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	Yes		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																		

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<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	Yes, there are no project emissions.	<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 form is correct.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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 21 years and the renewable crediting period of max 7 years with potential for 2 renewals is chosen. The yearly emission reduction and total emission reduction indicated in B.6.4. in the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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	Yes, it is	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>B.7. Application of the monitoring methodology and description of the monitoring plan</b>				
<b>B.7.1. Data and parameters monitored</b>				
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	Because the ex-ante approach is adopted, the net electricity fed to the grid is required to be monitored. This parameter has been included in table B.7.1 in the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.7.1.2. Parameter Title: Electricity supplied to the grid	1, 2		CAR12	<input checked="" type="checkbox"/>
		Monitoring Checklist		
		Title in line with methodology?		
		Data unit correctly expressed?		
		Appropriate description of parameter?		
		Source clearly referenced?		

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		Correct value provided for estimation?	Yes																				
		Has this value been verified?	Yes																				
		Measurement method correctly described?	Yes																				
		Correct reference to standards?	Yes																				
		Indication of accuracy provided?	No																				
		QA/QC procedures described?	Yes																				
		QA/QC procedures appropriate?	Yes																				
		<b><u>Corrective Action Request 12:</u></b> The indication of accuracy of a meter should be provided, and please explain whether this is the net energy or the gross energy.																					
B.7.1.3. Parameter Title: Quantity of 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></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	<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																						
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																						



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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		PDD in GSP	Final PDD																								
		<table><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>		Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A																				
Indication of accuracy provided?	N/A																												
QA/QC procedures described?	N/A																												
QA/QC procedures appropriate?	N/A																												
B.7.1.4. Parameter Title: Fraction of CO <sub>2</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	<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																												
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																												
B.7.1.5. Parameter Title:	1, 2			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																								

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Fraction of CH <sub>4</sub> in steam produced (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		
B.7.1.6. Parameter Title: Quantity of steam generated 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		

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		PDD in GSP	Final PDD																								
		<table><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>		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														
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.7.1.7. Parameter Title: Fraction of CO <sub>2</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>		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																												
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																												

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD																								
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>	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																											
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																											
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></table>	Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	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																											

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		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		
B.7.2. Description of the monitoring plan					
B.7.2.1. Is the operational and management structure clearly described and in compliance with the envisioned situation?	1, 2	Yes, it is.		☑	☑
B.7.2.2. Are responsibilities and institutional arrangements for data collection and archiving clearly provided?	1, 2, 43	In fact, there are two meters at the exit of the proposed project station, one is the main meter, and the another one is the back-up meter. There are other two meters at the entrance of the transformer station of the grid company too, one is a main meter, and the another one is the back-up meter.  <b><u>Corrective Action Request 13:</u></b>  The information given under B.7.2 should be revised according to the above comments.		CAR13	☑
B.7.2.3. Does the monitoring plan provide current	1, 2	Yes		☑	☑

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good monitoring practice?				
B.7.2.4. If applicable: Does annex 4 provide useful information enabling a better understanding of the envisioned monitoring provisions?	1, 2, 43	Annex 4 didn't provide any useful information enabling a better understanding of the envisioned monitoring provisions.  <u>Corrective Action Request 14:</u>  A diagram of the location of the power meters should be included. It should be transparent that for the calculation of the emission reduction only the net electricity generation will be used.	CAR14	<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	Yes, 2006-12-19	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.8.2.Is this consistent with the time line of the PDD history?	1, 2	Yes	<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 provided consistent with the actual situation?	1, 2	Dr. Yang Aimin, Jingqiu Yang, Dongkui Jiang, Xiujuan yuan, Huaiping Mu, Xuemei Tang and Zhengtong from Beijing Tianqing Power International CDM Consulting, CO., Ltd. determined the monitoring methodology.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.8.4.Is information provided whether this person / entity is also considered a project participant?	1, 2	The above mentioned persons are no project participants.	<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 rea-	1, 2, 43	The project starting date is given as 30/05/2007 and the operational lifetime is expected to be 25 years.	CR 3	<input checked="" type="checkbox"/>

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sonable?		<b>Clarification Request 3:</b> Please clarify what activity is linked with the starting date.		
<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, 43	7 years with potential for 2 renewals is chosen as the crediting period. The starting date of the first crediting period is 15/10/2008 (or the date of registration, whichever is later).	<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, 9, 10, 12, 15, 20, 21	Yes, the environmental impacts of the project activity such as noise, visual impacts, interference with communication, land use, air quality and water usage have been clearly described.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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, 9, 10	Yes, EIA is a must in P. R. China for new hydro power projects. The EIA of the proposed project was approved by Yunnan Environment Protection Bureau on June 30, 2004.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.1.3. Will the project create any adverse environmental effects?	1, 2, 9, 10	Referred to the EIA and the approval of 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, 9, 10	There is no trans-boundary impact described in EIA report or approval of EIA.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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<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, 9	Refer to the EIA and the approval of EIA, there is no adverse environmental impact from the project activity.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.2.2. Does the project comply with environmental legislation in the host country?	1, 2, 9, 10	Yes, the project is in conformity with the environmental legislation of P. R. China and the EIA has been approved by authorized organization.	<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, 5, 18, 19, 20, 21, 30	A special stakeholder consultation meeting was organized on May 14, 2006 at Mang City, after that questionnaires have been distributed among the residents.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.1.2. Have appropriate media been used to invite comments by local stakeholders?	1, 2, 5, 30	A bulletin for the stakeholders' meeting was published on a local newspaper and also publicized via website.	<input checked="" type="checkbox"/>	<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, 5	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, 18, 19,	Yes. The process is described in a complete and transparent manner.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



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	20, 21, 30			
<b>E.2. Summary of the comments received</b>				
E.2.1. Is a summary of the stakeholder comments received provided?	1, 2, 30	Yes, see E.2 and E.3 of the PDD	<input checked="" type="checkbox"/>	<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, 30, 43	Referring to the PDD and filled questionnaires which were gathered from participants and reviewed by the auditor on site, all stakeholder comments are positive.  <b><u>Clarification Request 4:</u></b> A summary on the responses provided to questions of the representative of the stakeholders should be provided.	CR 4	<input checked="" type="checkbox"/>
<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	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.1.2. Is the information on all private participants and directly involved Parties presented?	1, 2	Yes.	<input checked="" type="checkbox"/>	<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	No public funding is involved in this project activity	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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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	N.A.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Annex 3: Baseline information</b>				
F.1.5.If additional background information on base-line data is provided: Is this information consistent with data presented by other sections of the PDD?	1,2	Yes, the information is consistent with data presented by other section of the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.1.6.Is the data provided verifiable? Has sufficient evidence been provided to the validation team?	1,2	Yes	<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	Yes	<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	There is no background information given in Annex 4. Please see CAR14	See CAR14	<input checked="" type="checkbox"/>
F.1.9.Is the information provided verifiable? Has sufficient evidence been provided to the validation team?	1,2	See F.1.8.	<input checked="" type="checkbox"/>	<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	See F.1.8.	<input checked="" type="checkbox"/>	<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															
<p>The available PDD is indicated as 03<sup>rd</sup> version dated December 19, 2006.</p> <p><u>Corrective Action Request 1:</u></p> <p>A revision history of the PDD should be included.</p>	A.1.2	<p>The following Revision History of the PDD has been added:</p> <table><tr><th>Version</th><th>Date</th><th>Comments</th></tr><tr><td>Version 1.0</td><td>12 September 2006</td><td>Draft PDD</td></tr><tr><td>Version 2.0</td><td>18 October 2006</td><td>Complete version of the PDD, prepared for the host country approval process</td></tr><tr><td>Version 3.0</td><td>19 December 2006</td><td>Revised draft PDD; prepared for validation</td></tr><tr><td>Version 4.0</td><td>21 June 2007</td><td>Revised draft PDD, prepared on the basis of corrective action requests in the Validation protocol of TUV SUD.</td></tr></table>	Version	Date	Comments	Version 1.0	12 September 2006	Draft PDD	Version 2.0	18 October 2006	Complete version of the PDD, prepared for the host country approval process	Version 3.0	19 December 2006	Revised draft PDD; prepared for validation	Version 4.0	21 June 2007	Revised draft PDD, prepared on the basis of corrective action requests in the Validation protocol of TUV SUD.	<div>☑</div>
Version	Date	Comments																
Version 1.0	12 September 2006	Draft PDD																
Version 2.0	18 October 2006	Complete version of the PDD, prepared for the host country approval process																
Version 3.0	19 December 2006	Revised draft PDD; prepared for validation																
Version 4.0	21 June 2007	Revised draft PDD, prepared on the basis of corrective action requests in the Validation protocol of TUV SUD.																
<p><u>Corrective Action Request 2:</u></p> <p>The information provided on the location of the project activity should be in compliance with the actual situation, and more detailed.</p>	A.4.1.1	<p>The proposed project activity is located in the lower reaches of the trunk stream of the Daying River, in Meng'e Village, Mangxian Hamlet, Nongzhang Town, Yingjiang County, Dehong Dai-Jingpo Autonomous Prefecture, Yunnan Province, China.</p>	<div>☑</div> <p>Adequate details have been provided in PDD.</p>															

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<p>The type of generator and turbine provided by PDD does not match with the actual data of installed components.</p> <p><u>Corrective Action Request 3:</u></p> <p>Clarify the mismatch between actual data and PDD data</p>	<p>A.4.3.5</p>	<p>The type of generator and turbine provided by PDD is from FSR and the project owner adjusted the technical data according to the Factory's suggestion.</p> <table><tr><th>Tur-bine Unit</th><th>Amount</th><th>Type</th><th>Rated flow</th><th>De-signed water head</th><th>Rated output</th></tr><tr><td></td><td>3</td><td>HLN276-LJ-305</td><td>80.2m3/s</td><td>46.5m</td><td>33,840 kW</td></tr><tr><th>Gene-rator Unit</th><th>Amount</th><th>Type</th><th>Rated voltage</th><th>Rated factor</th><th>Rated Capacity</th></tr><tr><td></td><td>3</td><td>SF33-32/6200</td><td>10.5kV</td><td>0.85</td><td>33,000 kW</td></tr></table>	Tur-bine Unit	Amount	Type	Rated flow	De-signed water head	Rated output		3	HLN276-LJ-305	80.2m3/s	46.5m	33,840 kW	Gene-rator Unit	Amount	Type	Rated voltage	Rated factor	Rated Capacity		3	SF33-32/6200	10.5kV	0.85	33,000 kW	<p><input checked="" type="checkbox"/></p> <p>The issue has been clarified and the data match with the actual situation.</p>
Tur-bine Unit	Amount	Type	Rated flow	De-signed water head	Rated output																						
	3	HLN276-LJ-305	80.2m3/s	46.5m	33,840 kW																						
Gene-rator Unit	Amount	Type	Rated voltage	Rated factor	Rated Capacity																						
	3	SF33-32/6200	10.5kV	0.85	33,000 kW																						
<p><u>Corrective Action Request 4:</u></p> <p>Information should be provided about the relevant trainings to be planned and executed for the correct implementation of the project.</p>	<p>A.4.3.8</p> <p>A.4.3.9</p>	<p>Experienced experts monitor and coordinate project operations. The Fujian Nanping Nandian Equipment Manufacture Co., Ltd. Will train the project workers on correct use and maintenance of the turbines. As the hydropower technology is common practice in China, there is no need for an extensive initial training on safe and maintenance operation.</p> <p>With relevance to CDM monitoring, a monitoring officer will receive training on monitoring methodologies, procedures and archiving by Beijing Tianqing Power International CDM Consulting Co. Ltd. Then, the monitoring officer will train the project staff in charge for CDM monitoring.</p>	<p><input checked="" type="checkbox"/></p> <p>Adequate training information have been provided in PDD.</p>																								

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<p>The planning schedule in the past and for the future was clearly described by the project owner during the audit, but is not included in PDD.</p> <p><u>Corrective Action Request 5:</u></p> <p>The time schedule of the implementation of the project should be included in the PDD.</p>	A.4.3.10	<p>The following schedule has been added to the PDD:</p> <ul style="list-style-type: none"> <li>- The Environmental Impact Assessment of the proposed project has been approved by Yunnan Environment Protection Bureau on 30/06/2004.</li> <li>- The project owner has got a letter of Power Enterprise Association of Dehong Prefecture who recommended the owner to apply to CDM on 07/07/2004.</li> <li>- The project owner decided to apply to CDM in directorate on 15/07/2004.</li> <li>- The Feasible Study Report has been approved by the Development and Reform Commission of Yunnan Province on 20/07/2004.</li> <li>- The project owner signed the agreement of turbine and generators in 06/10/2004.</li> <li>- The main construction started to be constructed on 03/04/2005.</li> <li>- The diversion tunnel was finished on 18/02/2006.</li> <li>- The powerhouse was finished on 27/07/2006.</li> <li>- The dam was finished on 09/09/2006.</li> <li>- The project will be completed in Oct. 2007.</li> </ul>	<p><input checked="" type="checkbox"/></p> <p>The detailed schedule is presented in final PDD. Furthermore, an explanation on the key events timeline has been added by PP.</p>
<p><u>Corrective Action Request 6:</u></p> <p>Version 3 of the Tool for Demonstration and Assessment of Additionality should be applied. The PDD needs to be update with the newer version.</p>	B.1.1	<p>The PDD has been updated and the latest version of the Additionality Tool has been used (version 03, approved at EB29).</p>	<p><input checked="" type="checkbox"/></p> <p>The PDD has been updated accordingly.</p>
<p><u>Corrective Action Request 7:</u></p> <p>This is a new hydro electric power projects with reservoir, hence, the power densities should be calculated.</p>	<p>B.2.2</p> <p>B.3.3</p>	<p>The proposed Project activity involves an electricity capacity addition from a run-of-river diversion type hydro power station with a small reservoir having power density greater than 171W/m2 (the installed capacity of the hydropower station is 99MW; the surface of the reservoir is 0.58Km2; hence the reservoir has a power density of 171W/m2).</p>	<p><input checked="" type="checkbox"/></p> <p>The relevant information has been added in PDD.</p>

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<p><u>Corrective Action Request 8:</u></p> <p>There are some inconsistencies about the date of Key Event "The project has started to know CDM", "The stakeholder consultation meeting was organized" as well as "received approval of Chinese DNA" between Table B.2 and the proofs provided on site.</p> <p>The above inconsistency should be resolved.</p>	B.5.2	The project owner was in an early stage aware about the potential of CDM to support its activities, before the beginning of the main construction. This is illustrated with the schedule of main events relating to the project included in the revised PDD.	<p><input checked="" type="checkbox"/></p> <p>The issue has been clarified in final PDD.</p>
<p>The common practice analysis is not sufficient and related proofs are not available.</p> <p><u>Corrective Action Request 9:</u></p> <ol style="list-style-type: none"> <li>1) Please explain how the definition of similar projects for the common practice analysis has been chosen.</li> <li>2) Please describe in detail how many hydropower plants are installed in project region and whether these plants are economically feasible without CDM.</li> <li>3) What is the difference of the proposed project and these plants without CDM?</li> <li>4) Reference documents and data sources must be delivered to DOE.</li> </ol>	B.5.16 B.5.17	From 2000, the basic information about the existing or constructing hydropower plants similar (50-150MW to the proposed activity and are located on the same River or in Yunnan Province are shown in Table B.4. of the updated PDD. A complete analysis of similar options has also been provided in the PDD.	<p><input checked="" type="checkbox"/></p> <p>A deeper discussion on common practice has been provided describing and explaining the differences among the projects considered.</p>
<p><u>Corrective Action Request 10:</u></p> <p>Where applicable the parameter should be updated using as a source of data also the "China Electric Power Yearbook 2006" that has been already published.</p>	B.6.1 B.6.2.1 B.6.2.4	The Certification Body of the DOE agreed that in the EF calculation, if the project gets uploaded before the new NDRC values are published, the datas of the last published NDRC values could be used as reference. The calculation has not been revised.	<p><input checked="" type="checkbox"/></p> <p>The issue has been clarified.</p>

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<p><u>Corrective Action Request 11:</u></p> <p>The parameter of surface of full reservoir level should be presented.</p>	<p>B.6.2.10</p>	<p>The parameter has been added in the PDD as following:</p> <table><tr><td>Data / Parameter:</td><td>SRA</td></tr><tr><td>Data unit:</td><td>km2</td></tr><tr><td>Description:</td><td>Surface area at full reservoir level</td></tr><tr><td>Source of data used:</td><td>FSR</td></tr><tr><td>Value applied:</td><td>0.58</td></tr><tr><td>Justification of the choice of data or description of measurement methods and procedures actually applied :</td><td>The surface area was calculated using the design schematics and area maps. Photographs of the reservoir at several key locations will be taken when the project becomes operational to check whether the actual reservoir does not deviate substantially for the design.</td></tr><tr><td>Any comment:</td><td>To calculate power density</td></tr></table>	Data / Parameter:	SRA	Data unit:	km2	Description:	Surface area at full reservoir level	Source of data used:	FSR	Value applied:	0.58	Justification of the choice of data or description of measurement methods and procedures actually applied :	The surface area was calculated using the design schematics and area maps. Photographs of the reservoir at several key locations will be taken when the project becomes operational to check whether the actual reservoir does not deviate substantially for the design.	Any comment:	To calculate power density	<p>☑</p> <p>This and more technical parameters have been added in final PDD.</p>
Data / Parameter:	SRA																
Data unit:	km2																
Description:	Surface area at full reservoir level																
Source of data used:	FSR																
Value applied:	0.58																
Justification of the choice of data or description of measurement methods and procedures actually applied :	The surface area was calculated using the design schematics and area maps. Photographs of the reservoir at several key locations will be taken when the project becomes operational to check whether the actual reservoir does not deviate substantially for the design.																
Any comment:	To calculate power density																
<p><u>Corrective Action Request 12:</u></p> <p>The indication of accuracy of a meter should be provided, and please explain whether this is the net energy or the gross energy.</p>	<p>B.7.12</p>	<p>The accuracy of the four meters is stated in the PDD as accuracy degree of 0.2S, bi-directional. Evidences of the accuracy have been provided to the DOE.</p> <p><u>First revision of DOE:</u> it is note clear from the revised PDD if the meter measures the net energy production or the gross energy.</p> <p>Through the main meter M1 (accuracy degree is 0.2S, bi-directional), the amount of electricity supplied to the grid M1<sub>A</sub> and power supplied to the project from the grid company M1<sub>B</sub>. In order to measure electricity when the main meter is out of order, a backup meter M2, M3, and M4 will be installed. The net power supplied by the proposed project activity will be calculated as: M1<sub>A</sub>-M1<sub>B</sub>.</p>	<p>☑</p> <p>The issue has been clarified with final PDD.</p>														

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<p>In fact, there are two meters at the exit of the proposed project station, one is the main meter, and the another one is the back-up meter. There are other two meters at the entrance of the transformer station of the grid company too, one is a main meter, and the another one is the back-up meter.</p> <p><u>Corrective Action Request 13:</u></p> <p>The information given under B.7.2 should be revised according to the above comments.</p>	B.7.2.2	<p>Four meters will be required. There are two meters at the exit of the proposed project station, one is the main meter 1, and the another one is the back-up meter 1. There are other two meters at the entrance of the Yingjiang transformer station of the grid company too, one is a main meter 2, and the another one is the back-up meter 2. When the main meter 1 is in trouble, the project owner should employ the data monitored by the backup meter 1. When the main meter 1 and the backup meter 1 are in trouble, the project owner should employ the data monitored by the main meter 2. When the main meter 1, backup meter 1 and main meter 2 are in trouble, the project owner should employ the data monitored by the back-up meter 2.</p>	<p><input checked="" type="checkbox"/></p> <p>The issue has been clarified.</p>
<p>Annex 4 didn't provide any useful information enabling a better understanding of the envisioned monitoring provisions.</p> <p><u>Corrective Action Request 14:</u></p> <p>A diagram of the location of the power meters should be included. It should be transparent that for the calculation of the emission reduction only the net electricity generation will be used.</p>	B.7.2.4 F.1.8	<p>A diagram with the location of the meters has been added to the PDD.</p>	<p><input checked="" type="checkbox"/></p> <p>A diagram has been added in final PDD showing the position of the meters according to the actual situation.</p>
<p><u>Clarification Request 1:</u></p> <p>The argumentations to support these analysis are not project specific and they are valid for all projects, moreover the explanation of the investment barriers is based on a regulation which has been published later than the decision to apply for CDM was taken. Please provide more detailed information on this barrier analysis.</p>	B.5.13 B.5.14 B.5.15	<p>Investment analysis has been the basis to demonstrate the additionality of the project, hence it has been decided to withdraw the barrier analysis.</p>	<p><input checked="" type="checkbox"/></p>



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<p><u>Clarification Request 2:</u></p> <p>Please justify why and may use simple OM.</p>	B.6.1.2	<p>The Simple OM method has been chosen because low cost/ must run resources account for less than 50% of the power generation in the grid in most recent years. Specifically, from 2000 to 2005, in the composition of gross annual generation power for Southern China Power Grid, the ratio of power generated by hydro-power and other low cost/compulsory resources was: 32.96% in 2000, 32.39% in 2001, 31.60% in 2002, 31.06% in 2003, 29.72% in 2004, obviously lower than 50%. Finally, the "ex-ante vintage" will be employed for OM calculation of the project.</p>	<p><input checked="" type="checkbox"/></p> <p>The choice has been adequately justified.</p>
<p>The project starting date is given as 30/05/2007 and the operational lifetime is expected to be 25 years.</p> <p><u>Clarification Request 3:</u></p> <p>Please clarify what activity is linked with the starting date.</p>	C.1.1	<p>The project dates have been modified as follows:</p> <ul style="list-style-type: none"> <li>- 06/10/2004 (the date of signing the purchasing contract of turbine and generator)</li> <li>- 03/04/2005 (project start construction)</li> <li>- 30/07/2007 (project start operation)</li> </ul>	<p><input checked="" type="checkbox"/></p> <p>Changes have done in the project dates.</p>
<p>Referring to the PDD and filled questionnaires which were gathered from participants and reviewed by the auditor on site, all stakeholder comments are positive.</p> <p><u>Clarification Request 4:</u></p> <p>A summary on the responses provided to questions of the representative of the stakeholders should be provided.</p>	E.3.1	<p>There has been no negative feedback nor any questions from the representative of the stakeholders.</p>	<p><input checked="" type="checkbox"/></p>




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

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Reference No.	Document or Type of Information
1	Project Design Document for CDM project “Yunnan Dayingjiang Meng’e Hydro Power Station Project”, version 0.3, date 19/12/2006
2	Consolidated baseline methodology for grid-connected electricity generation from renewable sources, ACM0002, version 06.
3	Tool for the demonstration and assessment of additionality, version 03.
4	Participant list of on-site interview, signed on April 20, 2007
5	<p>Validation team: Mr Luciano Grugni TÜV Italia Srl – TÜV SÜD Group Mr. Xiong Rencheng TÜV SÜD China, Shenzhen Branch</p> <p>On-site interviews and inspection were conducted on April 20, 2007 by auditing team of TUV-SUD.</p> <p>Interviewed persons: Mr. Yang Biannan Hydropower Association of Dehong Dai-Jingpo Autonomous Prefecture Ms. Ling Po Dehong Furong Dayingjiang Hydroelectric Power Development Co., Ltd. Mr. Ling Xingyu Dehong Furong Dayingjiang Hydroelectric Power Development Co., Ltd. Mr. Xiong Hui Dehong Furong Dayingjiang Hydroelectric Power Development Co., Ltd. Mr. Zou Yonghe Dehong Furong Dayingjiang Hydroelectric Power Development Co., Ltd. Mr. Yang Aimin Beijing Tianqing Power International CDM Consulting, Co., Ltd. Mr. Jiang Dongkui Beijing Tianqing Power International CDM Consulting, Co., Ltd.</p>
6	Approval of Yunnan Dayingjiang Meng’e Hydro Power Station Project, dated on January 19, 2004, Development and Reformation Committee of Yunnan Province, file number: No.62 Yun Ji Ji Chou [2004].
7	Feasibility Study Report, dated in May 2004.
8	Approval of Feasibility Study Report, dated on July 20, 2004, Development and Reformation Committee of Yunnan Province, file number: No.544 Yun Fa Ga Leng Yuan [2004].
9	EIA, dated in June, 2004.

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Reference No.	Document or Type of Information
10	Approval of EIA, dated on June 30, 2004, Environmental Protection Bureau of Yunnan Province, file number: No.397 Yun Huan Shen [2004].
11	Water & Soil Conservation Program, dated in June, 2004.
12	Approval of Water & Soil Conservation Program, dated on June 15, 2004, Water Conservancy Department of Yunnan Province, file number: No.59, Yun Shui Shui Bao [2004].
13	Agreement on connection to grid, dated on August 18, 2004, signed with Power Supply Company of Dehong Prefecture.
14	Approval of Land Expropriation, dated on June 21, 2005, Land Management Department of Yunnan Province, file number: No.144 Yun Guo Tou Zi Yong [2005].
15	Approval of Forest Land Expropriation, dated on May 31, 2004, Forestry Department of Yunnan Province, file number: No.304 Yun Ling Ling Zhen [2004]
16	Loan Contract, dated on Sep. 29, 2005, signed with Yingjiang Branch of Agricultural Bank of China.
17	Loan Contract, dated on Apr. 26, 2005, signed with Yingjiang Branch of Agricultural Bank of China.
18	Agreement on Compensation for Land Expropriation, dated on Dec. 28, 2004, signed with farmers in Meng’e group, Mangxian village, Jiemao town, Yingjiang county.
19	Agreement on Compensation for Land Expropriation, dated on Dec. 31, 2004, signed with farmers in Bangwa group, Xueli village, Mangyui town, Yingjiang county.
20	Agreement on Compensation for Forest Land Expropriation, dated on May 20, 2004, signed with farmers in Meng’e group, Mangxian village, Jiemao town, Yingjiang county.
21	Agreement on Compensation for Forest Land Expropriation, dated on May 20, 2004, signed with farmers in Bangwa group, Xueli village, Mangyui town, Yingjiang county.
22	CDM Emission Reduction Purchase Agreement, dated on August 8, 2006, signed with Enel Trade SpA.
23	Meeting Minute about the Decision to Apply for CDM support, dated on July 7, 2004.
24	Letter of Approval for Yunnan Dayingjiang Meng’e Hydro Power Station As a Clean Development Mechanism Project by National Development and Reform Commission of the People’s Republic of China, dated on January 17, 2007
25	IRR of Dayingjiang Meng'e with and without CER20080513
26	Bank Credit Policy Direction in 2005

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Reference No.	Document or Type of Information
27	Notice on Strictly Prohibiting the Installation of Fuel Generators with the Capacity of 135MW or below issued by the General Office of the State Council, file number: No.6 [2002].
28	Economical Assessment and Parameters for Construction Project issued in Sep. 2002.
29	The Management Provisional Regulation on the Construction of Small Fuel-fired Generators issued in Aug. 1997.
30	Questionnaire of local stakeholder comments.
31	China Energy Statistical Yearbook (2003/2004/2005).
32	China Electric Power Yearbook (2003/2004/2005).
33	Letter of Commitment for CDM Application of Dayingjiang First Level Meng’e Hydro Power Station, The Power Enterprises Association of Dehong Prefecture, dated April 7, 2005.
34	The Permission for Starting Construction for Civil Engineering in Daying River 1st Level Hydropower Station, issued by The 5th Project Department of Fujian Province Sanming City Engineering Supervise and Consulting Co., Ltd., dated March 30, 2005.
35	Application Form for Administrative Consent (Application for Kyoto Protocol CDM Cooperation Projects), issued by General Office of National Development and Reform Commission, dated March 30, 2006.
36	The Approval of Operation and Inspection for the first generator and the second generator, issued by the committee of Operation and Inspection, dated January 16, 2007.
37	Cooperation Agreement on Clean Development Mechanism Revenue Application, dated September 8, 2004.
38	Notice from the Power Enterprise Association of Dehong Prefecture on CDM Application, dated July 7 2004.
39	The purchase agreement of turbine and generator, dated October 6, 2004.
40	Yearbook of China Water Resources 2006
41	Footnote [5], Evidence on different water resources among different provinces, website of Chinese Hydropower Engineering Consulting Group Co.
42	LoA Netherlands
43	Project Design Document for CDM project “Yunnan Dayingjiang Meng’e Hydro Power Station Project”, version 0.6, dated in April 7 <sup>th</sup> , 2008
44	Footnote [6] Evidence on the water resources of Guangxi Zhuang Autonomous Region, website of Chinese Hydropower Engineering Consulting Group Co.
45	Footnote [7] Evidence on the water resources of Yunnan Province, website of Chinese Hydropower Engineering Consulting Group Co.

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Reference No.	Document or Type of Information
46	Footnote [8] Evidence on the water resources of Guizhou Province, website of Chinese Hydropower Engineering Consulting Group Co.
47	Footnote [9] Evidence on different conditions Autonomous Region and normal Provinces, website of the Government of People’s Republic of China
48	The Sale Invoice issued by the Yunnan Power Corporation, dated 04/07/2008
49	Hydro Energy Design Code for Hydro Power Projects (SL76-94), dated 1994
50	The Explanation of the Average coefficient of effective electricity Adopted by the local grid system, dated August 6 <sup>th</sup> , 2008
51	Dispatch information data for the period 28/07/2008 to 03/08/2008, by the Yunnan grid local company