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# Validation Report

**Kai county Dongli River Hydropower Co., Ltd**

**VALIDATION OF THE CDM-PROJECT:**

**SHUANGHEKOU 16.6MW HYDROPOWER  
PROJECT IN CHONGQING CITY, P.R. CHINA**

**REPORT NO. 1180906**

**31 July 2009**

TÜV SÜD Industrie Service GmbH

Carbon Management Service  
Westendstr. 199 - 80686 Munich – GERMANY

| Report No. | Date of first issue | Revision No. | Date of this revision | Certificate No. |
|------------|---------------------|--------------|-----------------------|-----------------|
| 1180906    | 26-07-2008          | 6            | 31-07-2009            | -               |

|  |   |
|--|---|
| <b>Subject:</b> Validation of a CDM Project  |   |
| <b>Accredited TÜV SÜD Unit:</b><br>TÜV SÜD Industrie Service GmbH<br>Certification Body "climate and energy"<br>Westendstr. 199<br>80686 Munich, Germany   | <b>TÜV SÜD Contract Partner:</b><br>Jiangsu TUV Product Service Ltd. Guangzhou Branch<br>26 Floor & Unit 2703-2710, Dongbao<br>510600 Guangzhou<br>China                                  |
| <b>Project Participants:</b><br>Marubeni Corporation<br>4-2,Ohtemachi 1-chome ,Chiyoda-ku, 100-8088<br>Tokyo Japan<br>Kai county Dongli River Hydropower Co., Ltd<br>Room B4, Kaizhou Avenue, Kai county, Kai City,<br>Chongqing, China  | <b>Project Site(s):</b><br>Guangmian town, Kai County, Chongqing<br>Municipality, P. R. China<br>The central geographic coordinate of powerhouse is<br>108° 34 ' 54" E and 31° 33' 12" N. |
| <b>Project Title:</b> Shuanghekou 16.6MW Hydropower Project in Chongqing City, P.R. China  |   |
| <b>Applied Methodology / Version:</b> ACM0002 / Version 07   | <b>Scope(s):</b> 1<br><b>Technical Area:</b> 1.1  |
| <b>First PDD Version:</b><br>Date of issuance: 28-10-2007<br>Version No.: 01<br>Starting Date of GSP 12-12-2007  | <b>Final PDD version:</b><br>Date of issuance: 31-07-2009<br>Version No.: 05  |
| <b>Estimated Annual Emission Reduction:</b> 63,873 tCO <sub>2</sub> e  |   |
| <b>Assessment Team Leader:</b><br>Dr. Sven Kolmetz   | <b>Further Assessment Team Members:</b><br>Dr. Georg Zenk<br>Shen (Jason) Wu<br>Ling (Smith) Liu<br>Sebastian Randig<br>Xuemei (Olina) Li   |
| <b>Summary of the Validation Opinion:</b><br><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 or the applied methodology version respectively.<br><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. |   |

## Abbreviations

|                 |   |
|-----------------|---|
| <b>ACM</b>      | Approved Consolidated Methodology   |
| <b>AM</b>       | Approved Methodology  |
| <b>AMS</b>      | Approved Methodology Small scale  |
| <b>BM</b>       | Build Margin  |
| <b>CAR</b>      | Corrective Action Request   |
| <b>CDM</b>      | Clean Development Mechanism   |
| <b>CDM EB</b>   | CDM Executive Board   |
| <b>CER</b>      | Certified Emission Reduction  |
| <b>CM</b>       | Combined Margin   |
| <b>CMP</b>      | Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol |
| <b>CR / CL</b>  | Clarification Request   |
| <b>DNA</b>      | Designated National Authority   |
| <b>DOE</b>      | Designated Operational Entity   |
| <b>EF</b>       | Emission Factor   |
| <b>EIA / EA</b> | Environmental Impact Assessment / Environmental Assessment                            |
| <b>ER</b>       | Emission Reduction  |
| <b>FAR</b>      | Forward Action Request  |
| <b>FSR</b>      | Feasibility Study Report  |
| <b>GHG</b>      | GreenHouse Gas(es)  |
| <b>IPCC</b>     | Intergovernmental Panel on Climate Change   |
| <b>IRL</b>      | Information Reference List  |
| <b>IRR</b>      | Internal Rate of Return   |
| <b>KP</b>       | Kyoto Protocol  |
| <b>MP</b>       | Monitoring Plan   |
| <b>NGO</b>      | Non Governmental Organisation   |
| <b>OM</b>       | Operational Margin  |
| <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 Executive Board (CDM-EB). The ultimate decision on the registration of a proposed project activity rests at the CDM-EB and the Parties involved.

The project activity discussed by this validation report has been submitted under the project title:  
Shuanghekou 16.6MW Hydropower Project in Chongqing City, P.R. China

### 1.2 Scope

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

- The Kyoto Protocol, in particular § 12 and modalities and procedures for the CDM
- 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 and 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)
- Baselines and monitoring methodologies (including GHG inventories)
- Management systems and auditing methods
- Environmental issues relevant to the sectoral scope applied for
- Applicable environmental and social impacts and aspects of CDM project activity
- Sector specific technologies and their applications
- Current technical and operational knowledge of the specific sectoral scope and information on best practice
- 

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

Once TÜV SÜD receives a first PDD version, it is made publicly available at the UNFCCC webpage and at TÜV SÜD's webpage 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 could be repeated) and the final PDD will form the basis for the final evaluation as presented in this report. Information on the first and the final PDD version is presented in 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 cannot 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 applies standard auditing techniques to assess the correctness of the information provided by the project participants. The assessment is based on the "Clean Development Mechanism Validation and Verification Manual" version 01. The work starts with appointment of team covering the technical scope(s), sectoral scope(s) and relevant host country experience for evaluating the CDM project activity. Once the project is made available for the stakeholder consultation process, members of the team carry out the desk review, follow-up actions, resolution of issues identified and finally preparation of the validation report. The prepared validation report and other supporting documents then undergo an internal quality control by the CB "climate and energy" before submission to the CDM-EB.

In order to ensure transparency, assumptions are clear and explicitly stated; the background material is clearly referenced. TÜV SÜD developed a methodology-specific protocol customised for the project. 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 and any adjustment made to the project design.

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

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

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

| Validation Protocol Table 2: Resolution of Corrective Action and Clarification Requests   |  |   |  |
|---|--|---|--|
| Clarifications and corrective action requests   | Ref. to table 1  | Summary of project owner response   | Validation team conclusion   |
| <i>If the conclusions from table 1 are either a Corrective Action, a Clarification or a Forward action Request, these should be listed in this section.</i> | <i>Reference to the checklist question number in Table 1 where the issue 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 discussion on and revision to project documentation together with the validation team's responses and final conclusions. The conclusions should be reflected 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.

| Validation Protocol Table 3: Unresolved Corrective Action and Clarification Requests                                      |                                   |   |
|---|-----------------------------------|---|
| Clarifications and corrective action requests   | Id. of CAR/CR 1                   | Explanation of the Conclusion for Denial  |
| <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 with a clear reference to the requirement which is not complied with.</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 (CB) ensuring that the required skills are covered by the team. The CB 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.

| Name             | Qualification | Coverage of scope                   | Coverage of technical area          | Host country experience             |
|------------------|---------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Dr. Sven Kolmetz | ATL           | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Dr. Georg Zenk   | GHG-A         | <input checked="" type="checkbox"/> |                                     |                                     |
| Shen (Jason) Wu  | GHG-A         | <input checked="" type="checkbox"/> |                                     | <input checked="" type="checkbox"/> |
| Ling (Smith) Liu | GHG-A         | <input checked="" type="checkbox"/> |                                     | <input checked="" type="checkbox"/> |
| Sebastian Randig | GHG-A         | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |



|                   |       |                                     |                                     |                                     |
|-------------------|-------|-------------------------------------|-------------------------------------|-------------------------------------|
| Xuemei (Olina) Li | GHG-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 Industrie Service GmbH in Munich, Germany. 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.

**Dr. Georg Zenk** is an auditor for environmental management systems (according to ISO 14001) based in Hamburg. In his position he is responsible for CDM-validation and CDM-verification projects. He has received training in the CDM process and participated already in several CDM project assessments as an auditor. Wu (Jason) Shen is a GHG auditor at the department “TÜV Management Service” located in the Guangzhou Branch of TÜV SÜD, China. Furthermore, Mr. Wu got a bachelor's degree of Mechanical and Electronic Engineering Studies from the Gulin University of Electronic Technology in the year 2002. Before entering GHG projects, he worked as an Environment and Quality Management System lead auditor.

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

**Sebastian Randig** is an ATL for environmental management systems at the “Carbon Management Service” in the head office of TÜV Industrie Service GmbH, Germany. He holds a M.Sc. degree in Renewable Energy and has gathered experience in planning and installing renewable energy installations before joining TÜV SÜD. He has received training in the CDM validation process and participated in several CDM project assessments.

**Xuemei (Olina) Li** is an auditor for environmental management systems (according to ISO 14001) at TUV SUD China. She is based in Guangzhou. In her position she is responsible for the implementation of validation, verification and certifications audits for management systems. She has received training in the CDM validation process and participated already in several CDM project assessments.

## 2.2 Review of Documents

A first version of the PDD was submitted to the DOE in Oct. 2007. The first PDD version submitted by the PP and additional background documents related to the project design and baseline were reviewed to verify the correctness, credibility and interpretation of the presented information, furthermore a cross check between information provided and information from other sources have been done as initial step of the validation process. A complete list of all documents and proofs reviewed is attached as annex 2 to this report.

## 2.3 Follow-up Interviews

On 27 Mar. 2008 TÜV SÜD performed interviews, telephone conferences and physical site inspection with project stakeholders to confirm relevant information and to resolve issues identified in the first document review. The table below provides a list of all persons interviewed in this context.

| Name | Organisation |
|------|--------------|
|------|--------------|



|                   |   |
|-------------------|---|
| Mr. Xiang Songwen | Kai County Dongli River Hydropower Co., Ltd     |
| Mr. Fan Wen       | Kai County Dongli River Hydropower Co., Ltd     |
| Mr. Yang Binhua   | Kai County Dongli River Hydropower Co., Ltd     |
| Ms. Tu Xin        | Shanghai Yanminjiu International Trade Co., Ltd |
| Ms. Hua Minxia    | Shanghai Yanminjiu International Trade Co., Ltd |

## 2.4 Further cross-check

During the validation process, the team makes reference to available information related to similar projects or technologies as the CDM project activity. The documentation has also been reviewed against the approved methodology applied to confirm the appropriateness of formulae and correctness of calculations.

## 2.5 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 conclusion on the project design. The CARs and CLs 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 documented in more detail in the validation protocol in annex 1.

The final PDD version submitted in July.2009 serves as the basis for the final 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, i.e. to achieve a reduction of anthropogenic GHG emissions and to contribute to a sustainable development.

## 2.6 Internal Quality Control

As final step of a validation the final documentation including the validation report and the protocol have to undergo an internal quality control by the CB "climate and energy", i.e. each report has to be finally approved either by the head of the CB or the deputy. In case one of these two persons is part of the assessment team approval can only be given by the other one.

After confirmation of the PP the validation opinion and relevant documents are submitted to the EB through the UNFCCC web-platform.

### 3 SUMMARY

The assessment work and the main results are described below in accordance with the VVM reporting requirements. The reference documents indicated in this section and Annex 1 are stated in Annex 2.

#### 3.1 Approval

The project participants are Kai county Dongli River Hydropower Co., Ltd of People's Republic of China and Marubeni Corporation of Japan. The host Party China and further participant Party Japan meet the requirements to participate in the CDM.

The DNA of the Japan has issued a LoA (IRL #54) on 10 June 2008 authorizing Marubeni Corporation as a project participant. The DNA of China has also issued a LoA (IRL 52) on July 2008 authorizing Kai County Dongli River Hydropower Co., Ltd as a project participant. TÜV SÜD received these letters from the project participants directly and considers the provided letters as authentic.

The China LoA has further been double-checked with the CDM project webpage sponsored by the Department of Climate Change, NDRC (<http://cdm.ccchina.gov.cn/english/ItemList.asp>), which further confirms the approval of this CDM project.

Furthermore, after checking the provided LoAs, TÜV SÜD confirms that both letters refer to the precise proposed CDM project activity title in line with the title in the PDD "Shuanghekou 16.6MW Hydropower Project in Chongqing City, P.R. China".

Both letters also indicate that each participating Party is a Party to the Kyoto Protocol, and that the participation in the Shuanghekou 16.6MW Hydropower Project in Chongqing City, P.R. China project is voluntary. The Chinese LoA also confirms that the proposed CDM project activity contributes to the sustainable development of China (host country). Based on the information given in these letters, TÜV SÜD considers the approval as unconditional with respect to these items.

Both LoAs have been issued by the respective Party's DNA, National Development and Reform Commission of the People's Republic of China and Minister of Economy, Trade and Industry of Japan, respectively.

TÜV SÜD considers the requirements of the VVM (§§ 45-48) to be complied with.

The LoA does not specify a version number of the PDD or validation report.

#### 3.2 Participation

The participants of the project activity have been approved by the corresponding Parties, which is confirmed by the issued LoAs.

The means of validation were equivalent to those described in section 3.1 in regard to the approval process of the project activity.

#### 3.3 Project design document

The PDD is compliant with relevant form and guidance as provided by UNFCCC.

The most recent version of the PDD form was used.

TÜV SÜD considers that the guidelines for the completion of the PDD in their most recent version have been followed. Relevant information has provided by the participants in the applying PDD sections. Completeness was assessed through the checklist included to Annex 1 of this report.

### 3.4 Project description

The project was uploaded for the GSP with version 6 of ACM0002 on 12 December 2007, but has not been submitted for registration within this grace period 8 months after the revised methodology approved, so the project participants revised the PDD using the revised version of the methodology version 7 of ACM0002 in accordance with EB43, Annex 12 paragraph 6..

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

Shuanghekou 16.6MW Hydropower Project involves the construction and operation of a 16.6 MW run-of-river hydropower plant on the up stream of Dongli River, Kai County, Chongqing Municipality, P. R. China. The project creates a new reservoir with the surface area of 272,800 m<sup>2</sup> at the full reservoir level. So the power density of the proposed project is 60.85 W/m<sup>2</sup>. There are three turbines and three generators installed. The generators includes 2 × 6,300 kW and 1 × 4,000 kW.

The annual net electricity generation is estimated to be 65,541 MWh which will be exported to the Central China Power Grid (CCPG) via Xianba substation and therefore displaces electricity generated by various power plants connected to the grid including fossil-fuel fired power plants. The project will supply reliable, zero-emission renewable energy to CCPG and create many job opportunities. Furthermore, the project developer will construct roads and other traffic infrastructures.

The information presented in the PDD on the technical design is consistent with the actual planning and implementation of the project activity as confirmed by:

- review of data and information (see annex 2), cross check the same with other sources if available.
- An on-site visit has been performed and relevant stakeholder and personnel with knowledge of the project were interviewed, in case of doubt further cross checks through additional interviews have been done.
- Finally information related to similar projects or technologies as the CDM project activity have been used if available to confirm the accuracy and completeness of the project description.

In light of the above, TÜV SÜD confirms that the project description as included to the PDD is sufficiently accurate and complete in order to comply with the requirements of the CDM.

### 3.5 Baseline and monitoring methodology

#### 3.5.1 Applicability of the selected methodology

Compliance with each applicability condition as listed in the chosen baseline and monitoring methodology ACM0002 Version 07 has been demonstrated, although ACM0001 Version 06 had been applied originally since the first version of PDD was published for global stakeholder consultation. Then after the expiration of Version 06, PDD has been revised to comply with Version 07 and has been thoroughly validated again.

The assessment was carried out for each applicability criteria and included among others the compliance check of the local project setting with the applicability conditions in regard to baseline setting and eligible project measures. This assessment also included the review of secondary sources which sustain that applicability conditions are complied with.

The Methodology specific protocol included to the Annex 1 documents the assessment process, including the steps taken. The results on the compliance check as well as the relevant evidence are explicitly presented in annex 1.

TÜV SÜD confirms that the chosen baseline and monitoring methodology is applicable to the project activity.

Emission sources which are not addressed by the applied methodology and which are expected to contribute more than 1% of the overall expected average annual emissions reduction have not been identified.

### 3.5.2 Project boundary

The project boundary was assessed in the context of physical site inspection, interviews and based on the secondary evidence received on the design of the project. The project boundary consists of the project power plant and all power plants connected to the electricity system to which the project is connected to, namely the Central China Power Grid. The most relevant documentation assessed in order to confirm the project boundary are following:

- Preliminary Design Report (IRL #5)
- Approval of Grid Connection of Shuanghekou Hydropower Station (IRL #35)
- The Baseline Emission Factor of China published by NDRC (IRL #39)
- The Purchase and Sell Electricity Contract (IRL #42)

The same have been validated during the validation process using standard audit techniques, further details of any observation are transparently presented in the annex 1.

Hence TÜV SÜD confirms that the identified boundary and the selected sources and gases as documented in the PDD are justified for the project activity.

### 3.5.3 Baseline identification

In the PDD the following baseline scenario has been defined:

Continuation of the current situation, i.e. electricity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources within the Central China Power Grid. The information presented in the PDD has been validated by a first document review of all the data, further confirmation based on the on-site visit and a final step by cross checking the information with similar relevant projects and/or technologies. The sources referenced in the PDD have been quoted correctly. The information was cross-checked based on verifiable and credible sources, such as:

- Preliminary Design Report (IRL #5)
- Notice on Strictly Prohibiting the Installation of Fuel fired Generators with the Capacity of 135MW or below issued by the General Office of the State Council, Decree No. [2002]6. (IRL #27)
- Approval of Grid Connection of Shuanghekou Hydropower Station (IRL #35)

TÜV SÜD has determined that no reasonable alternative scenario has been excluded.

Based on the validated assumptions on calculations TÜV SÜD considers that the identified baseline scenario is reasonable.

TÜV SÜD confirms that all relevant CDM requirements, including relevant and / or sectoral policies and circumstances, have been identified correctly taken into account in the definition of the baseline scenario.

A verifiable description of the baseline scenario has been included to the PDD.

In regard to item 86 of VVM, TÜV SÜD confirms that:

1. All the assumptions and data used by the project participants are listed in the PDD, including their references and sources;
2. All documentation used is relevant for establishing the baseline scenario and correctly quoted and interpreted in the PDD;
3. Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence and can be deemed reasonable;
4. Relevant national and/or sectoral policies and circumstances are considered and listed in the PDD;
5. The approved baseline methodology has been correctly applied to identify the most reasonable baseline scenario and the identified baseline scenario reasonably represents what would occur in the absence of the proposed CDM project activity.

### 3.5.4 Algorithm and/or formulae used to determine emission reductions

#### 3.5.4.1 Baseline Emissions

TÜV SÜD has assessed the calculations of project emissions, baseline emissions and leakage and emission reductions. Corresponding calculations were carried out based on calculation spreadsheets. The parameters and equations presented in the PDD and further documentation have been compared with the information and requirements presented in the methodology and respective tools. The equation comparison has been made explicitly following all the formulae presented in the calculation files.

The calculation of the baseline emissions followed the procedures described in the methodology ACM0002 Version 07. The Central China Power Grid is considered to be the project boundary. The operating margin emission factor ( $EF_{OM}$ ) was determined based on the simple OM method. The ex-ante option was chosen for this calculation. The calculation of the build margin emission factor ( $EF_{BM}$ ) was based on modified methods agreed by the EB, because plant specific data are not available in China.

The emission factor of the thermal power plants was calculated by the proportion of the emissions of coal, gas and oil times the emission factor of the best available coal, gas and oil power plant as defined and published by NDRC, <http://cdm.ccchina.gov.cn/web/NewsInfo.asp?NewsId=1889> though these data was no longer the latest as they have been renewed to 2008 data in last December <http://cdm.ccchina.gov.cn/web/NewsInfo.asp?NewsId=3239>. However these 2007 data ( $EF_{OM}$  and  $EF_{BM}$ ) are considered as “the most recent data available at the time of submission of the CDM-PDD to the DOE for validation” in accordance with Ex-ante option in the page 4 of “Tool to calculate the emission factor for an electricity system” version 01.1

[http://cdm.unfccc.int/Reference/tools/ls/meth\\_tool07\\_v01\\_1.pdf](http://cdm.unfccc.int/Reference/tools/ls/meth_tool07_v01_1.pdf)

The Operating Margin at 1.2899 tCO<sub>2</sub>/MWh stated in PDD which is identical to one publicized by NDRC while NDRC's official value is calculated based on the old values for coke (should be 29.2tC/TJ, instead of 25.8 in NDRC) and refinery gas (should be 15.7tC/TJ, instead of 18.2 in NDRC) defined in 1996 IPCC Guidelines and the result of calculation using 2006 IPCC Guidelines will be 1.2909 tCO<sub>2</sub>/MWh. As the value stated in PDD is more conservative, the validation team has accepted it as  $EF_{OM}$  as the result of ex-ante determination. The new thermal capacity installation that exceeded 20% in the last years, for which data was available, was finally assessed with this factor.

The value for the combined margin emission factor ( $EF_{CM} = 0.97455$  tCO<sub>2</sub>/MWh.) was determined using the weighted average of the  $EF_{BM}$  and  $EF_{OM}$  using the default values for the factors as described in the methodology (i.e. 0.5 for hydro plants). As per the methodology, the project does not

need to consider leakage or project emissions. As a result, the annual emission reductions equal the annual baseline emissions.

The assumptions and data used to determine the emission reductions are listed in the PDD and all the sources have been checked and confirmed.

Based on the information reviewed it can be confirmed that the sources used are correctly quoted and interpreted in the PDD.

The values presented in the PDD are considered reasonable based on the documentation reviewed, further references and the result of the interviews.

The baseline methodology has been correctly applied following the requirements.

The estimate of the baseline emissions can be confirmed as the same have been replicated by the audit team using the information provided.

Detailed information on the verification of the parameters used in the equations can be found in the annex 1.

### **3.5.5 Project emissions**

No project emission is considered in PDD as the power density of the new reservoir is  $60.85 \text{ W/m}^2$  which is greater than  $10 \text{ W/m}^2$ . This complies with ACM0002, version 07

### **3.5.6 Leakage**

No leakage is considered in PDD and this complies with ACM0002, version 07

### **3.5.7 Emission Reductions**

In summary, the calculation of the baseline emissions and the emission reductions, respectively, can be considered as correct.

## **3.6 Additionality**

The additionality of the project has been presented in the PDD using following approach: The approved "Tool for demonstration and assessment of additionality", Version 05.2, in effect as of EB39.

Step 2 of the Tool is used in the proposed project.

The approach used in the PDD has been assessed first based on a document review, where following relevant documents have been reviewed:

- Directors Board Resolution of Kai County Donglihe Hydropower Co.,Ltd (IRL #11)
- Economic Evaluation Code for Small Hydropower Projects (SL16-95) (IRL #25)

On site the additionality has been discussed principally with: Mr. Xiang, Songwen, standing deputy general manager of Kai County Dongli River Hydropower Co., Ltd. Furthermore some documents have been reviewed on-site (for details see annex 2).

Finally the data, rationales, assumptions, justifications and documentation provided have been checked using local knowledge and sectoral and financial expertise, the same has been cross checked.

The steps of the tool for the demonstration and assessment of additionality (hereafter: additionality tool) were applied correctly and demonstrate clearly that this project activity is not a baseline scenario and that the emission reductions are hence additional. The individual steps are discussed below. As part of the first step of the additionality tool, one alternative scenario was identified that is in line with currently enforced laws and regulations in China and that does not face any barriers. TÜV SÜD was able to verify the existence of this scenario and can also confirm that this alternative, namely continuation of the current situation, i.e. electricity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources within the



Central China Power Grid is realistic and credible. Hence, the requirements of step one of the additionality tool were fulfilled successfully. The benchmark analysis was applied in step two of the additionality tool to demonstrate that the project activity is not economically or financially feasible without the revenue from the sale of CERs. The applied benchmark of 10% (project, after tax) indicated in the "Economic evaluation code for small hydropower projects" (SL16- 95, IRL #25) is widely accepted in the Chinese power sector for hydropower plants with a capacity of less than 25 MW and less than 50 MW of rural area hydro plants and was therefore found to be appropriate for this project activity.

TÜV SÜD performed a thorough review of the input parameters used for the calculation of the IRR of the project. The key input parameters such as net electricity generation, O&M costs and installed capacity were derived from the values presented in the PDR (IRL #5) issued by Chongqing City Three-gorge Hydropower Reconnaissance Design Institute and approved by Kai County Convergence and Agricultural Machinery Bureau on Oct. 25, 2006. The total static investment was from Amendment to Budget of PDR (IRL #37) which was also issued by Chongqing City Three-gorge Hydropower Reconnaissance Design Institute.

The reason why the significant cost increase took place for the electricity transmission after PDR was the overloaded capacity of the existing line. In the PDR, the electricity generated was planned to be transmitted from the project station to the Honghua substation, and then to Xianba substation with the existing 110 KV transmission line, and the total investment estimated was RMB 6,510,000 in the PDR. After that, the project proponent recognized the overloaded situation of the existing line between the Honghua substation and the Xianba substation in relation to the *Letter on the electricity transmission from Kai County Shuanghekou Hydropower Station, No 145 Yu Dian Han [2006], issued by Chongqing City Power Supply Co., Ltd.* (IRL #63). And thus the project had to include a new 26km 110 KV transmission line from the power station to Xianba substation. The Chongqing City Three-gorge Hydropower Reconnaissance Design Institute has increased the investment for transmission facility to RMB 13,980,000 in the Amendment Budget of PDR (IRL #37).

Consequently, the total static investment of the project had been increased to be 93,733,400 Yuan. The tariff was from Purchase and sell electricity contract which was signed between Kai County Dongli River Hydropower Co., Ltd. and Chongqing Kai County Power Supply Co., Ltd., on Nov. 15th, 2006 (IRL #42) where it is clearly indicated that the tariff is 0.205 Yuan/KWh (including VAT). The tariff was determined by Chongqing Municipal Bureau of Prices according to the Note of adjustment tariff of CCPG by NDRC (YU JIA [2006] 352#) (IRL #48). The tariff is hardly to increase 10%, as the tariff adjustment needs to be negotiated with Chongqing Kai County Power Supply Co. Ltd and several government departments who hardly increase tariff for one specific power generation enterprise.

In PDR, the tariff is 0.254 Yuan/KWh (including VAT) during loan repayment period and 0.228 Yuan/KWh after paying off which are estimated by PDR maker based on the local tariffs of renewable energy. So it is reasonable to take the actual tariff mentioned above for IRR calculation. Even if the tariff of the PDR (as more conservative) was taken for the IRR calculation, the IRR would be still lower than the benchmark of 10% by recalculation by the audit team. Only if the tariff is increased by 23.4%, the IRR will reach the benchmark of 10%. Due to the tariff is strictly controlled by the government (IRL #48). It is hardly to increase by 23.4% in the near future. The audit team confirms that the tariff used in the PDD is reasonable and credible.

TÜV SÜD checked the credibility and plausibility of the input data by comparing the applied values with TÜV SÜD's internal statistical results of the evaluation of 250 hydropower projects in China that are either already registered or under validation. Investment costs were calculated at approximately 5.6 Mio RMB/MW, which were significantly lower than the average cost of 6.7 Mio RMB/MW, and can therefore be considered as conservative in the CDM/additionality context. The O&M costs 0.156 Mio RMB/MW was much lower than the average cost of 0.193 Mio RMB/MW. The plant is estimated to operate about 4,249 hours per year, which was designed by the authorized institute Chongqing



City Three-gorge Hydropower Reconnaissance Design Institute based on the hydrometric station statics of the hydrological flow pattern in the river from 1967 to 2003 (IRL #5).

The actual tariff of 0.205 RMB/kWh (IRL #42) is lower than the average of 0.24 RMB/kWh (net tariff) resulting from TÜV SÜD's internal statistical evaluations from hydropower projects all over China. This tariff is evidenced by the purchase and sell electricity contract which was determined by the Chongqing Municipal Price Bureau (IRL #48). To further ensure, TÜV SÜD crosschecked the invoice of another hydropower station (IRL #69) located in the same Town and contracted with same Grid Company i.e. Chongqing city Kai County power Co., Ltd, the actual tariff is 0.191 Yuan/kWh excluding VAT.

Therefore, TÜV SÜD considered the applied tariff as valid and realistic.

The net electricity exported to the grid is 7.2% less than the gross electricity generated. As mentioned in the PDR (IRL #5), the coefficient of effective electricity is 95%; the coefficient of electricity consumption on the auxiliaries' equipment is 0.2%; the transmission loss is 2%. The assumption was made according to Economic Evaluation Code for Small Hydropower Projects (SL16-95) (IRL #25) which was issued by Ministry of Water Resources of People's Republic of China. The document is the current specification for compiling primary design report of hydraulic and hydroelectric engineering. In order to ensure the financial additionality, TÜV SÜD recalculated the IRR using the total power generated (70,540 MWh). IRR will be increased to be 8.39% which is still below the benchmark 10%. Even if further 10% increase of electricity output is assumed in the sensitivity analysis, the maximum IRR will be 9.5% which is still below the benchmark. Therefore the audit team confirmed that the assumption is reasonable.

In summary, TÜV SÜD checked the applied values thoroughly and based on local and sectoral expertise, TÜV SÜD confirms that these values are realistic and credible and appears to be valid at the time the investment decision was made.

The IRR is calculated at 7.58% and also indicated in the financial analysis (IRL # 28), well below the benchmark of 10% and hence in the absence of additional revenues through CDM not financially attractive.

The sensitivity analysis was conducted on the project activity for the critical parameters like total investment, annual O&M costs as well as annual power supply and the tariff. The results indicated that the IRR does not overcome the benchmark, thereby demonstrating that the project activity is not viable without CDM revenues. Furthermore, the proposed project has been in construction since 25 June 2007 and the main equipment i.e. turbines and generators had been contracted (IRL #12), and the prices of the industrial products (IRL #78) and the labour force (IRL #79) had kept rising up rapidly for the past several years. Furthermore, TÜV SÜD compared the investment mentioned in the PDR with purchase agreement and the contracts occurred (IRL 12, 65-68) and crosschecked the Assets evaluation report abstract of Kai County Donglihe Hydropower Co., Ltd (IRL 64). Till May 15 2009, the investment on equipments and buildings has been RMB 60,760,000 evaluated by Chongqing City Zhongrongxing Real Estate and Land Assets Evaluation Co., Ltd on June 8th, 2009. The project is still under construction. The payment for Construction Companies, Transmission Electricity Engineering and other cost has not been executed yet, thus it is hardly to decrease by 10% for the total investment or the O&M cost. The capacity had already been an optimization according to the PDR, and the runtime could not be improved according to the statistics data of local hydrometric stations over the past 36 years (1967 to 2003) (IRL #5). The estimated annual electricity generation is 70,540 MWh. The coefficient of effective electricity is 95%. The coefficient of electricity consumption on the auxiliaries' equipment is 0.2%. The transmission loss is 2%. The annual net electricity generation will be 65,541 MWh (IRL #5). The amounts of electricity generated/exported rely on other factors, e.g. the amount and the stableness of the water flow in the river. So, the possibility of increase is very small based on the hydrologic statistics at the project location (IRL #5). So it is hardly to increase by 10% of the sales from electricity. The grid tariff of the project was approved

by Chongqing City Price Bureau ("NDRC Price No. [2006] 1233") (IRL #42), so it is fixed and is difficult for the tariff of the proposed project to be increased in future. TÜV SÜD confirms that a 10% variation is deemed reasonable and has been also observed for similar projects in the past.

As per the additionality tool, step three can be skipped if the requirements indicated in step two are discussed clearly and also met. Therefore, step three was skipped for this project activity.

The last step of the additionality tool, the common practice analysis could also be verified by TÜV SÜD and deemed to be acceptable and realistic. It is demonstrated by an analysis of the existing hydropower projects in the same province (i.e capacity 0-50 MW, implemented after 2002 when several changes of the regulations for the generation of electricity were implemented in China).

There are five similar projects in the area. Except Tizidong Hydropower Project, four projects are developed by state-invested organizations which are confirmed by visiting many websites (IRL #70, 71, , 73, 74). The State-invested organizations have better and easier access to project finance and have more power to negotiate with Grid Company. Compared to the proposed project, Tizidong Hydropower Project is located in the rivers with much better water resource to allow the owners better (more and easier) access to project finance. The annual operation time of Tizidong Hydropower Project is about 5,355 hours/year (IRL #77), which is 26% higher than the one of the project (4,249 hours/year). Consequently, significantly less electricity will be generated, which makes the project less financially attractive and more exposed to financial risks than Tizidong Hydropower Project.

Furthermore, the Tizidong project was developed by Chongqing Wujiang Industry Group which is state holding by Communist Party of China Committee of Qianjiang District, Chongqing Municipality (IRL #80, 81) that is a further distinction between Tizidong and the proposed project.

TÜV SÜD confirmed that it is clearly demonstrated that essential and also plausible and realistic distinctions exist between the project activity and similar activities.

In addition to comply with Annex 11 of EB48, PDD has been revised to identify 48.5% as the plant load factor in accordance with the option II (a) chosen. The plant load factor has been interpreted to be (the gross annual electricity produced in MWh) divided by (the installed capacity) further divided by (8760 hours: total hours in a year). The reason of the choice of the option II (a) is considered to be reasonable as the key parameter e.g. the capacity installed and the annual operating hours expected is based on the figure identified in PDR approved by Kai County Conversancy and Agricultural Machinery Bureau. And this key parameter in PDR has been further cross-checked with the sources about the hydrologic resources available for the project which was based on the analysis of historic data for 36 years from 1967 to 2003 derived from Wenquan Hydrologic Stations which have been located in the same river (Dongli River). Consequently the validation team did not find inconsistency in these sources and the explanation given. In summary, it was sufficiently demonstrated that the requirements for the additionality were fulfilled and that the project's emission reductions are additional. Based on these validation steps we confirm that the documentation assessed is appropriate for this project.

### **3.6.1 Prior consideration of the clean development mechanism**

The starting date of the project activity is determined by EB33 guidance; e.g. purchasing contract, construction start ("The start date of a CDM project activity is the earliest of the dates at which the implementation or construction or real action of the project activity begins"). For the project activity, the start date was the construction starting date on June 25, 2007. In order to confirm the same the assessment team had reviewed the following documents:

- Approval of Kai County Shuanghekou Hydropower Station Starting-work Construction, June 25, 2007 (IRL #10)
- Chongqing City Kai County Shuanghekou Hydropower Station Tur-generator and Accessory Equipments Purchase Contract Paper, Dec. 18, 2007 (IRL #12)

Additionally the assessment team cross checked this information with interviews with the staff of the project and visiting the project site as well as the project schedule (IRL #16). The Project Delay Report issued by the constructor on Dec 17 2007, was verified by the 3rd party supervisor on Dec 22 2007 and approved by the project owner on Dec 25 2007 (IRL #30).

The starting date of the project activity was determined to be June 25, 2007 which is before 02 August 2008 and also before the GSP. The PPs had presented to the assessment team following documentation:

#### Approval of Kai County Shuanghekou Hydropower Station Starting-work Construction (IRL #10)

The original of the documentation presented has been reviewed and cross checked based on interviews with Mr. Xiang Songwen (Standing deputy general manager) and Mr. Fan Wen (Deputy general manager), hence the document Board Decision (IRL #11) can be considered appropriate to confirm the prior consideration. Additionally in order to confirm that the PPs have taken real actions to continue the activity as CDM, following timeline has been reviewed against the respective documents presented in the table below:

| Activity  | Document   | Auditor conclusion   |
|---|--|--|
| 08/2005 PDR (IRL #5)  | Kai County Shuanghekou Hydropower Project Preliminary Design Report. Issued by Chongqing City Three-gorge Hydropower Reconnaissance Design Institute                           | Considered as the sources of the most input parameters for the IRR calculation except investment and tariff.<br><br>Bus-bar tariff is assumed at 0.254 Yuan/kWh including VAT in order to make the investment/profitability ratio 10%. |
| 11/2005 EIA (IRL #7)  | Chongqing City Kai County Shuanghekou Hydropower Project Environment Impact Report Paper. Issued by China Coal International Engineering Group Chongqing City Design Institute | The document is reliable and appropriate because it is from an accredited company  |
| 11/04/2006 EIA approval (IRL #8)  | Approval of Environment Impact Assessment, by Chongqing District Environment Protection Bureau   | The document is reliable and appropriate because it is from Government.  |
| 05/09/2006 Plan of new transmission line (IRL #63)                              | Letter from Chongqing City Power Supply Co.,Ltd. in which the planning of constructing a new 100KV transmission line by the project proponent is planned.                      | Considered as the reason why the investment for electricity transmission line was increased after PDR issuance   |
| 27/09/2006 Approval of Agricultural Land Transformation and Collection (IRL #9) | Approval of Kai County Shuanghekou Hydropower Station Agricultural Land Transformation and Collection, Yufudi No <2006>759. Issued by Chongqing                                | The document is reliable and appropriate because it is from Government.  |

|  |   |   |
|--|---|---|
|  | ing City People Government  |   |
| 25/10/2006 PDR approval (IRL #6)                                       | Approval of Preliminary Design Report, by Kai County Water Conservancy and Agricultural Machinery Bureau  | The document is reliable and appropriate because it is from Government.   |
| 15/11/2006 Electricity Purchase & Sell contract (IRL #42)              | Purchase and sell electricity contract between Kai county Dongli River Hydropower Co., Ltd. and Chongqing Kai County Power Supply Co., Ltd.                                     | <p>Considered as the source of the bus-bar tariff used in the financial calculation.</p> <p>The tariff is stated as 0.205 Yuan/kWh including VAT which is 0.1927 Yuan/kWh excluding VAT, assuming 6% for VAT conservatively</p> <p>To ensure, TÜV SÜD crosschecked the invoice of another hydropower station (IRL #69) located in the same Town and contracted with same Grid Company i.e. Chongqing city Kai County power Co., Ltd, the actual tariff is 0.191 Yuan/kWh excluding VAT.</p> <p>Therefore, the tariff in the PDD is considered to be feasible value.</p> |
| 28/11/2006 Investment Appraisal (Amendment to Budget of PDR) (IRL #37) | Investment appraisal of transmit electricity engineering of the Shuanghekou hydropower station, issued by Chongqing City Three-gorge Hydropower Reconnaissance Design Institute | Considered as the source of investment cost increase due to the change on the electricity transmission line as mentioned in chapter 3.6 Additionality.  |
| 01/12/2006 Decision at the board meeting to apply for CDM (IRL #11)    | Board decision to apply CDM project.  | With regard to the serious CDM consideration at this timing, there is no inconsistency found because the financial parameters were available at that time and the project was started 7 months later.   |
| 17/01/2007   | CDM confirmation letter to Shanghai Yanminjiu International Trade Co. Ltd   | Considered as one of continual actions toward CDM.  |
| 18/04/2007 Loan Evidence (CDM encouragement) (IRL #24)                 | The proof of the bank agreeing to grant a loan for the project  | Considered as one of continual actions toward the project and CDM   |

|  |   |  |
|--|---|--|
| 25/06/2007 The main construction started (IRL #10) | Approval of Kai County Shuanghekou Hydropower Station Starting-work Construction, Kaishuining No<2007>144. Issued by Kai County Conservancy and Agricultural Machinery Bureau | considered as the project start  |
| 18/12/2007 (IRL #12)                               | Purchase contract of turbines and generators  | The contract is signed by the supplier and the project owner. So the document is accepted. |
| 18/01/2008 (IRL #38)                               | Approval of the bank loans  | The file is sealed by the bank. So the document is accepted.                               |
| 01/10/2010   | Start to operation  | As a plan  |

Hence the project complies with the requirements to demonstrate the prior consideration of the CDM.

### 3.6.2 Identifications of alternatives

The output of the project is electricity supplied to the Central China Power Grid. The list of alternatives to supply the outputs mentioned above, which is presented in the PDD includes the project activity undertaken without being registered as CDM project. The rest of the alternatives presented do include all plausible scenarios taking into account the local and sectoral situations for the outputs mentioned. Hence the list of alternatives is considered to be complete.

### 3.6.3 Investment analysis

The PP uses the investment analysis to demonstrate the additionality.

The financial returns of the proposed project are insufficient to justify the investment.

The parameters used in the financial calculations have been validated based on a revision of the sources presented in the PDD, inter alia: total static investment 93.7334 million RMB (Amendment to Budget of PDR), annual O&M 2.5906 million RMB (PDR), tariff (including VAT) 0.205 RMB/kWh (Purchase and sell electricity contract) and annual electricity generation 70,540MWh (PDR), the same that were confirmed verbally on-site. Furthermore the period of time between the approval of the PDR and the investment decision is only less than 2 months therefore it can be confirmed that it is unlikely that the input values have materially changed. Furthermore based on a cross check with statistical figures from 250 CDM hydro power projects registered and under validation, it can be seen that the parameters are plausible and can be considered acceptable under the project situation.

The benchmark used for the financial comparison has been obtained from <Economic Evaluation Code for Small Hydropower Projects > (SL16-95, June 1995) issued by the Ministry of Water Resources (No. [1995]186) that is still in use and applicable according to the Current Effective Technical Standards of Water Resources ([2006] No. 05) issued by Ministry of Water Resources of China in year 2006 <http://www.mwr.gov.cn/tzgg/qt/20060926000000479251.aspx>. This value has been checked against the source and the suitability for this project can be confirmed due to its applicability to the hydropower projects with the installed capacity below 25MW, and the hydropower projects with the installed capacity below 50MW in the rural hydropower region. As the installed capacity of the proposed project is 16.6MW, the Design Institute for the Project used this benchmark in its Preliminary Design Report and got approval from the local government. Hence it can be confirmed that the benchmark used is adequate for this project.



Further assumptions presented in the financial analysis inter alia project lifetime 30, income tax 33%, valued-added tax 6%, sales tax 8% have been also reviewed and were found appropriate based on IRL #5, IRL #12. Hence it can be confirmed that the underlying assumptions are appropriate for this project.

The financial calculation has been completely checked, all the calculation files were checked and no mistakes have been found. Hence it can be confirmed that the calculations are correct.

### **3.6.4 Barrier analysis**

The project participants have not used the barrier analysis to demonstrate the additionality.

### **3.6.5 Common practice analysis**

The region for the common practice analysis has been defined as Chongqing city. The project activity's technology could be found in different country regions, where different situations could appear. Hence the region has been defined taken into account the kind of technology and the industry type. The assessment team has reviewed the approach presented in the PDD and it can be confirmed that the relevant parameters as location, infrastructure, economical situation and development had been taken into account in order to define the region to be used for the common practice (IRL #43, #44, #49, #56, #57). Hence the presented region could be considered appropriate for the common practice analysis.

The assessment team has reviewed official sources as Year book of China Water Resources 2006 and looked through the internet. This information confirmed that the list of similar projects presented in the PDD was complete. Additionally the team made a further cross check of the information based on the interviews.

All the similar projects that were not a CDM project have been checked firstly by a review of all documentation available (See annex 2), furthermore the essential distinctions between these projects and the CDM project under validation have been confirmed using the information from the websites (IRL #47, #58, #59, #61).

Five similar projects are identified in the area. Except Tizidong Hydropower Project, four projects are developed by State-invested organizations who have better and easier access to get project finance and have more power to negotiate with Grid Company. Tizidong Hydropower Project was developed by Chongqing Wujiang Industry Group which is state holding by Communist Party of China Committee of Qianjiang District, Chongqing Municipality (IRL 80) that was a further distinction between Tizidong and the proposed project.

In addition, the validation team checked if there was any rejected hydropower CDM project in this region and found no such instance.

Hence it can be confirmed that the proposed CDM activity is not a common practice in the defined region.

## **3.7 Monitoring plan**

The monitoring plan presented in the PDD complies with the requirement of the methodology. The assessment team has checked all the parameters presented in the monitoring plan against the requirements of the methodology; no deviations relevant for the project activity have been found in the plan.

The procedures have been reviewed by the assessment team through document review and interviews with the relevant personnel; this information together with a physical inspection allows the as-

assessment team to confirm that the proposed monitoring plan is feasible within the project design. The major parameters to be monitored have been discussed with the PPs especially regarding the location of the meters, the data management and in general the quality assurance and quality control procedures to be implemented in the context of the project. Two bidirectional meters (main and backup) will be installed at substation exit (high voltage side) and the accuracy of the meters will be 0.5s in accordance with <Technology & Management Regulations for Power Metering Devices> (DL/T448-2000). The imported and exported electricity are measured continuously and will be recorded monthly by project owner and Grid Company. The monitored data will be directly used for emission reductions calculation. Sale receipts or invoices are issued for cross-check. The meters will be calibrated every year by qualified organization.

Installed capacity will be monitored according to the nameplates of generators every year.

The area of reservoir at the full water level will be measured from water stage recorder and topographic survey yearly.

Hence it is expected that the PPs will be able to implement the monitoring plan and the emission reductions achieved can be reported ex-post and verified.

### **3.8 Sustainable development**

The LoA of the Host country clearly presents a statement that the project contributes to the sustainable development of the host Party.

### **3.9 Local stakeholder consultation**

The relevant local stakeholders have been invited via putting up a notice in Kai town, related counties and some villages. The evidence of these invitations is IRL #14. The stakeholders meeting were held in Nov. 2007 (IRL #13, #15). The assessment team has reviewed the documentation in order to validate the inclusion of relevant stakeholders and using the local expertise it can be confirmed that the communication method used to invite the stakeholders can be considered appropriate. The summary of comments presented in the PDD has been cross checked with the documentation of the stakeholder consultation and it is found to be complete.

The relevant comments presented by the local stakeholders have been taken due account by the PP, the same has been cross checked with the information obtained during the interviews.

Hence the local stakeholder consultation has been adequately performed according to the CDM requirements.

### **3.10 Environmental impacts**

The project participants undertook an environmental impact assessment. The assessment team made a document review of the information presented. The EIA (IRL #7) and the approval of EIA (IRL #8) confirm the correctness of the approach used by the PPs. Hence the PPs followed the requirements of the host country regarding the environmental impacts.



#### 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><br><a href="http://www.netinform.de/KE/Wegweiser/Guide2_1.aspx?ID=4176&amp;Ebene1_ID=26&amp;Ebene2_ID=1261&amp;mode=1">http://www.netinform.de/KE/Wegweiser/Guide2_1.aspx?ID=4176&amp;Ebene1_ID=26&amp;Ebene2_ID=1261&amp;mode=1</a><br><a href="http://cdm.unfccc.int/Projects/Validation/DB/3EIGUC0KQO41E703P6OJ8SJXNKVJJS/view.html">http://cdm.unfccc.int/Projects/Validation/DB/3EIGUC0KQO41E703P6OJ8SJXNKVJJS/view.html</a> |                            |
| <b>Starting date of the global stakeholder consultation process:</b><br>2007-12-12  |                            |
| <b>Comment submitted by:</b><br>None  | <b>Issues raised:</b><br>- |
| <b>Response by TÜV SÜD:</b><br>-  |                            |

## 5 VALIDATION OPINION

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

Shuanghekou 16.6MW Hydropower Project in Chongqing City, P.R. China

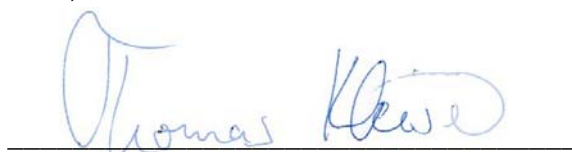
Standard auditing techniques have been used for the validation of the project. A methodology specific protocol customised for the project have been prepared to carry out the audit and present the outcome in a transparent and comprehensive manner.

The review of the project design documentation, the subsequent follow-up interviews and the further cross check of references have provided TÜV SÜD with sufficient evidence to determine the fulfilment of stated criteria in the protocol. 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 following the VVM requirements. 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.

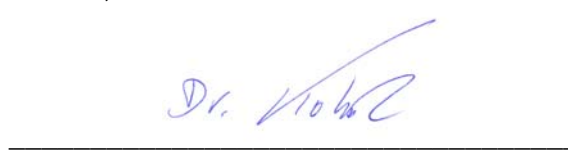
Munich, 31-07-2009



Thomas Kleiser

Head of the Certification Body "climate and energy"  
TÜV SÜD Industrie Service GmbH

Munich, 31-07-2009



Dr. Sven Kolmetz  
Assessment Team Leader

Validation of the CDM Project:  
Shuanghekou 16.6MW Hydropower Project in Chongqing City, P.R. China



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## **Annex 1: Validation Protocol**

## Validation Protocol

Project Title: Shuanghekou 16.6MW Hydropower Project in Chongqing City, P.R.China

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**Table 1 a 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, 3                   | 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, 3                   | The available PDD of GSP is indicated as version 01 dated Oct 28, 2007. The revised final PDD is version 05 dated July 31, 2009.   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| A.1.3.  | Is this consistent with the time line of the project's history?  | 1, 2, 3                   | Yes, it is consistent with the time line of the project's history.<br>And it is also consistent with the submitted project schedule provided by the project developer.   | <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, 3, 4, 5, 6, 7, 8, 9 | Yes, the description of the PDD provides the necessary information, including project character, developer, and emissions reductions etc.<br>And the project activity described has been proven by the auditor during the on-site audit.   | <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, 3, 4, 5, 6, 7, 8, 9 | The project activity is the displacement of electricity generated by coal fired power plants through electricity generated by hydro power. The following data deliver evidences for the project activity:<br><ul style="list-style-type: none"> <li>- Preliminary Design Report and its approval.</li> <li>- EIA and EIA approval</li> <li>- Land approval for project construction</li> </ul> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

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| CHECKLIST TOPIC / QUESTION  | Ref.                          | COMMENTS  | PDD in GSP                          | Final PDD                           |
|---|-------------------------------|---|-------------------------------------|-------------------------------------|
|   |                               | These data have been evidenced during the on-site audit. Please see the annex 2.  |                                     |                                     |
| A.2.3. Is the information provided by these proofs consistent with the information provided by the PDD? | 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 | Shuanghekou 16.6 MW Hydropower project is a new-built hydro-power project, located on the upstream of Dongli river. The project is a run-of-river hydropower project.<br>Yes, the information provided by the proofs is consistent with the information provided by the PDD.<br><b>See CAR8</b>   | <b>See CAR8</b>                     | <input checked="" type="checkbox"/> |
| A.2.4. Is all information presented consistent with details provided by further chapters of the PDD?    | 1, 2, 3, 4, 5, 6, 7, 8, 9     | Yes, all presented information is consistent with details provided by further chapters of 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, 4                          | Kai County Dongli River Hydropower Co.,Ltd, and Marubeni Corporation are considered as project participants.<br><b><u>Clarification Request 1:</u></b><br>Concerning the project participant of Kai County Dongli River Hydropower Co.,Ltd: the name of party involved is different from Annex 1, please clarify it.  | <b>CR1</b>                          | <input checked="" type="checkbox"/> |
| A.3.2. Is the participation of the listed entities or Parties confirmed by each one of them?            | 1, 4                          | Yes, the participation of the listed entities is confirmed by each one of them, the project participants were affirmed by the auditor. And they are demonstrated during the on-site audit.<br><b><u>Open issue</u></b><br>The LoA and MoC of the project participants should be provided before the request for registration. The MoC is planned to be got- | Open Issue                          | <input checked="" type="checkbox"/> |

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| CHECKLIST TOPIC / QUESTION  | Ref.                                     | COMMENTS  | PDD in GSP                          | Final PDD                           |
|---|--|---|-------------------------------------|-------------------------------------|
|   |  | ten on Jul 15 2008 and the LoA is estimated to be gotten on Jul 25 2008.  |                                     |                                     |
| 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, 4                                     | No.<br><b>See CR1.</b>  | <b>See CR1</b>                      | <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, 4, 5, 6, 7, 8, 9, 10, 16, 18, 35, 36, | <p>The project location is clearly identified according to the PDD.</p> <p>The project is located in the Guangmian Town, Kai County, Chongqing City, China.</p> <p>The exact location of the project is defined using geographic coordinates obtained using a Global Positioning System receiver: Longitude 108°04'E, Latitude 31°1' N.</p> <p><b><u>Corrective Action Request 1:</u></b></p> <ol style="list-style-type: none"> <li>The GPS coordinates should be specified as geographical seconds. Please indicate the exact site of GPS coordinates.</li> <li>Chongqing City isn't a city of Hunan Province; please correct it in the revised PDD.</li> </ol> | <b>CAR1</b>                         | <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, 4, 5, 6, 7, 8, 9, 10, 16, 18, 35,     | <p>During the on-site audit, the following evidence has been submitted:</p> <p>Approval of Kai County Shuanghekou hydropower station project preliminary design report, dated Oct 25 2006.</p> <p>Approval of Kai County Shuanghekou hydropower station environment impact report, April 11 2006.</p> <p>Approval of Kai County Shuanghekou hydropower station project</p>  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

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| CHECKLIST TOPIC / QUESTION  | Ref.                        | COMMENTS   | PDD in GSP                          | Final PDD                           |
|---|-----------------------------|--|-------------------------------------|-------------------------------------|
|   | 36                          | land for construction, dated Sep 27 2006.<br>Approval of Kai County Shuanghekou hydropower station starting-work construction, dated June 06 25 2007.<br>Approval of Kai County Shuanghekou hydropower station grid connection, dated July 26 2006.<br>With these evidences and the on-site audit, the DOE firmly believes that the project proponents can implement the project at this site. |                                     |                                     |
| <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, 3                     | Yes, the project falls into scope 1: Energy Industries (renewable/non renewable)   | <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, 6, 7, 8, 9, 10, 12 | The project uses well established hydropower generation technology for electricity generation and transmission.<br>Yes, the technical design of the project activity reflects the current good practices.  | <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, 6, 7, 8, 9, 10, 12 | Yes, the project utilizes mature domestic hydropower generation technology to replace power generation by coal-fired power 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, 5, 6, 7, 8,           | The project use well established domestic power generation technology for electricity, there is no technology transfer from annex-I countries to China by the proposed project.  | <b>CAR2</b>                         | <input checked="" type="checkbox"/> |



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| CHECKLIST TOPIC / QUESTION   | Ref.                                       | COMMENTS  | PDD in GSP                          | Final PDD                           |
|--|--|---|-------------------------------------|-------------------------------------|
|  | 9,<br>10,<br>12                            | <p><b><u>Corrective Action Request 2:</u></b></p> <p>Please indicate the main equipments manufacturers of the project.</p> <p>The hydraulic turbine models of the project are HLA575C-LJ-83 and HLA542-LJ-103, the generator models of the project are SF-J6300-6/2400 and SF-J4000-8/2150, please correct them in the PDD.</p> |                                     |                                     |
| A.4.3.4. Is the technology implemented by the project activity environmentally safe?   | 1, 2,<br>5, 6,<br>7, 8,<br>9,<br>10,<br>12 | Yes, the technology implemented by the proposed project is environmentally safely. The environmental impacts caused by the project activity will be very low after the suggested mitigation measures by the EIA report are adopted.   | <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,<br>5, 6,<br>7, 8,<br>9,<br>10,<br>16 | Yes, the provided information is in compliance with actual situation.   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| A.4.3.6. Does the project use state of the art technology and / or does the technology result in a significantly better performance than any commonly used technologies in the host country? | 1, 2,<br>5, 6,<br>7, 8,<br>9,<br>10,<br>12 | The common practice for electricity generation is still coal-fired power plant. Hence, the project definitely would result in a better performance than the common practice.  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| A.4.3.7. Is the project technology likely to be substituted by other or more efficient technologies within the project period?   | 1, 2,<br>5, 6,<br>7, 8,<br>9,              | The project utilizes mature domestic hydropower generation technology. It is not expected that there will be a substitution of the project technology by other or more efficient technologies.  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

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| CHECKLIST TOPIC / QUESTION  | Ref.                            | COMMENTS  | PDD in GSP                          | Final PDD                           |
|---|---------------------------------|---|-------------------------------------|-------------------------------------|
|   | 10, 12                          |   |                                     |                                     |
| 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, 5, 6, 7, 8, 9, 10, 36     | Yes, the PDD indicates the training and maintenance efforts of the project developer, and the evidences have been submitted to the DOE.<br><br><b><u>Corrective Action Request 3:</u></b><br>Please indicate the training and maintenance efforts of the project in the PDD.  | <b>CAR3</b>                         | <input checked="" type="checkbox"/> |
| A.4.3.9. Is information available on the demand and requirements for training and maintenance?  | 1, 2, 5, 6, 7, 8, 9, 10         | Yes, it is.<br>The relevant training and maintenance evidences were submitted to DOE during the on-site audit.<br><br><b>See CAR3.</b>  | <b>See CAR3</b>                     | <input checked="" type="checkbox"/> |
| A.4.3.10. Is a schedule available for the implementation of the project and are there any risks for delays?   | 1, 2, 5, 6, 7, 8, 9, 10, 30, 36 | The planning schedule in the past and for the future was clearly described in the PDD.<br>A time schedule of the project implementation is included in A.4.3 of the PDD.<br><br><b><u>Corrective Action Request 4:</u></b><br>During the on-site audit and analyzing relevant documents, the project schedule will be delayed for about 5 months, please explain it and submit evidence for it. | <b>CAR4</b>                         | <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, 3                         | Yes, the form for the indication of projected emission reductions is correctly applied.   | <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, 3                         | Yes, the provided figures in table A.-3 are consistent with other data presented in chapter B.6 of the PDD.   | <b>See CAR8</b>                     | <input checked="" type="checkbox"/> |

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| CHECKLIST TOPIC / QUESTION  | Ref.       | COMMENTS   | PDD in GSP                          | Final PDD                           |
|---|------------|--|-------------------------------------|-------------------------------------|
|   |            | See CAR8   |                                     |                                     |
| <b>A.4.5. Public funding of the project activity</b>  |            |  |                                     |                                     |
| A.4.5.1. Is the information provided on public funding provided in compliance with the actual situation or planning as available by the project participants? | 5, 6, 20,  | Yes, there is no public funding necessary; all costs are covered by bank loans and private equity.   | <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)?                              | 5, 6, 20,  | The statements are consistent within the PDD.  | <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, 5 | Yes, the latest version 06 of ACM0002 at that time has been applied for the GSP and the reference is clearly indicated.<br><br>In the revised PDD version 05 dated 31/07/2009, the applicable version 07 of ACM0002 has been applied.  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| B.1.2. Is the applied version the most recent one and / or is this version still applicable?  | 1, 2, 3, 5 | The applied version has been the most recent one at the time of GSP uploading. Requests for registration should be submitted until 13 <sup>th</sup> of August 2008.<br><br>Due to version 06 expiring, in the final PDD, the version 07 is applied which is still applicable at the time of submitting the project for registration. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

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| CHECKLIST TOPIC / QUESTION  | Ref.       | COMMENTS   | PDD in GSP                          | Final PDD                           |                                 |     |                      |     |                                |     |                      |     |                                     |                                     |
|---|------------|--|-------------------------------------|-------------------------------------|---------------------------------|-----|----------------------|-----|--------------------------------|-----|----------------------|-----|-------------------------------------|-------------------------------------|
| B.2. Justification of the choice of the methodology and why it is applicable to the project activity  |            |  |                                     |                                     |                                 |     |                      |     |                                |     |                      |     |                                     |                                     |
| B.2.1. Is the applied methodology considered the most appropriate one?  | 1, 2, 3, 5 | Yes, the approved methodology ACM0002 is exactly applicable to new hydropower projects.  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                 |     |                      |     |                                |     |                      |     |                                     |                                     |
| Fill in the required amount of sub checklists for applicability criteria as given by the methodology applied and comment at least every line answered with “No” |            |  |                                     |                                     |                                 |     |                      |     |                                |     |                      |     |                                     |                                     |
| B.2.2. Criterion 1:<br>Type of capacity addition by renewable energy  | 1, 2, 3    | <table><tr><th>Applicability checklist</th><th>Yes / No</th></tr><tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Evidences provided in the PDD?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table> | Applicability checklist             | Yes / No                            | Criterion discussed in the PDD? | Yes | Compliance provable? | Yes | Evidences provided in the PDD? | Yes | Compliance verified? | Yes | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Applicability checklist   | Yes / No   |  |                                     |                                     |                                 |     |                      |     |                                |     |                      |     |                                     |                                     |
| Criterion discussed in the PDD?   | Yes        |  |                                     |                                     |                                 |     |                      |     |                                |     |                      |     |                                     |                                     |
| Compliance provable?  | Yes        |  |                                     |                                     |                                 |     |                      |     |                                |     |                      |     |                                     |                                     |
| Evidences provided in the PDD?  | Yes        |  |                                     |                                     |                                 |     |                      |     |                                |     |                      |     |                                     |                                     |
| Compliance verified?  | Yes        |  |                                     |                                     |                                 |     |                      |     |                                |     |                      |     |                                     |                                     |
| B.2.3. Criterion 2:<br>Exclusion of fuel switching activities   | 1, 2, 3    | <table><tr><th>Applicability checklist</th><th>Yes / No</th></tr><tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Evidences provided in the PDD?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table> | Applicability checklist             | Yes / No                            | Criterion discussed in the PDD? | Yes | Compliance provable? | Yes | Evidences provided in the PDD? | Yes | Compliance verified? | Yes | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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:<br>Defined electricity grid boundaries  | 1, 2, 3    | <table><tr><th>Applicability checklist</th><th>Yes / No</th></tr><tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Evidences provided in the PDD?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table> | Applicability checklist             | Yes / No                            | Criterion discussed in the PDD? | Yes | Compliance provable? | Yes | Evidences provided in the PDD? | Yes | Compliance verified? | Yes | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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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| CHECKLIST TOPIC / QUESTION  | Ref.     | COMMENTS   | PDD in GSP                          | Final PDD                           |   |     |                                  |     |   |     |                                   |     |                                     |                                     |
|---|----------|--|-------------------------------------|-------------------------------------|---|-----|----------------------------------|-----|---|-----|-----------------------------------|-----|-------------------------------------|-------------------------------------|
| B.2.5. Criterion 4:<br>Approved inclusion in other methodologies (if applied only)  | 1, 2, 3  | Not applicable   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |   |     |                                  |     |   |     |                                   |     |                                     |                                     |
| B.3. Description of the sources and gases included in the project boundary  |          |  |                                     |                                     |   |     |                                  |     |   |     |                                   |     |                                     |                                     |
| Integrate the required amount of sub-checklists for sources and gases as given by the methodology applied and comment on at least every line answered with “No”       |          |  |                                     |                                     |   |     |                                  |     |   |     |                                   |     |                                     |                                     |
| B.3.1. Source:<br>Fugitive Emissions from non-condensable gases (geothermal activities only)<br>Gas(es): CO <sub>2</sub> , CH <sub>4</sub><br>Type: Project Emissions | 1, 2, 3  | <table><tr><td>Boundary checklist</td><td>Yes / No</td></tr><tr><td>Source and gas (es) discussed by the PDD?</td><td>N/A</td></tr><tr><td>Inclusion / exclusion justified?</td><td>N/A</td></tr><tr><td>Explanation / Justification sufficient?</td><td>N/A</td></tr><tr><td>Consistency with monitoring plan?</td><td>N/A</td></tr></table>  | 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:<br>Emissions from combustion of fossil fuels (geothermal activities only)<br>Gas(es): CO <sub>2</sub><br>Type: Project Emissions                       | 1, 2, 3  | <table><tr><td>Boundary checklist</td><td>Yes / No</td></tr><tr><td>Source and gas(es) discussed by the PDD?</td><td>N/A</td></tr><tr><td>Inclusion / exclusion justified?</td><td>N/A</td></tr><tr><td>Explanation / Justification sufficient?</td><td>N/A</td></tr><tr><td>Consistency with monitoring plan?</td><td>N/A</td></tr></table>   | 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:<br>Emissions from the reservoir (new hydroelectric activities only)<br>Gas(es): CO <sub>2</sub> , CH <sub>4</sub><br>Type: Project Emissions           | 1, 2, 3  | <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> <p>The proposed project is a run-of-river hydropower project.</p> | Boundary checklist                  | Yes / No                            | Source and gas(es) discussed by the PDD?  | Yes | Inclusion / exclusion justified? | Yes | Explanation / Justification sufficient? | Yes | Consistency with monitoring plan? | 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      |  |                                     |                                     |   |     |                                  |     |   |     |                                   |     |                                     |                                     |

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|---|----------|--|-------------------------------------|-------------------------------------|--|-----|----------------------------------|-----|---|-----|-----------------------------------|-----|-------------------------------------|-------------------------------------|
| B.3.4. Source:<br>Emissions from electricity generation in fossil fuel fired power plants of the project electricity system<br>Gas(es): CO <sub>2</sub><br>Type: Baseline Emissions   | 1, 2, 3  | <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.3.5. Source:<br>Emissions from electricity generation in fossil fuel fired power plants of any connected electricity system<br>Gas(es): CO <sub>2</sub><br>Type: Baseline Emissions | 1, 2, 3  | <table><tr><td>Boundary checklist</td><td>Yes / No</td></tr><tr><td>Source and gas(es) discussed by the PDD?</td><td>N/A</td></tr><tr><td>Inclusion / exclusion justified?</td><td>N/A</td></tr><tr><td>Explanation / Justification sufficient?</td><td>N/A</td></tr><tr><td>Consistency with monitoring plan?</td><td>N/A</td></tr></table> | 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.3.6. Source:<br>Emissions from electricity generation in fossil fuel fired power plants of imported electricity (project electricity consumption)<br>Gas(es): CO <sub>2</sub>       | 1, 2, 3  | <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, 3  | Yes, the project boundary of the proposed project verified on-site is in accordance with the discussion provided by the PDD.   | <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   | 1, 2,    | Yes, it is clearly described in the PDD that electricity delivered to  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |  |     |                                  |     |   |     |                                   |     |                                     |                                     |



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| represented by the combined margin of the grid the activity will be connected to?  |  | 3, 5, 27   | the grid by the project would have otherwise been generated by the operation of grid-connected coal-fired power plants and by the addition of new generation sources without the project activity, as reflected in the combined margin calculations.   |                                     |                                     |
| B.4.2.   | In case of any modification or retrofit of existing facilities:<br>Is data available to determine the historic production level?   | 1, 2, 3, 5   | Not applicable.  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| B.4.3.   | In case of any modification or retrofit of existing facilities:<br>Have conservative assumptions been applied in order to estimate the point in time when the existing equipment needs to be replaced? | 1, 2, 3, 5   | Not applicable.  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| <b>B.5. Description of how the anthropogenic emissions of GHG by sources are reduced below those that would have occurred in the absence of the registered CDM project activity (assessment and demonstration of additionality):</b> |  |  |  |                                     |                                     |
| B.5.1.   | Is evidence provided, that CDM has been considered seriously in the decision to proceed with the project activity (CDM decision before project start)?   | 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, | During the on-site audit, the following evidences have been submitted:<br>- Approval of The Project, issued by Chongqing Development and Reform Commission, dated Aug 18 2006.<br>- Investment Appraisal of Transmit Electricity Engineering of Chongqing Kai County Shuanghekou Hydropower Station, dated Nov 2006.<br>- Kai County Donglihe Hydropower Co., Ltd Directors Board Resolution (CDM decision), dated Dec 1 2006.<br>- CDM Confirmation Letter to Shanghai Yanminjiu International Trade Co. Ltd, issued by Kai County Dongli River Hydropower Co.,Ltd, dated Jan 17 2007<br>- Loan agreement (CDM encouragement). Issued by Kai County | CAR5                                | <input checked="" type="checkbox"/> |

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|  | 19, 21, 24, 31, 37, 38, 40 | <p>Country Credit Corporation Society, dated April 18 2007.</p> <ul style="list-style-type: none"> <li>- Approval of Kai County Shuanghekou Hydropower Station Start-ing-work Construction, issued by Kai County Agriculture and Ma-chinery Bureau, dated June 25 2007.</li> <li>- Kai County Shuanghekou Hydropower Station Turbine-generator and its Accessory Equipments Purchasing Contract, dated Dec 18 2007.</li> <li>- Approval of the Application of the Loan by Kai County Dongli River Hydropower Co.,Ltd, issued by Kai County Country Credit Corporation Society, dated Jan 18 2008.</li> </ul> <p>As the milestones listed above, the Directors Board Resolution (CDM decision) was held on Dec 1 2006 which was earlier than the construction starting date June 25 2007. So the CDM were considered seriously in the decision to proceed with the project activity.</p> <p><b><u>Corrective Action Request 5:</u></b></p> <p>Please provide a table listing the milestones of the project activity in the CDM context in the revised PDD</p> |                                     |                                     |
| B.5.2. Have realistic and credible alternatives been identified providing comparable out-puts or services? (step 1a) | 1, 2, 3                    | <p>The following baseline scenarios are discussed:</p> <ul style="list-style-type: none"> <li>- The project activity not undertaken as CDM project activity</li> <li>- Construct a fossil fuel-fired power plant with equivalent annual electricity generation.</li> <li>- Construct an alternative renewable power plant with equivalent annual electricity generation.</li> <li>- Equivalent annual generated electricity supplied by CCPG.</li> </ul> <p>These scenarios are required by methodology. It can be found that "Import equivalent annual generated electricity supplied by CCPG" is the most likely baseline scenario.</p>  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

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|----------------------------|---|-------------------|--|-------------------------------------|-------------------------------------|
| B.5.3.                     | Is the project activity without CDM included in these alternatives? (step 1a)   | 1, 2, 3           | Yes, the project activity without CDM is included in these alternatives.   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| B.5.4.                     | Is a discussion provided for all identified alternatives concerning the compliance with applicable laws and regulations? (step 1b)              | 1, 2, 3           | Yes. China's power regulations prohibit (without special permission) the installation of coal-fired power plants of less than 135MW. See the announcement which strictly forbids the construction of thermal power stations with an installed capacity lower than 135MW published by the State Council Office, Guobanfa-mingdian <2002>No.06.<br><br>That means that option "Construction of a thermal power plant with the same installed capacity or the same annual power" is not in compliance with legal and regulatory requirements. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| B.5.5.                     | In case the PDD argues that specific laws are not enforced in the country or region: Is evidence available concerning that statement? (step 1b) | 1, 2, 3           | Not applicable.  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| B.5.6.                     | In case of applying step 2 / investment analysis of the additionality tool: Is the analysis method identified appropriately (step 2a)?          | 1, 2, 3, 5, 6, 25 | Yes, the benchmark analysis is applied. It has been chosen a benchmark of 10%. The benchmark is referenced in the PDD.<br><br>The "Economic Evaluation Code for Small Hydropower Projects (SL16-95)" is used for benchmark analysis (which is applicable for projects with an installed capacity below 25MW).<br><br>The benchmark (10%) is widely accepted by hydropower developer in China.  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| B.5.7.                     | In case of Option I (simple cost analysis): Is it demonstrated that the activity produces no economic benefits other than CDM income?           | 1, 2, 3, 5, 6     | Not applicable.  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| B.5.8.                     | In case of Option II (investment compari-   | 1, 2,             | Not applicable.  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

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|                            | son analysis): Is the most suitable financial indicator clearly identified (IRR, NPV, cost benefit ratio, or (levelized) unit cost)?                              | 3, 5, 6                    |   |                                     |                                     |
| B.5.9.                     | In case of Option III (benchmark analysis): Is the most suitable financial indicator clearly identified (IRR, NPV, cost benefit ratio, or (levelized) unit cost)? | 1, 2, 3, 5, 6, 25          | Yes, the IRR indicator is selected, and the benchmark (10%) is widely accepted by small scale hydropower developer of China.  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| B.5.10.                    | In case of Option II or Option III: Is the calculation of financial figures for this indicator correctly done for all alternatives and the project activity?      | 1, 2, 3, 5, 6, 22, 25, 28, | <p>The calculation of IRR is done for the project activity without the revenues from the sale of CERs and with the revenues from the sale of CERs.</p> <p>The origin of the parameters used for IRR calculation has been checked by the DOE.</p> <p><b><u>Corrective Action Request 6:</u></b></p> <ol style="list-style-type: none"> <li>1. Please submit the IRR calculation EXCEL sheet to the auditor.</li> <li>2. Please submit the evidences for total statistic investment, electricity tariff, water resource tariff and annual O&amp;M to the DOE.</li> <li>3. The value of total statistic investment, water resource tariff and electricity tariff are different with the Project Preliminary Design Report (FSR), the reason should be explained in the revised PDD.</li> </ol> | <b>CAR6</b>                         | <input checked="" type="checkbox"/> |
| B.5.11.                    | In case of Option II or Option III: Is the analysis presented in a transparent manner including publicly available proofs for the utilized data?                  | 1, 2, 3, 5, 6, 22, 25, 28  | <p>Yes, the input data have been verified during the on-site audit.</p> <p><b>See CAR6 and CAR8</b></p>   | <b>See CAR6 and CAR8</b>            | <input checked="" type="checkbox"/> |
| B.5.12.                    | In case of applying step 3 (barrier analy-  | 1, 2,                      | Not applicable.   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

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| sis) of the additionality tool: Is a complete list of barriers developed that prevent the different alternatives to occur?   | 3, 5, 6                                      |   |                                     |                                     |
| B.5.13. In case of applying step 3 (barrier analysis): Is transparent and documented evidence provided on the existence and significance of these barriers?                          | 1, 2, 3, 5, 6                                | Not applicable.   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| B.5.14. In case of applying step 3 (barrier analysis): Is it transparently shown that the execution of at least one of the alternatives is not prevented by the identified barriers? | 1, 2, 3, 5, 6                                | Not applicable.   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| B.5.15. 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)?     | 5, 6, 11, 12, 15, 16, 17, 18, 19, 20, 32, 33 | <p>Because China began undertaking significant electric power sector reform including dividing the former single national power company into regional companies and separating generation and distribution responsibilities after 2002, so the other similar projects are defined as the hydropower projects of which the installed capacity is below than 50MW in Chongqing Municipality commissioned after 2002.</p> <p>There are five similar activities in Chongqing identified and analyzed. Except Tizidong Hydro Power Station, four projects are developed by state-invested organizations which have stronger power to negotiate with Grid Company and easily get finance., So there is only Tizidong Hydro Power Station could be regarded as the similar activity in the boundary.</p> <p><b><u>Corrective Action Request 7:</u></b></p> <p>Please submit the evidences for the other similar activities in Chongqing Municipality and the analysis of the difference of the proposed project.</p> | <b>CAR7</b>                         | <input checked="" type="checkbox"/> |
| B.5.16. If similar activities are occurring: Is it demonstrated that in spite of these simi-   | 5, 6, 11,                                    | <p>Yes, it is described in detail in the PDD.</p> <p>If the project could be approved and registered successfully, CDM</p>  | <b>See CAR7</b>                     | <input checked="" type="checkbox"/> |

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| larities the project activity would not be implemented without the CDM component (step 4b)?   | 12,<br>15,<br>16,<br>17,<br>18,<br>19,<br>20,<br>32,<br>33                 | registration and carbon credit sales will partially mitigate the project financial unattractiveness by providing additional incomes. The project developer will be more confident in successful implementation of the project.<br><br><b>See CAR7.</b>   |                                     |                                     |
| B.5.17. Is it appropriately explained how the approval of the project activity will help to overcome the economic and financial hurdles or other identified barriers? | 5, 6,<br>11,<br>12,<br>15,<br>16,<br>17,<br>18,<br>19,<br>20,<br>32,<br>33 | Registration of the project as a CDM project would result in additional revenues for the project, significantly improving the economic attractiveness of the project.  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| <b>B.6. Emissions reductions</b>  |  |  |                                     |                                     |
| <b>B.6.1. Explanation of methodological choices</b>   |  |  |                                     |                                     |
| B.6.1.1. Is it explained how the procedures provided in the methodology are applied by the proposed project activity?   | 1, 2,<br>3, 5,<br>6  | The calculation of the emission reduction is applied according to the steps described in ACM0002:<br><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> These steps are described in a transparent manner. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |



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|---|---------------|---|-------------------------------------|-------------------------------------|
| B.6.1.2. Is every selection of options offered by the methodology correctly justified and is this justification in line with the situation verified on-site?                            | 1, 2, 3, 5, 6 | Yes, the every section of options offered by the methodology is correctly justified, and the justification is in line with the situation verified on site.<br><br>The information about the project boundary should be revised. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| B.6.1.3. Are the formulae required for the determination of project emissions correctly presented, enabling a complete identification of parameter to be used and / or monitored?       | 1, 2, 3, 5, 6 | Not applicable as there are no project emissions due to the project activity.   | <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, 3, 5, 6 | Yes, the formula to calculate baseline emissions is 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, 3, 5, 6 | Yes, the choice of options to determine the emissions factor is justified in a suitable and transparent manner.   | <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, 3, 5, 6 | 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, 3, 5, 6 | 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 and project emissions correctly presented, enabling a complete  | 1, 2, 3, 5, 6 | According to ACM0002 ver06, the project is a run-of-river hydro power plant. In the case that power density is above 10 W/m <sup>2</sup> . So, it is not needed to calculate project emissions, PE <sub>y</sub> = 0.            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

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|--|---------------------------|--|----------------|-----------|---------------------------------|-----|--------------------------------|-----|---------------------------------------|-----|----------------------------|-----|-------------------------|-----|-------------------------------|-----|-------------------------------------|-----|---|-----|---|---|
| identification of parameter to be used and / or monitored?   |                           | Leakage does not have to be addressed as per the methodology   |                |           |                                 |     |                                |     |                                       |     |                            |     |                         |     |                               |     |                                     |     |   |     |   |   |
| B.6.1.9. Are formulae required for the determination of emission reductions correctly presented?   | 1, 2, 3, 5, 6             | Yes, the required formula for the determination of emission reductions is correctly presented.   | ☑              | ☑         |                                 |     |                                |     |                                       |     |                            |     |                         |     |                               |     |                                     |     |   |     |   |   |
| 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, 3, 5, 6, 26, 29, 39 | Yes, it is.  | ☑              | ☑         |                                 |     |                                |     |                                       |     |                            |     |                         |     |                               |     |                                     |     |   |     |   |   |
| 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, 3, 5, 6, 26, 29, 39 | Yes, the ex-ante calculation of emission factors is chosen.<br>The OM and BM factors are specified in the methodology and PDD.   | ☑              | ☑         |                                 |     |                                |     |                                       |     |                            |     |                         |     |                               |     |                                     |     |   |     |   |   |
| Fill in the required amount of sub checklists for monitoring parameter and comment any line answered with “No”                                       |                           |  |                |           |                                 |     |                                |     |                                       |     |                            |     |                         |     |                               |     |                                     |     |   |     |   |   |
| B.6.2.3. Parameter Title:<br>Annual electricity supplied to the grid prior to retrofit<br>(applicable only for retrofit and modification activities) | 1, 2, 3, 5, 6, 26, 29, 39 | <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 | ☑ | ☑ |
| 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                       |  |                |           |                                 |     |                                |     |                                       |     |                            |     |                         |     |                               |     |                                     |     |   |     |   |   |

# Validation Protocol

Project Title: Shuanghekou 16.6MW Hydropower Project in Chongqing City, P.R.China

Date of Completion: 31/07/2009

Number of Pages: 55



Industrie Service

| CHECKLIST TOPIC / QUESTION   | Ref.                                 | COMMENTS   | PDD in GSP     | Final PDD |                                 |     |                                |     |                                       |     |                            |     |                         |    |                               |     |                                     |     |   |     |          |   |
|--|--------------------------------------|--|----------------|-----------|---------------------------------|-----|--------------------------------|-----|---------------------------------------|-----|----------------------------|-----|-------------------------|----|-------------------------------|-----|-------------------------------------|-----|---|-----|----------|---|
| B.6.2.4. Parameter Title:<br>Emission factor of the grid (EF <sub>CM</sub> in tCO <sub>2</sub> /MWh)                     | 1, 2,<br>3, 5,<br>6,26,<br>29,<br>39 | <table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided?</td><td>No</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Choice of data correctly justified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr></table> <p><b><u>Corrective Action Request 8:</u></b></p> <p>The value of EF<sub>CM</sub> calculated in the PDD is 0.97505, which higher than the value of 0.97455 which was published by China NDRC on Aug.9<sup>th</sup>, 2007. Please correct it in the revised PDD and provide the EF calculation Excel spreadsheet to the DOE. Meanwhile, the ex-ante calculation of emission reductions and IRR with CDM revenue should be re-calculated and all the relative contents should be revised in the PDD.</p> | Data Checklist | Yes / No  | Title in line with methodology? | Yes | Data unit correctly expressed? | Yes | Appropriate description of parameter? | Yes | Source clearly referenced? | Yes | Correct value provided? | No | Has this value been verified? | Yes | Choice of data correctly justified? | Yes | Measurement method correctly described? | N/A | CAR8     | ☑ |
| Data Checklist   | Yes / No                             |  |                |           |                                 |     |                                |     |                                       |     |                            |     |                         |    |                               |     |                                     |     |   |     |          |   |
| Title in line with methodology?  | Yes                                  |  |                |           |                                 |     |                                |     |                                       |     |                            |     |                         |    |                               |     |                                     |     |   |     |          |   |
| Data unit correctly expressed?   | Yes                                  |  |                |           |                                 |     |                                |     |                                       |     |                            |     |                         |    |                               |     |                                     |     |   |     |          |   |
| Appropriate description of parameter?  | Yes                                  |  |                |           |                                 |     |                                |     |                                       |     |                            |     |                         |    |                               |     |                                     |     |   |     |          |   |
| Source clearly referenced?   | Yes                                  |  |                |           |                                 |     |                                |     |                                       |     |                            |     |                         |    |                               |     |                                     |     |   |     |          |   |
| Correct value provided?  | No                                   |  |                |           |                                 |     |                                |     |                                       |     |                            |     |                         |    |                               |     |                                     |     |   |     |          |   |
| Has this value been verified?  | Yes                                  |  |                |           |                                 |     |                                |     |                                       |     |                            |     |                         |    |                               |     |                                     |     |   |     |          |   |
| Choice of data correctly justified?  | Yes                                  |  |                |           |                                 |     |                                |     |                                       |     |                            |     |                         |    |                               |     |                                     |     |   |     |          |   |
| Measurement method correctly described?  | N/A                                  |  |                |           |                                 |     |                                |     |                                       |     |                            |     |                         |    |                               |     |                                     |     |   |     |          |   |
| B.6.2.5. Parameter Title:<br>Operating margin (EF <sub>OM</sub> in tCO <sub>2</sub> /MWh)<br>emission factor of the grid | 1, 2,<br>3, 5,<br>6,26,<br>29,<br>39 | <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>No</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Choice of data correctly justified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr></table> <p><b>See CAR8</b></p>  | 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? | No | Has this value been verified? | Yes | Choice of data correctly justified? | Yes | Measurement method correctly described? | N/A | See CAR8 | ☑ |
| 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?  | No                                   |  |                |           |                                 |     |                                |     |                                       |     |                            |     |                         |    |                               |     |                                     |     |   |     |          |   |
| Has this value been verified?  | Yes                                  |  |                |           |                                 |     |                                |     |                                       |     |                            |     |                         |    |                               |     |                                     |     |   |     |          |   |
| Choice of data correctly justified?  | Yes                                  |  |                |           |                                 |     |                                |     |                                       |     |                            |     |                         |    |                               |     |                                     |     |   |     |          |   |
| Measurement method correctly described?  | N/A                                  |  |                |           |                                 |     |                                |     |                                       |     |                            |     |                         |    |                               |     |                                     |     |   |     |          |   |

## Validation Protocol

Project Title: Shuanghekou 16.6MW Hydropower Project in Chongqing City, P.R.China

Date of Completion: 31/07/2009

Number of Pages: 55



Industrie Service

| CHECKLIST TOPIC / QUESTION  | Ref.                                 | COMMENTS   |  | PDD in GSP     | Final PDD |                                 |     |                                |     |                                       |     |                            |     |                         |     |                               |     |                                     |     |   |                                     |                                     |                                     |
|---|--------------------------------------|--|--|----------------|-----------|---------------------------------|-----|--------------------------------|-----|---------------------------------------|-----|----------------------------|-----|-------------------------|-----|-------------------------------|-----|-------------------------------------|-----|---|-------------------------------------|-------------------------------------|-------------------------------------|
| B.6.2.6. Parameter Title:<br>Build margin ( $EF_{BMintCO_2}/MWh$ ) emission factor of the grid                              | 1, 2,<br>3, 5,<br>6,26,<br>29,<br>39 | <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>N/A</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? | N/A                                 | <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?   | N/A                                  |  |  |                |           |                                 |     |                                |     |                                       |     |                            |     |                         |     |                               |     |                                     |     |   |                                     |                                     |                                     |
| B.6.2.7. Parameter Title:<br>fuel consumption of each power source (F, mass or volume unit)                                 | 1, 2,<br>3, 5,<br>6,26,<br>29,<br>39 | <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>N/A</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? | N/A                                 | <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?   | N/A                                  |  |  |                |           |                                 |     |                                |     |                                       |     |                            |     |                         |     |                               |     |                                     |     |   |                                     |                                     |                                     |
| B.6.2.8. Parameter Title:<br>emission coefficient of each fuel (COEF of grid, in $tCO_2$ / mass or volume unit of the fuel) | 1, 2,<br>3, 5,<br>6,26,<br>29,<br>39 | <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></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 | <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                                  |  |  |                |           |                                 |     |                                |     |                                       |     |                            |     |                         |     |                               |     |                                     |     |   |                                     |                                     |                                     |

# Validation Protocol

Project Title: Shuanghekou 16.6MW Hydropower Project in Chongqing City, P.R.China

Date of Completion: 31/07/2009

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Industrie Service

| CHECKLIST TOPIC / QUESTION  | Ref.                                 | COMMENTS   |  | PDD in GSP                              | Final PDD |                                 |     |                                |     |                                       |                                     |                            |     |                         |     |                               |     |                                     |     |   |     |                                     |                                     |
|---|--------------------------------------|--|--|---|-----------|---------------------------------|-----|--------------------------------|-----|---------------------------------------|-------------------------------------|----------------------------|-----|-------------------------|-----|-------------------------------|-----|-------------------------------------|-----|---|-----|-------------------------------------|-------------------------------------|
|   |                                      | <table><tr><td>Measurement method correctly described?</td><td>Yes</td></tr></table>   |  | Measurement method correctly described? | Yes       |                                 |     |                                |     |                                       |                                     |                            |     |                         |     |                               |     |                                     |     |   |     |                                     |                                     |
| Measurement method correctly described?   | Yes                                  |  |  |   |           |                                 |     |                                |     |                                       |                                     |                            |     |                         |     |                               |     |                                     |     |   |     |                                     |                                     |
| B.6.2.9. Parameter Title:<br>electricity generation of each power source (GEN in MWh)                                     | 1, 2,<br>3, 5,<br>6,26,<br>29,<br>39 | <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.6.2.10. Parameter Title:<br>surface area of full reservoir level (for new hydroelectric activities only)                | 1, 2,<br>3, 5,<br>6,26,<br>29,<br>39 | <table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>NA</td></tr><tr><td>Data unit correctly expressed?</td><td>NA</td></tr><tr><td>Appropriate description of parameter?</td><td>NA</td></tr><tr><td>Source clearly referenced?</td><td>NA</td></tr><tr><td>Correct value provided?</td><td>NA</td></tr><tr><td>Has this value been verified?</td><td>NA</td></tr><tr><td>Choice of data correctly justified?</td><td>NA</td></tr><tr><td>Measurement method correctly described?</td><td>NA</td></tr></table>         |  | Data Checklist                          | Yes / No  | Title in line with methodology? | NA  | Data unit correctly expressed? | NA  | Appropriate description of parameter? | NA                                  | Source clearly referenced? | NA  | Correct value provided? | NA  | Has this value been verified? | NA  | Choice of data correctly justified? | NA  | Measurement method correctly described? | NA  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Data Checklist  | Yes / No                             |  |  |   |           |                                 |     |                                |     |                                       |                                     |                            |     |                         |     |                               |     |                                     |     |   |     |                                     |                                     |
| Title in line with methodology?   | NA                                   |  |  |   |           |                                 |     |                                |     |                                       |                                     |                            |     |                         |     |                               |     |                                     |     |   |     |                                     |                                     |
| Data unit correctly expressed?  | NA                                   |  |  |   |           |                                 |     |                                |     |                                       |                                     |                            |     |                         |     |                               |     |                                     |     |   |     |                                     |                                     |
| Appropriate description of parameter?   | NA                                   |  |  |   |           |                                 |     |                                |     |                                       |                                     |                            |     |                         |     |                               |     |                                     |     |   |     |                                     |                                     |
| Source clearly referenced?  | NA                                   |  |  |   |           |                                 |     |                                |     |                                       |                                     |                            |     |                         |     |                               |     |                                     |     |   |     |                                     |                                     |
| Correct value provided?   | NA                                   |  |  |   |           |                                 |     |                                |     |                                       |                                     |                            |     |                         |     |                               |     |                                     |     |   |     |                                     |                                     |
| Has this value been verified?   | NA                                   |  |  |   |           |                                 |     |                                |     |                                       |                                     |                            |     |                         |     |                               |     |                                     |     |   |     |                                     |                                     |
| Choice of data correctly justified?   | NA                                   |  |  |   |           |                                 |     |                                |     |                                       |                                     |                            |     |                         |     |                               |     |                                     |     |   |     |                                     |                                     |
| Measurement method correctly described?   | NA                                   |  |  |   |           |                                 |     |                                |     |                                       |                                     |                            |     |                         |     |                               |     |                                     |     |   |     |                                     |                                     |
| B.6.2.11. Parameter Title:<br>fraction of time with low costs /must run plant at the margin (for simple adjusted OM only) | 1, 2,<br>3, 5,<br>6,26,<br>29,       | <table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr></table>  |  | Data Checklist                          | Yes / No  | Title in line with methodology? | N/A | Data unit correctly expressed? | N/A | <input checked="" type="checkbox"/>   | <input checked="" type="checkbox"/> |                            |     |                         |     |                               |     |                                     |     |   |     |                                     |                                     |
| Data Checklist  | Yes / No                             |  |  |   |           |                                 |     |                                |     |                                       |                                     |                            |     |                         |     |                               |     |                                     |     |   |     |                                     |                                     |
| Title in line with methodology?   | N/A                                  |  |  |   |           |                                 |     |                                |     |                                       |                                     |                            |     |                         |     |                               |     |                                     |     |   |     |                                     |                                     |
| Data unit correctly expressed?  | N/A                                  |  |  |   |           |                                 |     |                                |     |                                       |                                     |                            |     |                         |     |                               |     |                                     |     |   |     |                                     |                                     |

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| CHECKLIST TOPIC / QUESTION  | Ref.                                 | COMMENTS                                |          | PDD in GSP                          | Final PDD                           |
|---|--------------------------------------|---|----------|-------------------------------------|-------------------------------------|
|   | 39                                   | 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.6.2.12. Parameter Title:<br>electricity imports from connected grid to the grid (in MWh)  | 1, 2,<br>3, 5,<br>6,26,<br>29,<br>39 | Data Checklist                          | Yes / No | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
|   |                                      | 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.6.2.13. Parameter Title:<br>CO <sub>2</sub> emission coefficient of fuels used in connected grids (COEF of connected grid, in tCO <sub>2</sub> / mass or volume unit of the fuel) | 1, 2,<br>3, 5,<br>6,26,<br>29,<br>39 | Data Checklist                          | Yes / No | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
|   |                                      | 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      |                                     |                                     |



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| CHECKLIST TOPIC / QUESTION  | Ref.                      | COMMENTS  | PDD in GSP                          | Final PDD                           |
|---|---------------------------|---|-------------------------------------|-------------------------------------|
| <b>B.6.3. Ex-ante calculation of emission reductions</b>  |                           |   |                                     |                                     |
| B.6.3.1. Is the projection based on the same procedures as used for future monitoring?  | 1, 2, 3, 5, 6             | Yes. Emission reductions are calculated on the base of the dispatched electricity to the grid times the emissions factor (CM). This emissions factor has been determined ex-ante for the whole crediting period.  | <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, 3, 5, 6, 26, 29, 39 | Yes, the GHG calculations are documented in a complete and transparent way.   | <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, 3, 5, 6, 26, 29, 39 | <b>See CAR8</b>   | <b>See CAR8</b>                     | <input checked="" type="checkbox"/> |
| <b>B.6.4. Summary of the ex-ante estimation of emission reductions</b>  |                           |   |                                     |                                     |
| B.6.4.1. Will the project result in fewer GHG emissions than the baseline scenario?   | 1, 2, 3, 5                | Yes, the proposed project uses mature domestic hydropower to generate electricity replacing coal-fired power generation. Thus emission reduction will be achieved through avoided power generation of fossil fuel electricity due to the power generated by the proposed project. | <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, 3, 5                | Yes, the form required for the indication of projected emission reductions is correctly applied.  | <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 | 1, 2, 3, 5                | Yes, the projection is in line with the envisioned time schedule for the project's implementation and the indicated crediting period.   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

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|---|------------|---|-------------------------------------|-------------------------------------|
| period?   |            |   |                                     |                                     |
| 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, 3, 5 | See CAR8  | See CAR8                            | <input checked="" type="checkbox"/> |
| <b>B.7. Application of the monitoring methodology and description of the monitoring plan</b>  |            |   |                                     |                                     |
| <i>B.7.1. Data and parameters monitored</i>   |            |   |                                     |                                     |
| 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, 3, 5 | EGy, surface area of the reservoir, installed capacity and imported electricity are the parameter that shall be monitored and recorded. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Integrate the required amount of sub-checklists for monitoring parameter and comment on any line answered with "No"                                 |            |   |                                     |                                     |
| B.7.1.2. Parameter Title:<br>Electricity supplied to the grid (in MWh)  | 1, 2, 3, 5 | Monitoring Checklist  | Yes / No                            | <input checked="" type="checkbox"/> |
|   |            | Title in line with methodology?   | Yes                                 |                                     |
|   |            | Data unit correctly expressed?  | Yes                                 |                                     |
|   |            | Appropriate description of parameter?   | Yes                                 |                                     |
|   |            | Source clearly referenced?  | Yes                                 |                                     |
|   |            | Correct value provided for estimation?  | Yes                                 |                                     |
|   |            | Has this value been verified?   | Yes                                 |                                     |
|   |            | Measurement method correctly described?   | Yes                                 |                                     |
|   |            | Correct reference to standards?   | Yes                                 |                                     |
|   |            | Indication of accuracy provided?  | Yes                                 |                                     |
|   |            | QA/QC procedures described?   | Yes                                 |                                     |
|   |            | QA/QC procedures appropriate?   | Yes                                 |                                     |
| B.7.1.3. Parameter Title:<br>Electricity imported from the grid (in MWh)  | 1, 2, 3, 5 | Monitoring Checklist  | Yes / No                            | <input checked="" type="checkbox"/> |
|   |            | Title in line with methodology?   | N/A                                 |                                     |

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| CHECKLIST TOPIC / QUESTION   | Ref.          | COMMENTS                                |          | PDD in GSP                          | Final PDD                           |
|--|---------------|---|----------|-------------------------------------|-------------------------------------|
|  |               | 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.7.1.4. Parameter Title:<br>Quantity of steam produced<br>(for geothermal projects only)                    | 1, 2,<br>3, 5 | Monitoring Checklist                    | Yes / No | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
|  |               | 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:<br>Fraction of CO <sub>2</sub> in steam produced<br>(for geothermal projects only) | 1, 2,<br>3, 5 | Monitoring Checklist                    | Yes / No | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
|  |               | Title in line with methodology?         | N/A      |                                     |                                     |
|  |               | Data unit correctly expressed?          | N/A      |                                     |                                     |

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| CHECKLIST TOPIC / QUESTION  | Ref.          | COMMENTS                                |          | PDD in GSP                          | Final PDD                           |
|---|---------------|---|----------|-------------------------------------|-------------------------------------|
|   |               | 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:<br>Fraction of CH <sub>4</sub> in steam produced<br>(for geothermal projects only)      | 1, 2,<br>3, 5 | Monitoring Checklist                    | Yes / No | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
|   |               | 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.7.1.7. Parameter Title:<br>Quantity of steam generated during well<br>testing<br>(for geothermal projects only) | 1, 2,<br>3, 5 | Monitoring Checklist                    | Yes / No | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
|   |               | Title in line with methodology?         | N/A      |                                     |                                     |
|   |               | Data unit correctly expressed?          | N/A      |                                     |                                     |
|   |               | Appropriate description of parameter?   | N/A      |                                     |                                     |

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|---|---------------|---|----------|-------------------------------------|-------------------------------------|
|   |               | 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.7.1.8. Parameter Title:<br>Fraction of CO <sub>2</sub> in steam during well testing<br>(for geothermal projects only) | 1, 2,<br>3, 5 | Monitoring Checklist                    | Yes / No | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
|   |               | 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:<br>Fraction of CH <sub>4</sub> in steam during well testing<br>(for geothermal projects only) | 1, 2,<br>3, 5 | Monitoring Checklist                    | Yes / No | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
|   |               | Title in line with methodology?         | N/A      |                                     |                                     |
|   |               | Data unit correctly expressed?          | N/A      |                                     |                                     |
|   |               | Appropriate description of parameter?   | N/A      |                                     |                                     |
|   |               | Source clearly referenced?              | N/A      |                                     |                                     |

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|---|------------|---|--|-------------------------------------|-------------------------------------|-----|---|-----|---------------------------------------|-----|----------------------------------|-----|--|-----|-------------------------------|-----|---|-----|---------------------------------|-----|----------------------------------|-----|-----------------------------|-----|-------------------------------|-----|--|-------------------------------------|-------------------------------------|
|   |            | <table><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>  | 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 |   |     |                                 |     |                                  |     |                             |     |                               |     |  |                                     |                                     |
| 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.7.1.10. Parameter Title:<br>CO <sub>2</sub> emission coefficient of fuel used by the geothermal plant<br>(for geothermal projects only) | 1, 2, 3, 5 | <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.7.2. 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, 3, 5 | Yes, the operational and management structure is clearly de-scribed and in compliance with the envisioned situation.  |  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     |   |     |                                       |     |                                  |     |  |     |                               |     |   |     |                                 |     |                                  |     |                             |     |                               |     |  |                                     |                                     |
| B.7.2.2. Are responsibilities and institutional arrangements for data collection and  | 1, 2, 3, 5 | The project developer compiled a monitoring and management handbook. The aim of the monitoring plan is to make sure that the  |  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     |   |     |                                       |     |                                  |     |  |     |                               |     |   |     |                                 |     |                                  |     |                             |     |                               |     |  |                                     |                                     |



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|---|---|------------|---|-------------------------------------|-------------------------------------|
| archiving clearly provided?   |   |            | net generated electricity monitored and evaluated during the project activity operation period is completed, consistent, and precise. It has identified the duties of the related responsibilities.<br>Data collection and archiving is clearly provided. |                                     |                                     |
| B.7.2.3.  | Does the monitoring plan provide current good monitoring practice?  | 1, 2, 3, 5 | Yes, the monitoring plan provides current good monitoring practice.   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| B.7.2.4.  | If applicable: Does annex 4 provide useful information enabling a better understanding of the envisioned monitoring provisions?   | 1, 2, 3, 5 | NA.   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| <b>B.8. Date of completion of the application of the baseline study and monitoring methodology an the name of the responsible person(s)/entity(ies)</b> |   |            |   |                                     |                                     |
| B.8.1.  | Is there any indication of a date when the baseline was determined?   | 1, 2, 3, 4 | Yes, it indicates that the determined baseline date is 28/11/2007.  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| B.8.2.  | Is this consistent with the time line of the PDD history?   | 1, 2, 3, 4 | Yes, it is consistent with the time line of the PDD history which is listed in the Table A.4.2.   | <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, 3, 4 | Ms. Tu Xin and Mr. Luo Yuejun, employees of Shanghai Yanminjiu International Trade Co.,Ltd, determined the baseline and 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, 3, 4 | Shanghai Yanminjiu International Trade Co.,Ltd is not project participant which has been verified during the on-site audit.   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

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| CHECKLIST TOPIC / QUESTION  | Ref.                  | COMMENTS  | PDD in GSP                          | Final PDD                           |
|---|-----------------------|---|-------------------------------------|-------------------------------------|
| <b>C. Duration of the project activity / crediting period</b>   |                       |   |                                     |                                     |
| <b>C.1. Duration of the project activity</b>  |                       |   |                                     |                                     |
| C.1.1. Are the project's starting date and operational lifetime clearly defined and reasonable?   | 1, 2, 3, 5, 6, 16, 30 | It has been clarified in EB 33 that for the starting date of the project activity it should be considered "the earliest of the dates at which the implementation or construction or real action of the project activity begins".<br><br>Yes, the project's starting date and operational lifetime is clearly defined.<br><br><b>See CAR4.</b> | <b>See CAR4</b>                     | <input checked="" type="checkbox"/> |
| <b>C.2. Choice of the crediting period and related information</b>  |                       |   |                                     |                                     |
| C.2.1. Is the assumed crediting time clearly defined and reasonable (renewable crediting period of max 7 years with potential for 2 renewals or fixed crediting period of max. 10 years)? | 1, 2, 3, 5, 6         | 7 years with potential for 2 renewals is chosen as the crediting period.<br><br>The start of the crediting period is not possible as it is indicated in the PDD.<br><br><b>See CAR4.</b>  | <b>See CAR4</b>                     | <input checked="" type="checkbox"/> |
| <b>D. Environmental impacts</b>   |                       |   |                                     |                                     |
| <b>D.1. Documentation on the analysis of the environmental impacts, including trans-boundary impacts</b>  |                       |   |                                     |                                     |
| D.1.1. Has the analysis of the environmental impacts of the project activity been sufficiently described?   | 1, 2, 7, 8            | Yes, the environmental impacts of the project activity during construction and operation period have been clearly described.  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| D.1.2. Are there any Host Party requirements for  | 1, 2,                 | Yes, EIA is a must in P. R. China for new hydropower projects.  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

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|--|--|--------------------|--|-------------------------------------|-------------------------------------|
| an Environmental Impact Assessment (EIA), and if yes, has an EIA been approved?  |  | 7, 8               | The EIA of the proposed project was approved by Chongqing Environmental Protection Bureau, the approved EIA report with the document "Yu<shi>huanzhuan No <2006>84". The documents have been reviewed by the DOE.                              |                                     |                                     |
| D.1.3.   | Will the project create any adverse environmental effects?                                   | 1, 2, 7, 8         | Referred to the EIA and the approval of EIA, the project creates insignificant negative environmental impact.  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| D.1.4.   | Were transboundary environmental impacts identified in the analysis?                         | 1, 2, 7, 8         | There is no trans-boundary impact described in the EIA report or approval of EIA.  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| <b>D.2. If environmental impacts are considered significant by the project participants or the host Party, please provide conclusions and all references to support documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party</b> |  |                    |  |                                     |                                     |
| D.2.1.   | Have the identified environmental impacts been addressed in the project design sufficiently? | 1, 2, 7, 8         | Referring to the EIA and the approval of EIA, the project is expected to have an overall positive impact on the local environment. Mitigation measures will ensure that there are no significant residual impacts associated with the project. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| D.2.2.   | Does the project comply with environmental legislation in the host country?                  | 1, 2, 7, 8         | Yes, the project is in conformity with the environmental legislation of P. R. China and the EIA has been approved by an 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, 6, 7, 13, | The surveyed stakeholders include local residents, government officials and other people.<br>It describes clearly in the PDD.  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

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| CHECKLIST TOPIC / QUESTION  | Ref.  | COMMENTS  | PDD in GSP                          | Final PDD                           |
|---|---|---|-------------------------------------|-------------------------------------|
|   | 14,<br>15,<br>17                                |   |                                     |                                     |
| E.1.2. Have appropriate media been used to invite comments by local stakeholders?   | 1, 2,<br>5, 6,<br>7,<br>13,<br>14,<br>15,<br>17 | The project developer put up a notice in Kai county, related countries and some villages near Shuanghekou hydropower project.<br><br>The project developer also published a notice in the Kaozhou Daily, dated Oct 25 2007.<br><br>With these medias, the project developer invited comments by local stakeholders. | <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,<br>5, 6,<br>7,<br>13,<br>14,<br>15,<br>17 | 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,<br>5, 6,<br>7,<br>13,<br>14,<br>15,<br>17 | The stakeholder meeting is described in a complete and transparent manner.  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| <b>E.2. Summary of the comments received</b>  |   |   |                                     |                                     |
| E.2.1. Is a summary of the stakeholder comments received provided?  | 1, 2,<br>5, 6,<br>7,<br>13,                     | Yes, E.2. and E.3. of the PDD give a summary of stakeholder comments received in stakeholders meeting.  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

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| CHECKLIST TOPIC / QUESTION   | Ref.  | COMMENTS  | PDD in GSP                          | Final PDD                           |
|--|---|---|-------------------------------------|-------------------------------------|
|  | 14,<br>15,<br>17                                |   |                                     |                                     |
| <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,<br>5, 6,<br>7,<br>13,<br>14,<br>15,<br>17 | According to the comments and advice, the impacts brought by the project are positive, and all of them support the construction of this project, it is consistent with the information obtained during the on-site audit.<br><br>The Kai county is located in China western undeveloped area, the people live in poverty and have low average per capital income, and the proposed project can increase the local residents' incomes. | <input checked="" type="checkbox"/> | <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,<br>3, 4                                   | The provided information isn't consistent with the one given under section A.3.<br><br><b>See CR1.</b>  | <b>See CR 1</b>                     | <input checked="" type="checkbox"/> |
| F.1.2. Is the information on all private participants and directly involved Parties presented?   | 1, 2,<br>3, 4                                   | The information about Kai County Dongli River Hydropower Co.,Ltd, Marubeni Corporation are presented.   | <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? | 5, 6,<br>19,<br>20,<br>21                       | Yes, there is no public funding for the project. All costs are covered by bank loans and private equity, and the evidences were examined by the DOE during the on-site audit.   | <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?                       | 5, 6, 19, 20, 21 | Not applicable.   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| <b>Annex 3: Baseline information</b>   |   |                  |   |                                     |                                     |
| F.1.5.                                 | If additional background information on baseline data is provided: Is this information consistent with data presented by other sections of the PDD? | 1, 2, 3, 5       | See CAR8  | See CAR8                            | <input checked="" type="checkbox"/> |
| F.1.6.                                 | Is the data provided verifiable? Has sufficient evidence been provided to the validation team?  | 1, 2, 3, 5       | Yes, the provided data was verified during the on-site audit, and the sufficient evidence has been provided to the DOE. | <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, 3, 5       | Yes, the additional information supports statements given in other sections of the PDD.                                 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| <b>Annex 4: Monitoring information</b> |   |                  |   |                                     |                                     |
| F.1.8.                                 | If additional background information on monitoring is provided: Is this information consistent with data presented in other sections of the PDD?    | 1, 2, 3, 5       | NA.   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| F.1.9.                                 | Is the information provided verifiable? Has sufficient evidence been provided to the validation team?   | 1, 2, 3, 5       | NA.   | <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, 3, 5       | NA.   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

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**Table 1 b Conformity of Project Activity and PDD (ACM0002 Version 07 changes to version 06)**

| F.1.11. Does the methodology refer to the following tools with its latest approved versions: <ul style="list-style-type: none"><li>- Tool to calculate the emission factor for an electricity system</li><li>- Tool for the demonstration and assessment of additionality</li><li>- Tool to calculate project or leakage CO2 emissions from fossil fuel combustion</li></ul>  | 1, 2, 3, 5 | Yes, the latest version 01.1 of “Tool to calculate the emission factor for an electricity system” and the latest version 05.2 of “Tool for the demonstration and assessment of additionality” have been applied in the PDD.<br><br>There is no fossil fuel combustion in the project. So “Tool to calculate project or leakage CO2 emissions from fossil fuel combustion” is not applicable.   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                 |     |                      |     |                                |     |                      |     |                                     |                                     |
|---|------------|--|-------------------------------------|-------------------------------------|---------------------------------|-----|----------------------|-----|--------------------------------|-----|----------------------|-----|-------------------------------------|-------------------------------------|
| F.1.12. Criterion 1:<br>Type of electricity capacity addition by grid-connected renewable power generation<br><br>The following types are possible: hydro power plant/unit (either with a run-of-river reservoir or an accumulation reservoir), wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit.  | 1, 2, 3    | <table><tr><th>Applicability checklist</th><th>Yes / No</th></tr><tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Evidences provided in the PDD?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table><br>This project is a new run-of-river project with a new reservoir.   | Applicability checklist             | Yes / No                            | Criterion discussed in the PDD? | Yes | Compliance provable? | Yes | Evidences provided in the PDD? | Yes | Compliance verified? | Yes | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Applicability checklist   | Yes / No   |  |                                     |                                     |                                 |     |                      |     |                                |     |                      |     |                                     |                                     |
| Criterion discussed in the PDD?   | Yes        |  |                                     |                                     |                                 |     |                      |     |                                |     |                      |     |                                     |                                     |
| Compliance provable?  | Yes        |  |                                     |                                     |                                 |     |                      |     |                                |     |                      |     |                                     |                                     |
| Evidences provided in the PDD?  | Yes        |  |                                     |                                     |                                 |     |                      |     |                                |     |                      |     |                                     |                                     |
| Compliance verified?  | Yes        |  |                                     |                                     |                                 |     |                      |     |                                |     |                      |     |                                     |                                     |
| F.1.13. Criterion 2 (in the case of hydro plants):<br><br>-The project activity is implemented in an existing reservoir, with no change in the volume of reservoir or<br><br>-The project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project activity is greater than 4 W/m2 or<br><br>-The project activity results in new reservoirs and the | 1, 2, 3    | <table><tr><th>Applicability checklist</th><th>Yes / No</th></tr><tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Evidences provided in the PDD?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table><br>The project activity results in new reservoirs and the power density of the power plant is 60.85 W/m <sup>2</sup> much greater than 4 W/m <sup>2</sup> . | Applicability checklist             | Yes / No                            | Criterion discussed in the PDD? | Yes | Compliance provable? | Yes | Evidences provided in the PDD? | Yes | Compliance verified? | Yes | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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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| power density of the power plant is greater than 4 W/m2.   |          |  |                                     |                                     |                                 |     |                      |     |                                |     |                      |     |                                     |                                     |
|--|----------|--|-------------------------------------|-------------------------------------|---------------------------------|-----|----------------------|-----|--------------------------------|-----|----------------------|-----|-------------------------------------|-------------------------------------|
| F.1.7. Criterion 3 (in the case of modification/retrofit in existing power plants):<br><br>5 years of historical data (or 3 years in the case of non hydro project activities) are available | 1, 2, 3  | <table><tr><th>Applicability checklist</th><th>Yes / No</th></tr><tr><td>Criterion discussed in the PDD?</td><td>NA</td></tr><tr><td>Compliance provable?</td><td>NA</td></tr><tr><td>Evidences provided in the PDD?</td><td>NA</td></tr><tr><td>Compliance verified?</td><td>NA</td></tr></table>   | Applicability checklist             | Yes / No                            | Criterion discussed in the PDD? | NA  | Compliance provable? | NA  | Evidences provided in the PDD? | NA  | Compliance verified? | NA  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Applicability checklist  | Yes / No |  |                                     |                                     |                                 |     |                      |     |                                |     |                      |     |                                     |                                     |
| Criterion discussed in the PDD?  | NA       |  |                                     |                                     |                                 |     |                      |     |                                |     |                      |     |                                     |                                     |
| Compliance provable?   | NA       |  |                                     |                                     |                                 |     |                      |     |                                |     |                      |     |                                     |                                     |
| Evidences provided in the PDD?   | NA       |  |                                     |                                     |                                 |     |                      |     |                                |     |                      |     |                                     |                                     |
| Compliance verified?   | NA       |  |                                     |                                     |                                 |     |                      |     |                                |     |                      |     |                                     |                                     |
| F.1.8. Criterion 3:<br>Defined electricity grid boundaries   |          | <table><tr><th>Applicability checklist</th><th>Yes / No</th></tr><tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Evidences provided in the PDD?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table> <p>According to the definition of project boundary in ACM0002, the spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system that the CDM project power plant is connected to. The electricity system is defined in accordance with “Tool to calculate the emission factor for an electricity system” version 01.1. For the proposed project, the electricity system is Central China Power Grid.</p> | Applicability checklist             | Yes / No                            | Criterion discussed in the PDD? | Yes | Compliance provable? | Yes | Evidences provided in the PDD? | Yes | Compliance verified? | Yes | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Applicability checklist  | Yes / No |  |                                     |                                     |                                 |     |                      |     |                                |     |                      |     |                                     |                                     |
| Criterion discussed in the PDD?  | Yes      |  |                                     |                                     |                                 |     |                      |     |                                |     |                      |     |                                     |                                     |
| Compliance provable?   | Yes      |  |                                     |                                     |                                 |     |                      |     |                                |     |                      |     |                                     |                                     |
| Evidences provided in the PDD?   | Yes      |  |                                     |                                     |                                 |     |                      |     |                                |     |                      |     |                                     |                                     |
| Compliance verified?   | Yes      |  |                                     |                                     |                                 |     |                      |     |                                |     |                      |     |                                     |                                     |
| F.1.9. Criterion 4:<br>Approved inclusion in other methodologies (if applied only)   | 1, 2, 3  | Not applicable   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                 |     |                      |     |                                |     |                      |     |                                     |                                     |
| F.1.10. Criterion 6:<br>Exclusion of fuel switching activities   | 1, 2, 3  | <table><tr><th>Applicability checklist</th><th>Yes / No</th></tr><tr><td>Criterion discussed in the PDD?</td><td>NA</td></tr><tr><td>Compliance provable?</td><td>NA</td></tr><tr><td>Evidences provided in the PDD?</td><td>NA</td></tr><tr><td>Compliance verified?</td><td>NA</td></tr></table>   | Applicability checklist             | Yes / No                            | Criterion discussed in the PDD? | NA  | Compliance provable? | NA  | Evidences provided in the PDD? | NA  | Compliance verified? | NA  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Applicability checklist  | Yes / No |  |                                     |                                     |                                 |     |                      |     |                                |     |                      |     |                                     |                                     |
| Criterion discussed in the PDD?  | NA       |  |                                     |                                     |                                 |     |                      |     |                                |     |                      |     |                                     |                                     |
| Compliance provable?   | NA       |  |                                     |                                     |                                 |     |                      |     |                                |     |                      |     |                                     |                                     |
| Evidences provided in the PDD?   | NA       |  |                                     |                                     |                                 |     |                      |     |                                |     |                      |     |                                     |                                     |
| Compliance verified?   | NA       |  |                                     |                                     |                                 |     |                      |     |                                |     |                      |     |                                     |                                     |

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|  |          |   |                         |          |   |     |                                     |                                     |   |     |                                   |     |                                     |                                     |
|--|----------|---|-------------------------|----------|---|-----|-------------------------------------|-------------------------------------|---|-----|-----------------------------------|-----|-------------------------------------|-------------------------------------|
| F.1.18. Criterion 7:<br>Exclusion of biomass fired power plants  | 1, 2, 3  | <table><tr><td>Applicability checklist</td><td>Yes / No</td></tr><tr><td>Criterion discussed in the PDD?</td><td>NA</td></tr><tr><td>Compliance provable?</td><td>NA</td></tr><tr><td>Evidences provided in the PDD?</td><td>NA</td></tr><tr><td>Compliance verified?</td><td>NA</td></tr></table>  | Applicability checklist | Yes / No | Criterion discussed in the PDD?           | NA  | Compliance provable?                | NA                                  | Evidences provided in the PDD?          | NA  | Compliance verified?              | NA  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Applicability checklist  | Yes / No |   |                         |          |   |     |                                     |                                     |   |     |                                   |     |                                     |                                     |
| Criterion discussed in the PDD?  | NA       |   |                         |          |   |     |                                     |                                     |   |     |                                   |     |                                     |                                     |
| Compliance provable?   | NA       |   |                         |          |   |     |                                     |                                     |   |     |                                   |     |                                     |                                     |
| Evidences provided in the PDD?   | NA       |   |                         |          |   |     |                                     |                                     |   |     |                                   |     |                                     |                                     |
| Compliance verified?   | NA       |   |                         |          |   |     |                                     |                                     |   |     |                                   |     |                                     |                                     |
| F.1.19. Criterion 8:<br>Exclusion of hydro power plants that result in new reservoirs or in the increase in existing re-<br>servoirs where the power density of the power<br>plant is less than 4 W/m <sup>2</sup> | 1, 2, 3  | <table><tr><td>Applicability checklist</td><td>Yes / No</td></tr><tr><td>Criterion discussed in the PDD?</td><td>NA</td></tr><tr><td>Compliance provable?</td><td>NA</td></tr><tr><td>Evidences provided in the PDD?</td><td>NA</td></tr><tr><td>Compliance verified?</td><td>NA</td></tr></table> <p>The project is a run-of-river hydropower project with reservoir.<br/>As clearly calculated, the power density of the proposed project is 60.85 W/m<sup>2</sup> which is much higher than 4 W/m<sup>2</sup>.</p> | Applicability checklist | Yes / No | Criterion discussed in the PDD?           | NA  | Compliance provable?                | NA                                  | Evidences provided in the PDD?          | NA  | Compliance verified?              | NA  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Applicability checklist  | Yes / No |   |                         |          |   |     |                                     |                                     |   |     |                                   |     |                                     |                                     |
| Criterion discussed in the PDD?  | NA       |   |                         |          |   |     |                                     |                                     |   |     |                                   |     |                                     |                                     |
| Compliance provable?   | NA       |   |                         |          |   |     |                                     |                                     |   |     |                                   |     |                                     |                                     |
| Evidences provided in the PDD?   | NA       |   |                         |          |   |     |                                     |                                     |   |     |                                   |     |                                     |                                     |
| Compliance verified?   | NA       |   |                         |          |   |     |                                     |                                     |   |     |                                   |     |                                     |                                     |
| F.1.20. Source:<br>Fugitive Emissions from non-condensable<br>gases contained in geothermal steam<br>(geothermal power plants only)<br>Gas(es): CO <sub>2</sub> , CH <sub>4</sub><br>Type: Project Emissions       | 1, 2, 3  | <table><tr><td>Boundary checklist</td><td>Yes / No</td></tr><tr><td>Source and gas (es) discussed by the PDD?</td><td>N/A</td></tr><tr><td>Inclusion / exclusion justified?</td><td>N/A</td></tr><tr><td>Explanation / Justification sufficient?</td><td>N/A</td></tr><tr><td>Consistency with monitoring plan?</td><td>N/A</td></tr></table>   | 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      |   |                         |          |   |     |                                     |                                     |   |     |                                   |     |                                     |                                     |
| F.1.21. Source:<br>Emissions from combustion of fossil fuels<br>required to operate the geothermal power<br>plant (geothermal power plants only)<br>Gas(es): CO <sub>2</sub><br>Type: Project Emissions            | 1, 2, 3  | <table><tr><td>Boundary checklist</td><td>Yes / No</td></tr><tr><td>Source and gas(es) discussed by the PDD?</td><td>N/A</td></tr><tr><td>Inclusion / exclusion justified?</td><td>N/A</td></tr><tr><td>Explanation / Justification sufficient?</td><td>N/A</td></tr><tr><td>Consistency with monitoring plan?</td><td>N/A</td></tr></table>  | 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      |   |                         |          |   |     |                                     |                                     |   |     |                                   |     |                                     |                                     |
| F.1.22. Source:<br>Emissions from the reservoir (hydro power<br>plants only)   | 1, 2, 3  | <table><tr><td>Boundary checklist</td><td>Yes / No</td></tr><tr><td>Source and gas(es) discussed by the PDD?</td><td>Yes</td></tr></table>  | Boundary checklist      | Yes / No | Source and gas(es) discussed by the PDD?  | Yes | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |   |     |                                   |     |                                     |                                     |
| Boundary checklist   | Yes / No |   |                         |          |   |     |                                     |                                     |   |     |                                   |     |                                     |                                     |
| Source and gas(es) discussed by the PDD?   | Yes      |   |                         |          |   |     |                                     |                                     |   |     |                                   |     |                                     |                                     |

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|  |               |   |     |                                     |                                     |  |     |                                  |     |   |     |                                   |     |                                     |                                     |
|--|---------------|---|-----|-------------------------------------|-------------------------------------|--|-----|----------------------------------|-----|---|-----|-----------------------------------|-----|-------------------------------------|-------------------------------------|
| Gas(es): - CH <sub>4</sub><br>Type: Project Emissions  |               | Inclusion / exclusion justified?  | Yes |                                     |                                     |  |     |                                  |     |   |     |                                   |     |                                     |                                     |
|  |               | Explanation / Justification sufficient?   | Yes |                                     |                                     |  |     |                                  |     |   |     |                                   |     |                                     |                                     |
|  |               | Consistency with monitoring plan?   | Yes |                                     |                                     |  |     |                                  |     |   |     |                                   |     |                                     |                                     |
|  |               | The proposed project is a run-of-river hydropower project. As clearly calculated, the power density of the proposed project is 60.85 W/m <sup>2</sup> which is much higher than 10 W/m <sup>2</sup> . According to ACM0002 version 07, emissions from the reservoir needn't to be taken into account in the calculation of emission reductions. |     |                                     |                                     |  |     |                                  |     |   |     |                                   |     |                                     |                                     |
| F.1.23. Source:<br>Emissions from electricity generation in fossil fuel fired power plants that is displaced due to the project activity<br>Gas(es): CO <sub>2</sub><br>Type: Baseline Emissions             | 1, 2, 3       | <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           |   |     |                                     |                                     |  |     |                                  |     |   |     |                                   |     |                                     |                                     |
| Changes required for methodology implementation in 2 <sup>nd</sup> and 3 <sup>rd</sup> crediting periods   |               |   |     |                                     |                                     |  |     |                                  |     |   |     |                                   |     |                                     |                                     |
| F.1.24. Has the continued validity of the baseline been correctly assessed?  | 1, 2, 3, 5    | NA.   |     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |  |     |                                  |     |   |     |                                   |     |                                     |                                     |
| F.1.25. Has the baseline been updated with new data?   | 1, 2, 3, 5    | NA.   |     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |  |     |                                  |     |   |     |                                   |     |                                     |                                     |
| F.1.25.1. Are the six steps as defined per the “Tool for calculation of emission factor for electrical systems” correctly applied by the project participants?   | 1, 2, 3       | Yes, the six steps are correctly applied as defined per the “Tool for calculation of emission factor for electrical systems”.   |     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |  |     |                                  |     |   |     |                                   |     |                                     |                                     |
| Tool to calculate project or leakage CO2 emissions from fossil fuel combustion   |               |   |     |                                     |                                     |  |     |                                  |     |   |     |                                   |     |                                     |                                     |
| F.1.25.2. Is formula required for the determination of CO2 project emissions from fossil fuel combustion correctly presented, enabling a complete identification of parameter to be used and / or monitored? | 1, 2, 3, 5, 6 | Not applicable. There is no diesel generator in case of emergency. If emergency, the electricity is supplied by Grid which is considered as a part of electricity consumed.   |     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |  |     |                                  |     |   |     |                                   |     |                                     |                                     |

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| F.1.25.3. Is option A (preferred approach) or option B chosen for the determination of the CO2 emission coefficient COEF <sub>i,y</sub> and is COE-<br>Fi,y correctly determined?  | 1, 2, 3                  | Not applicable.  |  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                 |     |                                |     |                                       |     |                            |     |                         |     |                                     |                                     |                                     |     |   |     |                                     |                                     |
|--|--------------------------|--|--|-------------------------------------|-------------------------------------|---------------------------------|-----|--------------------------------|-----|---------------------------------------|-----|----------------------------|-----|-------------------------|-----|-------------------------------------|-------------------------------------|-------------------------------------|-----|---|-----|-------------------------------------|-------------------------------------|
| F.1.25.4. Parameter Title:<br>GWP <sub>CH4</sub> Global warming potential of methane valid for the relevant commitment period (tCO2/tCH4)  | 1, 2, 3, 5, 6,26, 29, 39 | <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                      |  |  |                                     |                                     |                                 |     |                                |     |                                       |     |                            |     |                         |     |                                     |                                     |                                     |     |   |     |                                     |                                     |
| F.1.25.5. Parameter Title: EG <sub>historical</sub> (only applicable to modification/ retrofit of an existing grid connected renewable power plant/unit).<br><br>Average of historical electricity delivered by the existing facility to the grid (MWh).                             | 1, 2, 3, 5, 6,26, 29, 39 | <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?</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?              | 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?   | 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                      |  |  |                                     |                                     |                                 |     |                                |     |                                       |     |                            |     |                         |     |                                     |                                     |                                     |     |   |     |                                     |                                     |
| F.1.25.6. Parameter Title: DATE <sub>BaselineRetrofit</sub> (only applicable to modification/ retrofit of an existing grid connected renewable power plant/unit).<br><br>Point in time when the existing equipment would need to be replaced in the absence of the project activity. | 1, 2, 3, 5, 6,26, 29, 39 | <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?</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></table>   |  | Data Checklist                      | Yes / No                            | Title in line with methodology? | N/A | Data unit correctly expressed? | N/A | Appropriate description?              | N/A | Source clearly referenced? | N/A | Correct value provided? | 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?   | N/A                      |  |  |                                     |                                     |                                 |     |                                |     |                                       |     |                            |     |                         |     |                                     |                                     |                                     |     |   |     |                                     |                                     |
| Source clearly referenced?   | N/A                      |  |  |                                     |                                     |                                 |     |                                |     |                                       |     |                            |     |                         |     |                                     |                                     |                                     |     |   |     |                                     |                                     |
| Correct value provided?  | N/A                      |  |  |                                     |                                     |                                 |     |                                |     |                                       |     |                            |     |                         |     |                                     |                                     |                                     |     |   |     |                                     |                                     |

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|   |                                      | Has this value been verified?  | N/A |                |          |                                 |     |                                |     |                                       |     |                            |     |                         |     |                               |     |                                     |     |   |                                     |                                     |                                     |
|---|--------------------------------------|--|-----|----------------|----------|---------------------------------|-----|--------------------------------|-----|---------------------------------------|-----|----------------------------|-----|-------------------------|-----|-------------------------------|-----|-------------------------------------|-----|---|-------------------------------------|-------------------------------------|-------------------------------------|
|   |                                      | Choice of data correctly justified?  | N/A |                |          |                                 |     |                                |     |                                       |     |                            |     |                         |     |                               |     |                                     |     |   |                                     |                                     |                                     |
|   |                                      | Measurement method correctly described?  | N/A |                |          |                                 |     |                                |     |                                       |     |                            |     |                         |     |                               |     |                                     |     |   |                                     |                                     |                                     |
| F.1.25.7. Parameter Title: EF <sub>Res</sub> (only applicable to hydro-power plants with reservoir)<br>Default emission factor for emissions from reservoirs (kg CO2e/MWh)  | 1, 2,<br>3, 5,<br>6,26,<br>29,<br>39 | <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                                  |  |     |                |          |                                 |     |                                |     |                                       |     |                            |     |                         |     |                               |     |                                     |     |   |                                     |                                     |                                     |
| F.1.25.8. Parameter Title: CAP <sub>BL</sub> (W) (only applicable to modification/retrofit of an existing grid-connected renewable power plant/unit)<br>Installed capacity of the hydro power plant before the implementation of the project activity. For new hydro power plants, this value is zero.                | 1, 2,<br>3, 5,<br>6,26,<br>29,<br>39 | <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                                  |  |     |                |          |                                 |     |                                |     |                                       |     |                            |     |                         |     |                               |     |                                     |     |   |                                     |                                     |                                     |
| F.1.25.9. Parameter Title: A <sub>BL</sub> (only applicable to hydropower plant projects with reservoir)<br>Area of the reservoir measured in the surface of the water, before the implementation of the project activity, when the reservoir is full (m2). For new reservoirs, this value is zero (m <sup>2</sup> ). | 1, 2,<br>3, 5,<br>6,26,<br>29,<br>39 | <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></table>   |     | Data Checklist | Yes / No | Title in line with methodology? | No  | Data unit correctly expressed? | No  | Appropriate description of parameter? | No  | Source clearly referenced? | No  | Correct value provided? | No  | Has this value been verified? | No  | Choice of data correctly justified? | No  | <b>CAR 9</b>                            | <input checked="" type="checkbox"/> |                                     |                                     |
| Data Checklist  | Yes / No                             |  |     |                |          |                                 |     |                                |     |                                       |     |                            |     |                         |     |                               |     |                                     |     |   |                                     |                                     |                                     |
| Title in line with methodology?   | No                                   |  |     |                |          |                                 |     |                                |     |                                       |     |                            |     |                         |     |                               |     |                                     |     |   |                                     |                                     |                                     |
| Data unit correctly expressed?  | No                                   |  |     |                |          |                                 |     |                                |     |                                       |     |                            |     |                         |     |                               |     |                                     |     |   |                                     |                                     |                                     |
| Appropriate description of parameter?   | No                                   |  |     |                |          |                                 |     |                                |     |                                       |     |                            |     |                         |     |                               |     |                                     |     |   |                                     |                                     |                                     |
| Source clearly referenced?  | No                                   |  |     |                |          |                                 |     |                                |     |                                       |     |                            |     |                         |     |                               |     |                                     |     |   |                                     |                                     |                                     |
| Correct value provided?   | No                                   |  |     |                |          |                                 |     |                                |     |                                       |     |                            |     |                         |     |                               |     |                                     |     |   |                                     |                                     |                                     |
| Has this value been verified?   | No                                   |  |     |                |          |                                 |     |                                |     |                                       |     |                            |     |                         |     |                               |     |                                     |     |   |                                     |                                     |                                     |
| Choice of data correctly justified?   | No                                   |  |     |                |          |                                 |     |                                |     |                                       |     |                            |     |                         |     |                               |     |                                     |     |   |                                     |                                     |                                     |

## Validation Protocol

Project Title: Shuanghekou 16.6MW Hydropower Project in Chongqing City, P.R.China

Date of Completion: 31/07/2009

Number of Pages: 55



Industrie Service

|   |                          |  |   |          |                                 |     |                                |     |                                       |     |                            |     |                         |     |                               |     |                                     |                                     |   |     |                                     |                                     |
|---|--------------------------|--|---|----------|---------------------------------|-----|--------------------------------|-----|---------------------------------------|-----|----------------------------|-----|-------------------------|-----|-------------------------------|-----|-------------------------------------|-------------------------------------|---|-----|-------------------------------------|-------------------------------------|
|   |                          | <table><tr><td>Measurement method correctly described?</td><td>No</td></tr></table> <p><b><u>Corrective Action Request 9:</u></b><br/>A<sub>BL</sub> should be indicated in B.6.2 of the revised PDD.</p>  | Measurement method correctly described? | No       |                                 |     |                                |     |                                       |     |                            |     |                         |     |                               |     |                                     |                                     |   |     |                                     |                                     |
| Measurement method correctly described?   | No                       |  |   |          |                                 |     |                                |     |                                       |     |                            |     |                         |     |                               |     |                                     |                                     |   |     |                                     |                                     |
| F.1.25.10.Parameter Title: FC <sub>i,m,y</sub> , FC <sub>i,y</sub> , FC <sub>i,j,y</sub> , FC <sub>i,k,y</sub> , FC <sub>i,n,y</sub> and FC <sub>i,n,h</sub><br>Amount of fossil fuel type i consumed by power plant / unit m,j,k or n (or in the project electricity system in case of FC <sub>i,y</sub> ) in year y or hour h (mass or volume unit) | 1, 2, 3, 5, 6,26, 29, 39 | <table><tr><td>Data Checklist</td><td>Yes / No</td></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Choice of data correctly justified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</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? | N/A | <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?   | N/A                      |  |   |          |                                 |     |                                |     |                                       |     |                            |     |                         |     |                               |     |                                     |                                     |   |     |                                     |                                     |
| F.1.25.11. Parameter Title: NCV <sub>i,y</sub><br>Net calorific value (energy content) of fossil fuel type i in year y (GJ / mass or volume unit)   |                          | <table><tr><td>Data Checklist</td><td>Yes / No</td></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Choice of data correctly justified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</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? | N/A | <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?   | N/A                      |  |   |          |                                 |     |                                |     |                                       |     |                            |     |                         |     |                               |     |                                     |                                     |   |     |                                     |                                     |
| F.1.25.12.Parameter Title:<br>EF <sub>CO2,i,y</sub> and EF <sub>CO2,m,i,y</sub><br>CO2 emission factor of fossil fuel type i in year y (tCO2/GJ)  | 1, 2, 3, 5, 6,26, 29, 39 | <table><tr><td>Data Checklist</td><td>Yes / No</td></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr></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                      |  |   |          |                                 |     |                                |     |                                       |     |                            |     |                         |     |                               |     |                                     |                                     |   |     |                                     |                                     |

## Validation Protocol

Project Title: Shuanghekou 16.6MW Hydropower Project in Chongqing City, P.R.China

Date of Completion: 31/07/2009

Number of Pages: 55



Industrie Service

|  |                          |   |                                     |          |   |     |                                |     |                                       |     |                                     |                                     |                         |     |                               |     |                                     |     |   |    |                                     |                                     |
|--|--------------------------|---|-------------------------------------|----------|---|-----|--------------------------------|-----|---------------------------------------|-----|-------------------------------------|-------------------------------------|-------------------------|-----|-------------------------------|-----|-------------------------------------|-----|---|----|-------------------------------------|-------------------------------------|
|  |                          | <table><tr><td>Choice of data correctly justified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr></table>   | Choice of data correctly justified? | Yes      | Measurement method correctly described? | N/A |                                |     |                                       |     |                                     |                                     |                         |     |                               |     |                                     |     |   |    |                                     |                                     |
| Choice of data correctly justified?  | Yes                      |   |                                     |          |   |     |                                |     |                                       |     |                                     |                                     |                         |     |                               |     |                                     |     |   |    |                                     |                                     |
| Measurement method correctly described?  | N/A                      |   |                                     |          |   |     |                                |     |                                       |     |                                     |                                     |                         |     |                               |     |                                     |     |   |    |                                     |                                     |
| F.1.25.13.Parameter Title:<br>EG <sub>m,y</sub> , EG <sub>y</sub> , EG <sub>j,y</sub> , EG <sub>k,y</sub> and EG <sub>n,h</sub><br>Net electricity generated and delivered to the grid by power plant / unit m,j,k or n (or in the project electricity system in case of EG <sub>y</sub> ) in year y or hour h (MWh) | 1, 2, 3, 5, 6,26, 29, 39 | <table><tr><td>Data Checklist</td><td>Yes / No</td></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Choice of data correctly justified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>NA</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? | NA | <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?  | NA                       |   |                                     |          |   |     |                                |     |                                       |     |                                     |                                     |                         |     |                               |     |                                     |     |   |    |                                     |                                     |
| F.1.25.14.Parameter Title: EG <sub>PJ,h</sub><br>Electricity displaced by the project activity in hour h of year y (in MWh)<br>(only applicable for the dispatch data OM)  | 1, 2, 3, 5, 6,26, 29, 39 | <table><tr><td>Data Checklist</td><td>Yes / No</td></tr><tr><td>Title in line with methodology?</td><td>NA</td></tr><tr><td>Data unit correctly expressed?</td><td>NA</td></tr><tr><td>Appropriate description of parameter?</td><td>NA</td></tr><tr><td>Source clearly referenced?</td><td>NA</td></tr><tr><td>Correct value provided?</td><td>NA</td></tr><tr><td>Has this value been verified?</td><td>NA</td></tr><tr><td>Choice of data correctly justified?</td><td>NA</td></tr><tr><td>Measurement method correctly described?</td><td>NA</td></tr></table>        | Data Checklist                      | Yes / No | Title in line with methodology?         | NA  | Data unit correctly expressed? | NA  | Appropriate description of parameter? | NA  | Source clearly referenced?          | NA                                  | Correct value provided? | NA  | Has this value been verified? | NA  | Choice of data correctly justified? | NA  | Measurement method correctly described? | NA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Data Checklist   | Yes / No                 |   |                                     |          |   |     |                                |     |                                       |     |                                     |                                     |                         |     |                               |     |                                     |     |   |    |                                     |                                     |
| Title in line with methodology?  | NA                       |   |                                     |          |   |     |                                |     |                                       |     |                                     |                                     |                         |     |                               |     |                                     |     |   |    |                                     |                                     |
| Data unit correctly expressed?   | NA                       |   |                                     |          |   |     |                                |     |                                       |     |                                     |                                     |                         |     |                               |     |                                     |     |   |    |                                     |                                     |
| Appropriate description of parameter?  | NA                       |   |                                     |          |   |     |                                |     |                                       |     |                                     |                                     |                         |     |                               |     |                                     |     |   |    |                                     |                                     |
| Source clearly referenced?   | NA                       |   |                                     |          |   |     |                                |     |                                       |     |                                     |                                     |                         |     |                               |     |                                     |     |   |    |                                     |                                     |
| Correct value provided?  | NA                       |   |                                     |          |   |     |                                |     |                                       |     |                                     |                                     |                         |     |                               |     |                                     |     |   |    |                                     |                                     |
| Has this value been verified?  | NA                       |   |                                     |          |   |     |                                |     |                                       |     |                                     |                                     |                         |     |                               |     |                                     |     |   |    |                                     |                                     |
| Choice of data correctly justified?  | NA                       |   |                                     |          |   |     |                                |     |                                       |     |                                     |                                     |                         |     |                               |     |                                     |     |   |    |                                     |                                     |
| Measurement method correctly described?  | NA                       |   |                                     |          |   |     |                                |     |                                       |     |                                     |                                     |                         |     |                               |     |                                     |     |   |    |                                     |                                     |
| F.1.25.15.Parameter Title: η <sub>m,y</sub><br>Average net energy conversion efficiency of power unit m in year y  | 1, 2, 3, 5, 6,26, 29, 39 | <table><tr><td>Data Checklist</td><td>Yes / No</td></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr></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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Project Title: Shuanghekou 16.6MW Hydropower Project in Chongqing City, P.R.China

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|  |                       |  |                                     |                                     |                                 |     |                                |     |                                       |                                     |   |     |  |     |                               |     |   |     |                                 |     |                                  |    |                             |     |                               |     |               |                                     |
|--|-----------------------|--|-------------------------------------|-------------------------------------|---------------------------------|-----|--------------------------------|-----|---------------------------------------|-------------------------------------|---|-----|--|-----|-------------------------------|-----|---|-----|---------------------------------|-----|----------------------------------|----|-----------------------------|-----|-------------------------------|-----|---------------|-------------------------------------|
|  |                       | <table><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>NA</td></tr></table>   | Source clearly referenced?          | Yes                                 | Correct value provided?         | Yes | Has this value been verified?  | Yes | Choice of data correctly justified?   | Yes                                 | Measurement method correctly described? | NA  |  |     |                               |     |   |     |                                 |     |                                  |    |                             |     |                               |     |               |                                     |
| Source clearly referenced?   | Yes                   |  |                                     |                                     |                                 |     |                                |     |                                       |                                     |   |     |  |     |                               |     |   |     |                                 |     |                                  |    |                             |     |                               |     |               |                                     |
| Correct value provided?  | Yes                   |  |                                     |                                     |                                 |     |                                |     |                                       |                                     |   |     |  |     |                               |     |   |     |                                 |     |                                  |    |                             |     |                               |     |               |                                     |
| Has this value been verified?  | Yes                   |  |                                     |                                     |                                 |     |                                |     |                                       |                                     |   |     |  |     |                               |     |   |     |                                 |     |                                  |    |                             |     |                               |     |               |                                     |
| Choice of data correctly justified?  | Yes                   |  |                                     |                                     |                                 |     |                                |     |                                       |                                     |   |     |  |     |                               |     |   |     |                                 |     |                                  |    |                             |     |                               |     |               |                                     |
| Measurement method correctly described?  | NA                    |  |                                     |                                     |                                 |     |                                |     |                                       |                                     |   |     |  |     |                               |     |   |     |                                 |     |                                  |    |                             |     |                               |     |               |                                     |
| F.1.25.16.Is the calculation of the operating margin and build margin emission factors documented electronically in a spreadsheet with the relevant information as defined per the “Tool for calculation of emission factor for electrical systems”? Has this spreadsheet been submitted to the validation team? | 1, 2, 3, 5, 6,26, 29, | Yes, the calculation of the operating margin and build margin emiaaion factors   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                 |     |                                |     |                                       |                                     |   |     |  |     |                               |     |   |     |                                 |     |                                  |    |                             |     |                               |     |               |                                     |
| F.1.25.17.Parameter Title: EGy<br>Electricity supplied by the project activity to the grid (in MWh)  | 1, 2, 3, 5            | <table><tr><td>Monitoring Checklist</td><td>Yes / No</td></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided for estimation?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr><tr><td>Correct reference to standards?</td><td>Yes</td></tr><tr><td>Indication of accuracy provided?</td><td>No</td></tr><tr><td>QA/QC procedures described?</td><td>Yes</td></tr><tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr></table> <p><b><u>Corrective Action Request 10:</u></b><br/>The calibration interval should be mentioned in the revised PDD.</p> | Monitoring 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 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>CAR 10</b> | <input checked="" type="checkbox"/> |
| Monitoring 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 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                   |  |                                     |                                     |                                 |     |                                |     |                                       |                                     |   |     |  |     |                               |     |   |     |                                 |     |                                  |    |                             |     |                               |     |               |                                     |
| F.1.25.18.Parameter Title: TEGy<br>Total electricity produced by the project activity, including the electricity supplied to the grid and the electricity supplied to  | 1, 2, 3, 5            | <table><tr><td>Monitoring Checklist</td><td>Yes / No</td></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr></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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|--|------------|--|---|----------|---------------------------------|----------|--|-----|---------------------------------------|-----|---|-----|--|-----|--|-----|-------------------------------------|-------------------------------------|---|-----|---------------------------------|-----|----------------------------------|-----|-----------------------------|-----|-------------------------------|-----|-------------------------------------|-------------------------------------|
| internal loads, in year y (in MWh).  |            | <table><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided 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>  | 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 |                                 |     |                                  |     |                             |     |                               |     |                                     |                                     |
| 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        |  |   |          |                                 |          |  |     |                                       |     |   |     |  |     |  |     |                                     |                                     |   |     |                                 |     |                                  |     |                             |     |                               |     |                                     |                                     |
| F.1.25.19.Parameter Title: EF <sub>grid,CM,y</sub><br><br>Combined margin CO2 emission factor for grid connected power generation in year y calculated using the latest version of the “Tool to calculate the emission factor for an electricity system” (tCO2/MWh)    | 1, 2, 3, 5 | <table><tr><td colspan="2">Not applicable, as this protocol refers to the ex-ante determination of CM.</td></tr><tr><td>Monitoring Checklist</td><td>Yes / No</td></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided for estimation?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr><tr><td>Correct reference to standards?</td><td>N/A</td></tr><tr><td>Indication of accuracy provided?</td><td>N/A</td></tr><tr><td>QA/QC procedures described?</td><td>N/A</td></tr><tr><td>QA/QC procedures appropriate?</td><td>N/A</td></tr></table> | Not applicable, as this protocol refers to the ex-ante determination of CM. |          | 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"/> |
| Not applicable, as this protocol refers to the ex-ante determination of CM.  |            |  |   |          |                                 |          |  |     |                                       |     |   |     |  |     |  |     |                                     |                                     |   |     |                                 |     |                                  |     |                             |     |                               |     |                                     |                                     |
| 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        |  |   |          |                                 |          |  |     |                                       |     |   |     |  |     |  |     |                                     |                                     |   |     |                                 |     |                                  |     |                             |     |                               |     |                                     |                                     |
| F.1.25.20.Parameter Title: PEFC <sub>j,y</sub><br><br>CO2 emissions from fossil fuel combustion in process j during the year y (tCO2/yr). Calculated as per the latest version of the “Tool to calculate project or leakage CO2 emissions from fossil fuel combustion” | 1, 2, 3, 5 | <table><tr><td>Monitoring Checklist</td><td>Yes / No</td></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided for estimation?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr></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 | <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        |  |   |          |                                 |          |  |     |                                       |     |   |     |  |     |  |     |                                     |                                     |   |     |                                 |     |                                  |     |                             |     |                               |     |                                     |                                     |

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|  |            | 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 |                      |          |                                 |     |                                |     |                                       |     |                            |     |  |     |                               |     |   |     |                                 |     |                                  |     |                             |     |                               |     |                                     |                                     |
| F.1.25.21.Parameter Title: Cap <sub>PJ</sub> (only applicable to hydropower plant projects)<br><br>Installed capacity of the hydro power plant after the implementation of the project activity (W).   | 1, 2, 3, 5 | <table><tr><th>Monitoring 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 for estimation?</td><td>No</td></tr><tr><td>Has this value been verified?</td><td>No</td></tr><tr><td>Measurement method correctly described?</td><td>No</td></tr><tr><td>Correct reference to standards?</td><td>No</td></tr><tr><td>Indication of accuracy provided?</td><td>No</td></tr><tr><td>QA/QC procedures described?</td><td>N/A</td></tr><tr><td>QA/QC procedures appropriate?</td><td>N/A</td></tr></table> <p><b><u>Corrective Action Request 11:</u></b><br/>The installed capacity should be monitored.</p> |     | Monitoring 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 for estimation? | No  | Has this value been verified? | No  | Measurement method correctly described? | No  | Correct reference to standards? | No  | Indication of accuracy provided? | No  | QA/QC procedures described? | N/A | QA/QC procedures appropriate? | N/A | CAR 11                              | <input checked="" type="checkbox"/> |
| Monitoring 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 for estimation?   | No         |   |     |                      |          |                                 |     |                                |     |                                       |     |                            |     |  |     |                               |     |   |     |                                 |     |                                  |     |                             |     |                               |     |                                     |                                     |
| Has this value been verified?  | No         |   |     |                      |          |                                 |     |                                |     |                                       |     |                            |     |  |     |                               |     |   |     |                                 |     |                                  |     |                             |     |                               |     |                                     |                                     |
| Measurement method correctly described?  | No         |   |     |                      |          |                                 |     |                                |     |                                       |     |                            |     |  |     |                               |     |   |     |                                 |     |                                  |     |                             |     |                               |     |                                     |                                     |
| Correct reference to standards?  | No         |   |     |                      |          |                                 |     |                                |     |                                       |     |                            |     |  |     |                               |     |   |     |                                 |     |                                  |     |                             |     |                               |     |                                     |                                     |
| Indication of accuracy provided?   | No         |   |     |                      |          |                                 |     |                                |     |                                       |     |                            |     |  |     |                               |     |   |     |                                 |     |                                  |     |                             |     |                               |     |                                     |                                     |
| QA/QC procedures described?  | N/A        |   |     |                      |          |                                 |     |                                |     |                                       |     |                            |     |  |     |                               |     |   |     |                                 |     |                                  |     |                             |     |                               |     |                                     |                                     |
| QA/QC procedures appropriate?  | N/A        |   |     |                      |          |                                 |     |                                |     |                                       |     |                            |     |  |     |                               |     |   |     |                                 |     |                                  |     |                             |     |                               |     |                                     |                                     |
| F.1.25.22.Parameter Title: A <sub>PJ</sub> (only applicable to hydropower plant projects with reservoir)<br><br>Area of the reservoir measured in the surface of the water, after the implemenation of the project activity, when the reservoir is full (m <sup>2</sup> ). | 1, 2, 3, 5 | <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        |   |     |                      |          |                                 |     |                                |     |                                       |     |                            |     |  |     |                               |     |   |     |                                 |     |                                  |     |                             |     |                               |     |                                     |                                     |

## Validation Protocol

Project Title: Shuanghekou 16.6MW Hydropower Project in Chongqing City, P.R.China

Date of Completion: 31/07/2009

Number of Pages: 55



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| F.1.25.23.Parameter Title: $W_{Main}$ , CO2<br>Average mass fraction of CO <sub>2</sub> in the<br>produced steam tCO2/t steam<br>(for geothermal projects only) | 1, 2,<br>3, 5 | <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           |   |                      |          |                                 |     |                                     |                                     |                                       |     |                            |     |  |     |                               |     |   |     |                                 |     |                                  |     |                             |     |                               |     |                                     |                                     |
| F.1.25.24.Parameter Title: $W_{Main}$ , CH4<br>Average mass fraction of CH4 in the<br>produced steam tCO2/t steam<br><br>(for geothermal projects only)         | 1, 2,<br>3, 5 | <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           |   |                      |          |                                 |     |                                     |                                     |                                       |     |                            |     |  |     |                               |     |   |     |                                 |     |                                  |     |                             |     |                               |     |                                     |                                     |
| F.1.25.25.Parameter Title: $M_{S,y}$<br>Quantity of steam produced during the<br>year y.  | 1, 2,<br>3, 5 | <table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr></table>   | Monitoring Checklist | Yes / No | Title in line with methodology? | N/A | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                       |     |                            |     |  |     |                               |     |   |     |                                 |     |                                  |     |                             |     |                               |     |                                     |                                     |
| Monitoring Checklist  | Yes / No      |   |                      |          |                                 |     |                                     |                                     |                                       |     |                            |     |  |     |                               |     |   |     |                                 |     |                                  |     |                             |     |                               |     |                                     |                                     |
| Title in line with methodology?   | N/A           |   |                      |          |                                 |     |                                     |                                     |                                       |     |                            |     |  |     |                               |     |   |     |                                 |     |                                  |     |                             |     |                               |     |                                     |                                     |

## Validation Protocol

Project Title: Shuanghekou 16.6MW Hydropower Project in Chongqing City, P.R.China

Date of Completion: 31/07/2009

Number of Pages: 55



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| (for geothermal projects only)   |            | 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                  |          |                                 |     |                                |     |                                       |     |                            |     |  |     |                                     |                                     |   |     |                                 |     |                                  |     |                             |     |                               |     |                                     |                                     |
| Parameters related to the “Tool to calculate project or leakage CO2 emissions from fossil fuel combustion” |            |   |                      |          |                                 |     |                                |     |                                       |     |                            |     |  |     |                                     |                                     |   |     |                                 |     |                                  |     |                             |     |                               |     |                                     |                                     |
| F.1.25.26.Parameter Title:<br>Quantity of fuel type i combusted in process j during the year y<br>FCi,j,y  | 1, 2, 3, 5 | <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        |   |                      |          |                                 |     |                                |     |                                       |     |                            |     |  |     |                                     |                                     |   |     |                                 |     |                                  |     |                             |     |                               |     |                                     |                                     |
| F.1.25.27.Parameter Title:<br>Weighted average mass fraction of carbon in fuel type i in year y<br>WC,i,y  | 1, 2, 3, 5 | <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></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 | <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        |   |                      |          |                                 |     |                                |     |                                       |     |                            |     |  |     |                                     |                                     |   |     |                                 |     |                                  |     |                             |     |                               |     |                                     |                                     |

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|  |            |   |          |                                     |                                     |
|--|------------|---|----------|-------------------------------------|-------------------------------------|
|  |            | Has this value been verified?           | N/A      |                                     |                                     |
|  |            | Measurement method correctly described? | N/A      |                                     |                                     |
|  |            | Correct reference to standards?         | N/A      |                                     |                                     |
|  |            | Indication of accuracy provided?        | N/A      |                                     |                                     |
|  |            | QA/QC procedures described?             | N/A      |                                     |                                     |
|  |            | QA/QC procedures appropriate?           | N/A      |                                     |                                     |
| F.1.25.28.Parameter title:<br>Weighted average density of fuel type i in year y<br>$\rho_{i,y}$            | 1, 2, 3, 5 | Monitoring Checklist                    | Yes / No | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
|  |            | 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      |                                     |                                     |
| F.1.25.29.Parameter title:<br>Weighted average net calorific value of fuel type i in year y<br>$NCV_{i,y}$ | 1, 2, 3, 5 | Monitoring Checklist                    | Yes / No | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
|  |            | 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      |                                     |                                     |
| F.1.25.30.Parameter title:   | 1, 2,      |   |          | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

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|   |      |   |          |  |  |  |
|---|------|---|----------|--|--|--|
| <p>Weighted average CO2 emission factor of fuel type i in year y</p> <p><math>EF_{CO2,i,y}</math></p> | 3, 5 | 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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**Table 2a 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  |
|---|-------------------------------|--|---|
| <b>CARs</b>   |                               |  |   |
| <p><b><u>Corrective Action Request 1:</u></b></p> <ol style="list-style-type: none"> <li>1. The GPS coordinates should be specified as geographical seconds. Please indicate the exact site of GPS coordinates.</li> <li>2. Chongqing City isn't a city of Hunan Province, please correct it in the revised PDD.</li> </ol> | A.4.1.1                       | The PDD has been revised accordingly for the location explanation.   | <p><input checked="" type="checkbox"/></p> <p>In the revised PDD, the GPS coordinate is specified to longitude of 108°34'54"E and the latitude of 31°33'12"N. Chongqing City is revised to be a municipality of China, which is verified to be correct.</p> |
| <p><b><u>Corrective Action Request 2:</u></b></p> <p>Please indicate the main equipments manufacturers of the project.</p> <p>The hydraulic turbine models of the project are HLA575C-LJ-83 and HLA542-LJ-103, the generator models of project are SF-J6300-6/2400 and SF-J4000-8/2150, please correct them in the PDD.</p> | A.4.3.3                       | <p>The main equipments manufacturers of the project have been added to the PDD.</p> <p>The correct equipment style number has been revised in the PDD.</p> | <p><input checked="" type="checkbox"/></p> <p>Comparing with the Tur-generator and Accessory Equipments Purchase Contract Paper (Annex II No.12), the equipments are listed in the PDD correctly.</p>   |
| <p><b><u>Corrective Action Request 3:</u></b></p> <p>Please indicate the training and maintenance efforts of the project in the PDD.</p>  | <p>A.4.3.8</p> <p>A.4.3.9</p> | The content regarding the training plan has been added in the revised PDD. The hardcopy has been delivered to the DOE.                                     | <p><input checked="" type="checkbox"/></p> <p>The content of training and maintenance is added in the revised PDD and training record is listed the Annex II (No.36) and verified by the audit team.</p>  |

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| <p><b><u>Corrective Action Request 4:</u></b></p> <p>During the on-site audit and relevant documents, the project schedule will be delayed for about 5 months, please explain it and submit evidence for it.</p> | <p>A.4.3.10<br/>C.1.1<br/>C.2.1</p> | <p>Because the geological condition is found to be different from original design in the tunneling component, which is more difficult for the construction, thus, the project schedule is delayed. The evidence has been submitted to the DOE.</p> | <p><input checked="" type="checkbox"/></p> <p>The Project Delay Report was issued by the constructor on Dec.17<sup>th</sup>, 2007, which is verified by the 3<sup>rd</sup> party supervisor on Dec.22<sup>nd</sup>, 2007 and approved by the project owner on Dec.25<sup>th</sup>, 2007. The report is listed in the Annex II (No.30) verified by the audit team.</p> |
| <p><b><u>Corrective Action Request 5:</u></b></p> <p>Please provide a table listing the milestones of the project activity in the CDM context in the revised PDD</p>   | <p>B.5.1</p>                        | <p>The table list has been added in the PDD chapter B.5.to indicate the project CDM activities milestone.</p>  | <p><input checked="" type="checkbox"/></p> <p>The milestone of the project CDM activities has been provided in the revised PDD to show the CDM was considered seriously in the decision to proceed with the project activity. The relative evidences are listed in the Annex II (No.10, 11, 12, 24, 31, 37, 38, 40 and etc.) and verified by the audit team.</p>      |

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| <p><b><u>Corrective Action Request 6:</u></b></p> <ol style="list-style-type: none"> <li>1. Please submit the IRR calculation EXCEL sheet to the auditor.</li> <li>2. Please submit the evidences for total statistic investment, electricity tariff, water resource tariff and annual O&amp;M to the DOE.</li> <li>3. The value of total statistic investment, water resource tariff and electricity tariff are different with the Project Preliminary Design Report (FSR), the reason should be explained in the revised PDD.</li> </ol> | <p>B.5.10<br/>B.5.11</p> | <ol style="list-style-type: none"> <li>1. The IRR calculation Excel sheet has been submitted to the DOE.</li> <li>2. The evidence and total statistic investment, water resource tariff and electricity tariff has been submitted to the DOE, the calculation formula of the annual O&amp;M cost is according to the Project Preliminary Design Report (FSR) and the result is calculated in the IRR Excel sheet.</li> <li>3. In the revised PDD, it is explained that               <ol style="list-style-type: none"> <li>1) The total static investment of Preliminary Design Report was 86,263,400 Yuan, while the financing of transmit electricity engineering increased from 6,510,000 Yuan to 13,980,000 Yuan. So the total static investment of the project is upgraded to 93,733,400 Yuan.</li> <li>2) The electricity tariff in the Original Project Preliminary Design Report was carried out with 0.254Yuen/kWh as expected pool purchase price but the decided price was 0.205 Yuen/kWh, which was adjusted by the NDRC on Jun 28 2006.</li> <li>3) The water resource tariff fee of the project increased from 0.001 Yuan/kwh to 0.005 Yuan/kwh, which was announced by Price bureau, finance bureau and water conservancy bureau in Chongqing City on Jul 4 2006.</li> </ol> </li> </ol> | <p style="text-align: right;"><input checked="" type="checkbox"/></p> <p>The IRR calculation Excel sheet (Annex II No.28) has been submitted to the audit team. Based on the Project Preliminary Design Report (No.5) and the evidence of adjusted total statistic investment (Annex II No.37) and electricity tariff (Annex II No.22), and adjusted water resource tariff (Annex II No.41), that the IRR is verified to be correct by the audit team.</p> |
|--|--------------------------|--|--|

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| <p><b><u>Corrective Action Request 7:</u></b></p> <p>Please submit the evidences for the other similar activities in Chongqing Municipality and the analysis of the difference of the proposed project.</p>  | <p>B.5.15<br/>B.5.16</p>  | <p>The evidence has been submitted to the DOE and the chapter of the common practice has been revised accordingly.</p>  | <p><input checked="" type="checkbox"/></p> <p>The common practice evidences is are submitted and listed in the Annex II (No.32, 33, 43, 44, 45, 46, 47, 49 and 50), which is are verified that Chongqing Municipality to be appropriate as the boundary and the table B-5 shows that it is correct as tthe similar project identification is rea-sonable</p>          |
| <p><b><u>Corrective Action Request 8:</u></b></p> <p>The value of EF<sub>CM</sub> calculated in the PDD is 0.97505, which higher than the value of 0.97455 which was published by China NDRC on Aug.9<sup>th</sup>, 2007. Please correct it in the revised PDD and provide the EF calculation Excel spreadsheet to the DOE. Meanwhile, the ex-ante calculation of emission reductions and IRR with CDM revenue should be re-calculated and all the relative contents should be revised in the PDD.</p> | <p>A.2.3<br/>A.4.4.2<br/>B.5.11<br/>B.6.2.4<br/>B.6.2.5<br/>B.6.3.3<br/>B.6.4.4<br/>F.1.5</p> | <p>The EF<sub>CM</sub> calculation has been revised based on the data published by the NDRC on Aug.9<sup>th</sup>, 2007, the ex-ante calculation of emission reductions and IRR with CDM revenue has been re-calculated and all the relative contents in the PDD are revised accordingly. The updated EF calculation Excel spreadsheet has been submitted to the DOE.</p> | <p><input checked="" type="checkbox"/></p> <p>The updated EF calculation Excel spreadsheet has been submitted, which is listed in the Annex II (No.29) and verified by the audit team. The updated EF<sub>CM</sub> is 0.97455 and the ex-ante calculations of emission reductions and IRR with CDM revenue are re-calculated in the relative chapters of the PDD.</p> |
| <p><b>CRs</b></p>  |   |   |   |
| <p><b><u>Clarification Request 1:</u></b></p> <p>Concerning the project participant of Kai County Dongli River Hydropower Co.,Ltd: the name of party involved is different from Annex 1, please clarify it.</p>  | <p>A.3.1<br/>A.3.3<br/>F.1.1</p>  | <p>The name of the project participant (host) is Kai Country Dongli River Hydropower Co.,Ltd. The PDD has been revised accordingly.</p>   | <p><input checked="" type="checkbox"/></p> <p>The tables in chapter A.3 and Annex1 in the PDD are revised to be consistent.</p>   |

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**Table 2b Resolution of Corrective Action and Clarification Requests (ACM0002 Version 07 changes to version 06)**

| Clarifications and corrective action requests by validation team  | Ref. to table 1 | Summary of project owner response                        | Validation team conclusion   |
|---|-----------------|--|--|
| <b>CARs</b>   |                 |  |  |
| <b><u>Corrective Action Request 9:</u></b><br>$A_{BL}$ should be indicated in B.6.2 of the revised PDD.         | F.1.25.9        | $A_{BL}$ has been indicated in B.6.2 of the revised PDD. | <input checked="" type="checkbox"/><br>The parameter $A_{BL}$ has been verified in B.6.2 of the revised PDD by the local auditor.<br>So the issue is considered to be resolved.  |
| <b><u>Corrective Action Request 10:</u></b><br>The calibration interval should be mentioned in the revised PDD. | F.1.25.17.      | The meters would be calibrated yearly.                   | <input checked="" type="checkbox"/><br>The related information has been verified in B.7.2 of the revised PDD by the local auditor.<br>So the issue is considered to be resolved. |
| <b><u>Corrective Action Request 11:</u></b><br>The installed capacity should be monitored.                      | F.1.25.21.      | The installed capacity has been added in B.7.1.          | <input checked="" type="checkbox"/><br>$Cap_{PJ}$ has been verified in B.7.1 of the revised PDD.   |

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|--|--|--|--|
|  |  |  | So the issue is considered to be resolved. |
|--|--|--|--|

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

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


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## **Annex 1: Validation Protocol**




|        |             |  |                |  |
|--------|-------------|--|----------------|--|
| Report | 2009-07 -31 | Shuanghekou 16.6MW Hydropower Project in Chongqing City, P.R.China<br>Information Reference List | Page<br>1 of 5 | <br>Industrie Service |
|--------|-------------|--|----------------|--|


| Reference No. | Document or Type of Information   |
|---------------|---|
| 1.            | Project Design Document for CDM project" Shuanghekou 16.6MW Hydropower Project in Chongqing City, P.R.China", version 01, dated Oct. 28, 2007   |
| 2.            | The approved baseline and monitoring methodology ACM0002, ver 07  |
| 3.            | Participant list of on-site interview, signed on March .27, 2008  |
| 4.            | <p>On-site interviews at the project site in Kai County Dongli River Hydropower Co.,Ltd, Guangmian Town, Kai County, Chongqing City, China, conducted on March 27<sup>th</sup> 2008 by auditing team of TÜV SÜD:</p> <p>Validation team:</p> <p>Mr. Smith Liu                      CDM Auditor , TÜV SÜD Industrie Service GmbH</p> <p>Interviewed persons:</p> <p>Mr. Xiang Songwen              Standing deputy general manager of Kai County Dongli River Hydropower Co.,Ltd</p> <p>Mr. Fan Wen                      Deputy general manager of Kai County Dongli River Hydropower Co.,Ltd</p> <p>Mr. Yang Binhua                Kai County Dongli River Hydropower Co.,Ltd</p> <p>Ms. Tu Xin                        CDM project manager of Shanghai Yanminjiu International Trade Co.,Ltd</p> <p>Ms. Hua Minxia                CDM project manager of Shanghai Yanminjiu International Trade Co.,Ltd</p> |
| 5.            | Kai County Shuanghekou Hydropower Project Preliminary Design Report. Issued by Chongqing City Three-gorge Hydropower Reconnaissance Design Institute dated Aug. 2005.   |
| 6.            | Approval of Kai County Shuanghekou Hydropower Project Preliminary Design Report, Kaishuinnong No <2006> 174. Issued by Kai County Conversancy and Agricultural Machinery Bureau, dated Oct 25 2006.   |
| 7.            | Chongqing City Kai County Shuanghekou Hydropower Project Environment Impact Report Paper. Issued by China Coal International Engineering Group Chongqing City Design Institute, dated Nov 2005.   |
| 8.            | Approval of Chongqing City Kai County Shuanghekou Hydropower Project Environment Impact Report Paper, Yu (shi)huanzhuann No <2006>84. Issued by Chongqing City Environment Protection Bureau, dated April 11 2006   |
| 9.            | Approval of Kai County Shuanghekou Hydropower Station Agricultural Land Transformation and Collection, Yufudi No <2006>759. Issued by Chongqing City People Government, dated Sep 27 2006.  |
| 10.           | Approval of Kai County Shuanghekou Hydropower Station Starting-work Construction, Kaishuinnong No<2007>144. Issued by Kai County Conversancy and Agricultural Machinery Bureau, dated June 25 2007.   |

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| 12.           | Chongqing City Kai County Shuanghekou Hydropower Station Tur-generator and Accessory Equipments Purchase Contract Paper. Issued by Chongqing Kai County Donglihe Hydropower Co., Ltd, and Hangzhou Power Generation Company, dated Dec 18 2007.   |
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| 14.           | Stakeholder Meeting Announcement, issued by Kaizhou Daily, dated Oct 25 2007.   |
| 15.           | Kai County Shuanghekou Hydropower Station CDM stakeholder consultation meeting summary. Issued by Kai County Dongli River Hydropower Co., Ltd, dated Oct 25 2007.   |
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| 17.           | CER Calculation sheet, dated Jul. 31, 2009  |
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| 27.           | Notice on Strictly Prohibiting the Installation of Fuel-Fired Generators with the Capacity of 135MW or Below, issued by the General Office of the State Council, Decree No. [2002]6, dated Apr 15 2002.   |
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| 29.           | Emission Factor Calculation Spreadsheet in English   |
| 30.           | The Project Delay Report issued by the constructor on Dec 17 2007, which is verified by the 3rd party supervisor on Dec 22 2007 and approved by the project owner on Dec 25 2007.  |
| 31.           | CDM Confirmation Letter to Shanghai Yanminjiu International Trade Co. Ltd, issued by Kai County Dongli River Hydropower Co.,Ltd, dated Jan 17 2007   |
| 32.           | Yearbook of China Water Resources 2006, page 575   |
| 33.           | The web site of Chongqing Wujiang Industry Group Co., Ltd. ( <a href="http://www.wjep.com/gb/aboutus/?stype=13">http://www.wjep.com/gb/aboutus/?stype=13</a> )   |
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| 36.           | Training and Maintenance Summary, issued by Kai County Dongli River Hydropower Co.,Ltd   |
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