



# VALIDATION REPORT

Zhongying Changjiang International  
New Energy Investment Co., Ltd

Zhongying Changjiang Small-scale Hydropower  
Programme of Activities

Report Number: 12011247

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<b>Project Title:</b>	<b>Country:</b>		
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<b>POA-DD for GSP</b>	<b>Final POA-DD</b>		
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<p><b>Summary:</b></p> <p>China Environmental United Certification Center Co., Ltd (CEC) has performed the validation of the "Zhongying Changjiang Small-scale Hydropower Programme of Activities" on the basis of all applicable CDM requirements. The CDM requirements include the CDM modalities and procedures and subsequent decisions by the CMP and documents released by the CDM Executive Board and available on the UNFCCC CDM website. The validation scope is defined as an independent and objective review of PoA-DD( hereafter referred to as "the proposed POA") and specific CPA-DD (the CPA-001, hereafter referred to as "the proposed CPA"), the baseline study, monitoring plan and other relevant documents, and consisted of the following three phases: i) desk review of the PoA design and the baseline and monitoring plan, the demonstration of additionality of the PoA and the eligibility criteria designed for the inclusion of CPAs, etc; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final validation report and opinion. The overall validation, from contract review to validation report &amp; opinion, was conducted using CEC's internal procedures.</p> <p>The first output of the validation process is a list of Clarification and Corrective Actions Requests (CLs and CARs), presented in Appendix A. Taking into account this output, the project participant took corrections and revised the PoA-DD, generic CPA-DD and specific CPA-DD.</p> <p>In summary, it is CEC's opinion that the "Zhongying Changjiang Small-scale Hydropower Programme of Activities" meets all relevant UNFCCC requirements for the CDM and all relevant Host Parties criteria, correctly applies the baseline and monitoring methodology AMS-I.D version 17.0, and also meets the stated validation criteria. CEC thus requests the registration of the Project as a CDM Programme of activities.</p>			
<b>Work Carried out by:</b>	<b>Date of this version</b>	<b>Version</b>	<b>Pages:</b>
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<b>Approved by:</b>			
TANG Dingding Chairman of Board			



## Abbreviations

ACM	Approved Consolidated Methodology
AMS	Approved Methodology For Small-scale Project
BM	Build Margin
CAR	Corrective Action Request
CER	Certified Emission Reduction
CFL	Compact Fluorescent Lamps
CL	Clarification Request
CME	Coordinating and /or managing entity
SSC-CPA-DD	Small-scale component project activity design document
SSC-PoA-DD	Small Scale CDM Programme Of Activities Design Document
DD	Document design
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
EB	Executive Board
CSPG	China Southern Power Grid
CCPG	Central China Power Grid
EIA	Environmental Impact Assessment
ER	Emission Reduction
ERPA	Emission Reduction Purchase Agreement
FAR	Forward Action Request
FSR	Feasibility Study Report
GHG	Greenhouse Gas
GSP	Global Stakeholders Process
ICL	Incandescent Lamps
IPCC	Intergovernmental Panel on Climate Change
IRR	Internal Rate of Return
kW	Kilo Watt
kWh	Kilo Watt Hours
LoA	Letter of Approval
MoV	Means of Verification
MW	Mega Watt
MWh	Mega Watt Hours
N/A	Not Applicable
NGO	Non Government Organization
POA-DD	Project Design Document for Programme of Activities
PoA Standard	Standard for Demonstration of Additionality, Development of Eligibility Criteria and Application of Multiple Methodologies for Programme of Activities
UNFCCC	United Nations Framework Convention on Climate Change
VVM	Validation and Verification Manual
ZCNI	Zhongying Changjiang International New Energy Investment Co., Ltd
PDR	Preliminary Design Report



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## 1. Introduction

Zhongying Changjiang International New Energy Investment Co., Ltd (PP, also the coordinating/management entity) has commissioned CEC to perform the validation of the small scale CDM Programme of Activities “Zhongying Changjiang Small-scale Hydropower Programme of Activities” (hereafter called “the proposed PoA”) with regard to the relevant requirements for CDM project activities. This report summarizes the findings of the validation of the project, performed on the basis of UNFCCC criteria for the CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting.

### 1.1 Objective

The purpose of validation is to ensure a thorough, independent assessment of proposed small-scale Programme of Activities (PoA) and the CDM Programme Activity (CPA) template with generic information applicable to all CPAs under that PoA submitted for registration as proposed CDM PoA, small hydropower project CPA-DD against the applicable CDM requirements. In particular, the project's baseline, the monitoring plan (MP), and the project's compliance with relevant UNFCCC and host country issues and criteria are validated in order to confirm that the project design as documented is sound and reasonable and meets the stated requirements and identified criteria. Validation is part of the CDM project cycle and will finally result in a conclusion by CEC whether the proposed PoA is valid and should be submitted for registration of a proposed programme of activities rests at the CDM Executive Board and the Parties involved.

The programme of activities discussed by this validation report has been submitted under the project title: Zhongying Changjiang Small-scale Hydropower Programme of Activities.

### 1.2 Scope

The validation scope is defined as an independent and objective review of the programme project design document and generic CPA design document, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against all applicable CDM requirements.

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

## 2. Validation Methods

The overall validation, from contract review to validation report and opinion, was conducted using CEC's internal procedures.

In order to ensure transparency, a validation protocol was customized for the project in accordance with Validation and Verification Manual (VVM) version 01.2/24/. The latest requirements by the CDM-EB were also considered, such as Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities (PoA Standard) /25/, Standard for Sampling and Surveys for CDM



Project Activities and Programme of Activities v03.0 /26/. The protocol shows in a transparent manner, criteria (requirements), means of verification and the results from validating the identified criteria. The validation protocol serves the following purposes:

- It organizes, details and clarifies the requirements that 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 results of the validation.

The validation protocol consists of two tables. The columns in these tables are described below. The findings are the essential part of this validation report and the completed validation protocol is enclosed in Appendix A to this report.

**Table 1: Requirements checklist**

Checklist Question	Reference	Means of Validation (MoV)	Comment	Draft and/or Final Conclusion
The various requirements in Table 1 are linked to checklist questions that the project should meet. The checklist is organized in several sections. Each section is then further sub-divided. The lowest level constitutes a checklist question.	Give reference to documents where the answer to the checklist question or item is found.	Explain how conformance with the checklist question is investigated. Examples of means of verification are document review (DR), interview (I) or observation (O), N/A means not applicable.	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. N/A means not applicable.	This is either acceptable based on evidence provided ( <b>OK</b> ), or a Corrective Action Request ( <b>CAR</b> ) due to non-compliance with the checklist question.(See below). Clarification Request ( <b>CL</b> ) is used when the validation team has identified a need for further clarification. A request for forward action request ( <b>FAR</b> ) is used for a need for review during the first verification.

To guarantee the transparency of the validation process, the CARs, CLs and FARs raised and responses that have been given are documented in more detail in table 2 of Appendix A.

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

CARs/CLs/FARs	Ref. to Table 1	Summary of PP's Response	Validation Conclusion
If the conclusions from the draft conclusion are CARs, CLs or FARs, these requests should be listed in this section.	Reference to the checklist question number in Table 1 where the CARs, CLs or FARs are explained.	The responses given by the project participants during the communications with the validation team should be summarized in this section.	This section summaries validation conclusion. The conclusion should also be reflected in "Final conclusion" section of Table 1.

## 2.1 Validation Personnel

According to the designation requirements on the validation team in the CDM accreditation standards of Executive Board, and following requirements from the technical scopes and



professional characters in the sectoral scopes, CEC designated a project assessment team.

It is required that the assessment team collectively has the required competencies in the technical, methodological and sectoral aspects of specific CDM project activities.

The assessment team consists of the following members, the detailed personal information see Appendix B.

**Table 3: List of Assessment Team**

<b>Validation Team</b>	<b>Role</b>	<b>Qualification</b>	<b>Specific scope</b>	<b>Participated in the on-site visit</b>
LIU Qingzhi	Team Leader	Auditor	√	√
LIU Yaotian	Team Member	Auditor	√	√

<b>Technical Review</b>	<b>Role</b>	<b>Specific Scope</b>	<b>Participated in the on-site visit</b>
XU Linghua	Technical Reviewer	√	--
QIN Boya	Technical Reviewer	√	--

Liu Qingzhi is a lead Greenhouse Gas(GHG) assessor. She is a qualified EMS Auditor and environmental Labeling auditor, who has also completed various CEC CDM training courses and GHG accounting related courses. She has participated in over 40 validation/verification CDM project activities and programme of activities(PoAs) in the areas of hydropower, wind power, coal mine methane recovery and utilization as well as animal waste recovery PoA, CFL distribution PoA etc. Most of the projects are in sectoral scope 1 and 8/10, which gives her rich experience in renewable energy and mining sector. Besides CDM auditing, Ms.LIU has participated in the assessment of hydroelectric projects against the criteria set by the World Commission on Dams and energy saving auditing.

Liu Yaotian is a Greenhouse Gas(GHG) assessor. She has attended extensive internal and external training courses on EMS, CDM and CDM related knowledge since 2006. She has participated in and finished over 20 validation/verification CDM/VCS projects in the areas of hydropower and wind power. Most of the projects are in sectoral scope 1 (energy industries), which gives her abundant experience in renewable energy sector.

Xu Linghua is a lead Greenhouse Gas(GHG) assessor. Ms. Xu worked on environmental monitoring, waste water treatment, and quality control of the adhesive product for over 20 years. She is an experienced senior EMS auditor with over 10 years' accreditation organization working experience, who has completed various CEC CDM training courses and technology trainings. Ms. XU has participated in over 30 validation/verification CDM projects in the areas of hydropower, wind power and biomass power generation. Most of the projects are in sectoral scope 1 (energy industries), which gives her abundant experience in renewable energy sector..

Qin Boya is a lead Greenhouse Gas(GHG) assessor. She has attended various internal and external training courses on EMS, CDM related knowledge and low carbon development training since 2008. She has participated in and finished over 20 validation/verification CDM/VCS/GS project activities and programme of activities(PoAs) both in China and abroad in the areas of hydropower, wind power, biomass power generation as well as CFL distribution PoAs. Most of the projects are in sectoral scope 1 (energy industries), which gives her abundant experience in renewable energy sector. Besides CDM auditing, Ms.QIN has participated in the assessment of hydroelectric projects against the criteria set by the World Commission on Dams.

## 2.2 Document Review

The proposed PoA-DD, generic CPA-DD and specific CPA-DD (the CPA-001, hereafter referred to as "the proposed CPA") version 01 dated 18/04/2012 were submitted by the CME, they were made publicly available on the internet on the UNFCCC CDM web pages for a 30 days global stakeholder consultation process (GSP) from 27/04/2012 to 26/05/2012. Additional background documents related to the project design, baseline and financial analysis were also made available before and during the on-site visit.



To address the validation team's corrective action and clarification requests, the PP revised the project design documents. The PDDs of the proposed PoA and the proposed CPA-001 version 02 dated 30/09/2012/2//4/ forms the basis for the final evaluation as presented by this report. The information on the POA-DD version is presented on Page 1.

The document review involves:

- 1) A review of data and information
- 2) Cross checks between information provided in the PoA-DD and information from sources other than those used, if available, CEC's sectoral and local expertise and if necessary, independent background investigations.

To address the validation team's corrective action and clarification requests, the PP revised the POA-DD, generic CPA-DD and specific CPA-DD and resubmitted them to the validation team and the validation findings presented in this report related to the project are described in the POA-DD and CPA-DD version 02 dated 30/09/2012/2//4/.

## 2.3 Follow-up Interviews

The validation team performed on-site interviews with representatives of the PP and local stakeholders on 10/06/2012 to 12/06/2012 (See Section 6: Personnel interviewed). Main topics of the interview are summarized in Table 4.

**Table 4 Interview Topics and Organizations**

Interview topics	Interview Organization
<ul style="list-style-type: none"> <li>Project background information.</li> <li>PoA technology, operation, maintenance and monitoring capability.</li> <li>Project implementation, monitoring and management plan.</li> <li>Stakeholder consultation process and sustainable development.</li> <li>Applicability of selected methodology.</li> <li>Baseline determination.</li> <li>Eligibility criteria for CPA inclusion</li> <li>Emission reductions calculation.</li> <li>Emission reduction monitoring plan.</li> </ul>	<p>Zhongying Changjiang International New Energy Investment Co.,Ltd (the PP and also CME)</p> <p>Cangyuan Kaidi Hydropower Development Investment Co., Ltd (CPA-001 owner and implementer)</p> <p>Innovative Carbon Investment Co., Ltd. (the consultant)</p>
<ul style="list-style-type: none"> <li>Government policies related to hydropower projects</li> <li>Realistic and credible baseline scenario alternatives</li> <li>hydropower application situation in the area</li> <li>Environmental and social impacts</li> <li>Stakeholder comments</li> </ul>	<p>Local Stakeholders</p> <p>(local officials and households)</p>

## 2.4 Resolution of CARs, CLs and FARs

During the validation of the proposed programme of activities, issues that need to be further elaborated upon, researched or added are identified in order to confirm that the small scale programme of activities meets the CDM requirements and can achieve credible emission





reductions, the issues are correctly identified, discussed and concluded in the validation report.

Corrective Action Requests (CARs) are raised, where:

- The project participants have made mistakes that will influence the ability of the programme of activities to achieve real, measurable additional emission reductions;
- The CDM requirements have not been met;
- There is a risk that emission reductions cannot be monitored or calculated.

Clarification Requests (CLs) are raised, where information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

Forward action requests (FARs) are raised to highlight issues related to project implementation that require review during the first verification of the programme of activities. FARs shall not be related to the CDM requirements for registration.

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 Appendix A.

## **2.5 Internal Quality Control**

This final validation report including the initial findings underwent a technical review before being submitted to PP and requesting registration of the proposed PoA according to CEC internal procedure. The technical reviewers were not part of the validation team, and the technical review was independently of the validation team. The complete QA/QC procedure applied to this validation report was as follows:

The initial draft validation report (DVR) after on-site visit was issued by CEC on 25/09/2012. After all CARs and CLs were closed, a draft final validation report (draft FVR) was issued. Then draft FVR was sent to technical review performed by two (2) technical reviewers according to CEC internal procedure. After reviewing and confirming by TRers, the draft FVR was then finalized and sent for completeness check carried out by Quality Assurance Management Division (QAD). After correction and confirmed by QAD, the report is verified by the Director. And finally the report will be approved by the Chair of Board.

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



### 3. Validation Summary

The findings from the desk review of the original project design documents and the findings from interviews during the on-site visit are described in the Validation Protocol Appendix A.

The Clarification and Corrective Action Requests are stated, where applicable, in the following sections and are further documented in the Validation Protocol in Appendix A. The validation of the Project resulted in 5 Corrective Action Requests and 9 Clarification Requests.

#### 3.1 Approval and Participation

The project participant is Zhongying Changjiang International New Energy Investment Co., Ltd (ZCNI), authorized by China. The host party, China has ratified the Kyoto Protocol and established a DNA as per the participating requirements for CDM under the Kyoto Protocol.

The host Party China meets the requirements to participate in the CDM.

Non-Annex 1 Country: <http://maindb.unfccc.int/public/country.pl?country=CN>

CAR01 was raised requesting the PP to provide the LoA from DNA of China. The PP has provided the LoA from DNA of China to CEC, the LoA has been validated and cross-checked to be authentic, hence CAR01 was closed.

The host country Letter of Approval (LoA) has been issued by the DNA of China, in October 2012(the document No.4697 in English version)/5/. The LoA was received from the project participant through the CDM consultant, and the authenticity of the LoA has been confirmed by cross-checking against the list of approved projects on the web-site of China DNA/27/. The letter confirms that:

- China ratified the Kyoto Protocol on 30/08/2002;
- Zhongying Changjiang International New Energy Investment Co.,Ltd is authorized as a project participant and also the CME of the proposed PoA by the P.R. China to voluntarily participate in the project activity;
- Zhongying Changjiang Small-scale Hydropower Programme of Activities and 1<sup>st</sup> CPA complies with the permission requirements provided for in the Measures for operation and management of CDM projects in P.R. China, and assists China in achieving sustainable development;
- The LoA references the precise project title “Zhongying Changjiang Small-scale Hydropower Programme of Activities”. This is consistent with the project title in the SSC PoA-PDD.

It is necessary to note that the LoA does not specify a version number of the POA-DD, CPA-DD, validation report or any other conditions with regarded to any CDM requirement.

In addition, during the validation, it is confirmed that for the CPA implementer, contracts will be signed with ZCNI, in which the terms of voluntary participation will be mentioned, so that the voluntary participation will be guaranteed. The agreement for the real case CPA-001 is checked/18/. Also, as required in the CDM Quality Management Manual/23/, the ZCNI will make agreement with the CPA implementer(s), so as to make sure that only ZCNI is qualified to claim CERs for this PoA.



CL04 was raised regarding the entity/individual responsible for the CPA shall be indicated in section A.3 in generic CPA-DD. The relevant information has been correctly indicated in the final generic CPA-dd. Hence CL04 was closed.

According to Annex 2 of the proposed PoA-DD and the on-site interview, the proposed PoA does not receive any public funding. The validation did not reveal any information that indicates that official development assistant (ODA) from Annex I Parties is involved in the proposed project.

Complying with Para.49, 50 and 125 of VVM 01.2, the validation team concluded that the participation and approval are fully complying with the requirements of the CDM.

### **3.2 Programme Design Document**

Due to the clarifications and corrective actions requested during the validation process, the project participant made a final version of the PoA-DD v02 dated 30/09/2012, which include corrections or clarifications to all issues raised.

The PoA-DD is in compliance with relevant form and guidance as provided by UNFCCC/29/30/. The most recent version of the forms under VVM Track is used.

CL03 was raised regarding the format of section A.4.3 is not in accordance with the published POA-DD template. The section has been revised in the final PoA-DD and validated to be in accordance with the template. Hence CL03 was closed.

CEC considers that the guidelines for the completion of the PoA documents in their most recent version under VVM track have been followed. Relevant information was provided by the Managing entity and/or project participants in the applicable PoA sections. Completeness was assessed through the protocol included in Annex A.

### **3.3 Programme Description**

The following description of the project as per PoA-DD and CPA-001 can be verified during the on-site visit:

Zhongying Changjiang Small-scale Hydropower Programme of Activities has an objective to develop newly built small hydropower projects in Hubei, Yunnan, Henan and Sichuan province of China. Hubei, Henan and Sichuan province of China belong to China Central Power Grid (CCPG), Yunnan province belongs to China Southern Power Grid (CSPG). Through the managing entity Zhongying Changjiang International New Energy Investment Co., Ltd (later on referred as "ZCNI"), the PoA aims to incentivize the development and implementation of small scale hydropower plants with the objective to contribute to the promotion of renewable energies in China, and and facilitate the abatement of greenhouse gas emissions through the replacement of fossil fuel-fired power generation in the grids (CCPG/CSPG) as well.

The geographical coordinates of Hubei, Yunnan, Henan and Sichuan province of China are listed below, they have validate against the public available evidences/56//57//58//59/.

Hubei Province: 108°21'42" to 116°07'50" E and 29°01'53" to 33°6'47" N

Yunnan Province: 97°31' to 106°11' E and 21°08' to 29°15' N

Henan Province: 110°21' to 116°39' E and 31°23' to 36°22' N



Sichuan Province: 110°21' to 116°39' E and 31°23' to 36°22' N

Under the proposed PoA, each CPA will comprise one or more such newly built hydropower plants and have a combined installed capacity of no more than 15 MW, namely the threshold for small-scale CDM projects.

The PoA is a voluntary action being coordinated and managed by ZCNI. It is verified there are no mandatory laws or regulations in place in China that require hydropower plants to seek CDM services. Likewise, no mandatory laws or regulations exist requiring the managing entity or any other party to develop a PoA for hydropower plants in China, this has been verified by checking the public available information such as Industrial Cstructure Adjustment Guidance Catalogue published by NDRC of China in Mar. 2011/31/ shown in the China NDRC website/53/.

Therefore, the proposed PoA and its CME contribute to the sustainable development in China in the following aspects: Reduce GHG and pollutant emissions by providing clean electric power; mitigate the shortage of power in Yunnan, Henan, Sichuan and Hubei Province, and promote the local economic development; promote the local development by providing job opportunities.

The PoA CME has confirmed that there is no diversion of ODA involved. Statement on no diversion of ODA involved in CPA-001 has been checked/46/.The starting date of the proposed PoA is s properly defined as 27/04/2012, which is the commencement of the validation. The length of PoA is taken as 28 years.

CL01 was raised requesting to provide evidence for the geological coordinates for the PoA boundary. The evidence for the geological coordinates for the PoA boundary has been indicated in the final PoA-DD. The linkage has been verified to be credible. Hence CL01 was closed.

CL02 was raised requesting to clarify whether a typical CPA involves in a capacity addition or a retrofit of (an) existing plant(s) or a replacement of (an) existing plant(s) as per the applied methodology and further clarify the technology employed by a typical CPA. CME explained a typical CPA under the PoA does not involve in a capacity addition or a retrofit or replacement of (an) existing plant(s), only new hydropower plants can be considered as a potential CPA included into the PoA. The technology information has been supplemented in Section A.4.2.1. This has been cross-checked during on-site interview. Hence CL02 was closed.

The information presented in the PoA documents on the technical design is consistent with the actual planning and implementation of the project activity confirmed in the following ways:

- A review of data and information (see section 5)
- An on-site visit to the place where the associated real case CPA-001 is being implemented and interview with relevant stakeholder and personnel with knowledge of the project in attendance.
- A review of information related to similar projects or technologies which have been used to validate the accuracy and completeness of the project description

According to Para.57 of VVM, it has been validated that the framework provided in the updated PoA-DD is consistent with the actual situation and planning. The description is complete, sufficiently accurate and therefore complies with CDM requirements.



### 3.4 Operational and Management Arrangement

Transparent operational and management arrangements have been established by ZCNI, the CME of the PoA. For each CPA, CPA implementers will be established the management system, and contracts will be signed to make sure that the management system could be implemented. Thus the validation team can conclude that the management system will be carried out, and the CPA implementers are aware of and have agreed that their activity is being subscribed to the PoA.

According to the SSC PoA-DD form/29/ Section A.4.4.1 and the Procedures for registration of a programme of activities as a single CDM project activity and issuance of certified emission reductions for a programme of activities, version 04.1/32/, four issues should be addressed and complied:

#### ***(1) A record keeping system for each CPA under the PoA***

As per the proposed PoA-DD Section A.4.4.1/2/, a database has been developed by the CME ZCNI, following CPA detail information for identifying each CPA will be included in:

- Number and address of the CPA and its installed capacity
- The name and contact details of each participating CPA implementer
- The geographical coordinates of each CPA (for example, GPS coordinates of dam and power house)
- The record of technical specification of each hydropower plant participating in the CPA
- Monitoring parameters of each CPA

The database will be fully controlled, monitored and updated by the CME within the crediting period of the PoA and its CPAs. In addition, the operation and management structure of the PoA and the responsibilities of the CME and each CPA implementer have been clearly presented in the PoA-DD. Therefore, the validation team considers that the record keeping system is clear and practical.

#### ***(2) A system/procedure to avoid double accounting e.g. to avoid the case of including a new CPA that has been already registered either as a CDM project activity or as a CPA of another PoA***

The established system performs a double accounting check by following steps:

- a) Checking SSC-CPA unique geographical boundary as defined by the project area.
- b) Confirming that no CPA or CDM project activity developed in the proposed project area, the relevant information, about the projects using the same methodology AMS-I.D or the same measure/technology, on websites of UNFCCC and Chinese DNA will be checked before applying for CDM and implementation of the CPA in Yunnan, Henan, Sichuan and Hubei Province.
- c) Signing a contract between CPA implementer and ZCNI to confirm that: a) They are aware of and have agreed that their activity is been subscribed to the PoA; b) They have neither already been registered as a CDM project, nor as a CPA of another PoA.

As the above measures, the validation team considers that the double accounting can be



avoided.

***(3) The SSC-CPA included in the PoA is not a de-bundled component of another CDM programme activity (CPA) or CDM project activity***

The CME indicated in the PoA-DD/2/ that de-bundling check will be preformed for the inclusion of each CPA according to the Guidelines on assessment of de-bundling for SSC project activities (version 03)/33/. The database described above (including geological coordinates, addresses, project titles and implementers' name) will be used to perform the de-bundling check. Every new hydropower plant included as a CPA will be compared to the list of project activities under-validation or registered at the UNFCCC. Moreover, the project implementers will be made aware of the de-bundling rules and will confirm that the proposed CPA is not a de-bundled part of a bigger hydropower project.

As the above measures, the validation team considers that the de-bundling check can be effectively conducted to each CPA before its inclusion.

***(4)The provisions to ensure that those operating the CPA are aware of and have agreed that their activity is being subscribed to the PoA***

As per the proposed PoA-DD, the CME indicated a contractual relationship that will be formed with the CPA implementers so as to ensure that those operating the CPA are aware of and have agreed being subscribed to the PoA. The validation team checked the signed agreement/18/ between the CPA-001 implementer and the CME and confirms that the CPA-001 implementer was aware of and agreed to subscribe the CPA-001 into the PoA. From the signed agreements, the de-bundling check, double accounting and monitoring issues are confirmed. Therefore, the validation team considers that the CME provides sufficient information and awareness to participating CPA implementers before their CPAs subscribe to the PoA.

In addition, the CME has established CDM Quality Management Manual v01 valid from 24/09/2012/23/. In the manual, the following procedures have been regulated, it is validated to be in compliance with para.17 of PoA standard/25/.

- Definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies
- Arrangements for training and capacity development for personnel,
- Procedures for technical review of inclusion of CPAs,
- A system/procedure to avoid double accounting,
- Records and documentation control process for each CPA under the PoA,
- Measures for continuous improvements of the PoA management system

CAR03 was raised requesting to state the respective responsibilities of CME and CPA implementer and further clarify the system/procedure to avoid double accounting. The respective responsibilities have been indicated in the final PoA-DD, and it is confirmed to be consistent with that in the CDM Quality Management Manual/23/. The system/procedure to avoid double accounting has been further clarified and confirmed to be credible. Hence CAR03 was closed.

In summary, the validation team considers that the PP clearly demonstrates the operational



and management arrangements for the PoA in the PoA-DD, this complies with the VVM requirements (para.166). Complying with para.17 and 18 of PoA Standard/25/, the validation team confirms that the CME has the competencies to check the features of potential CPAs and ensure that each CPA meets all requirements and eligibility criteria before inclusion in the registered PoA.

### **3.5 Eligibility criteria for CPA inclusion**

The validation team validates the eligibility criteria in accordance with the VVM (version 01.2) para.167, and PoA standard/25/, PP shall definite (DOE shall assess) the eligibility criteria for inclusion of a project activity as a CPA under the PoA, which shall include, as appropriate, criteria for demonstration of additionality of the CPA, applicability of applied methodology (ies), and the type and/ or extent of information that shall be provided by each CPA in order to ensure its eligibility.

The eligibility criteria has been defined and stated in the PoA-DD. The validation team has assessed the defined eligibility criteria as below:





**Table 5 Eligibility Criteria Assessment**

No.	Eligibility Criteria	Assessment
1	All activities under a CPA shall be located in the boundary of the PoA, i.e. within Yunnan, Henan, Hubei or Sichuan Province.	<p>The following methods and documents will be applied to verify the compliance: (1) Geographic coordinate evidence; (2) FSR (Feasibility Study Report) and its approval/PDR (Preliminary Design Report) and its approval of each plan (the sign “/” means “or”). Furthermore, this EC will be also checked by on –site visit.</p> <p>This fulfills the standard EB65 Annex 3 para. 14(a). CME indicates the gerographic boundary of a CPA that shall be within the PoA geographic boundary.</p>
2	<p>Measures shall be taken to avoid double counting of emission reductions.</p> <p>2.1 Each CPA under the PoA and each hydropower plant involved in one CPA shall have a unique programme logo, such as CPA-001 for CPA level, HP-00101 for project level in each CPA.</p> <p>2.2 The potential individual CPA implementer included in the proposed PoA should sign a contract with the CME to confirm that:</p> <p>a) They are aware of and have agreed that their activity is being subscribed to the PoA.</p> <p>b) They have neither already been registered as a CDM project, nor as a CPA of another PoA;</p>	<p>The following documents will be applied to verify the compliance: (1)specific SSC-CPA-DD design; (2) Contract between CPA implementer and CME to confirm CPA implementers are aware of and have agreed that their activity is being subscribed to the PoA and they have neither already been registered as a CDM project, nor as a CPA of another PoA.</p> <p>This fulfills the standard EB65 Annex 3 para. 14(b). CME considers methods to avoid double counting.</p>
3	The SSC-CPA shall be (a) new hydro power plant(s) with an installed capacity equal or less than 15 MW and must not involve capacity	The following documents will be applied to verify the compliance: (1) FSR and its approval/PDR and its approval of each plant; (2) EIA and its approval; (3) If





	addition, retrofitting or modifying of an existing facility for renewable energy generation.	<p>available, main equipment purchase contract of each plant.</p> <p>This fulfills the standard EB65 Annex 3 para. 14(c). CME considers the technology/ measures to be applied in CPA(s) and small-scale threshold.</p>
4	The starting date of any CPA is not, or will not be, prior to the commencement of validation of the programme of activities (27/04/2012 for the PoA GSP). Construction contracts or purchase contracts or other documents will be provided to prove the starting date of a CPA.	<p>The following documents will be applied to verify the compliance: (1)Construction contract/ Equipment purchase contract or other relevant documents of each hydropower plant; (2)In case the CPA has not committed to expenditures/take real actions when the CPA has been on-site validated by DOE, it should be concluded that this EC can be met automatically.</p> <p>This fulfills the standard EB65 Annex 3 para. 14(d). CME considers documents/ evidence to check the start date of a CPA. The validation team considers CME follows the definition of CPA starting date, "The starting date of a CDM programme activity is the earliest date at which either the implementation or construction or real action of a programme activity begins. The starting date of the CPA cannot be prior to the commencement of validation of the PoA, i.e. the date on which the PoA-DD GSP."</p>
5	Hydropower project(s) under each CPA should comply with applicability and other requirements of the applied methodology AMS-I.D (Version 17.0).	This complies with the standard EB65 Annex 3 para. 14(e). For the PoA-DD, AMS-I.D. version 17.0 is chosen to apply. Details of applicability have been demonstrated and details of validation opinion will be provided in the followings:
5.1	The project activity under each CPA should be (a) new hydropower plant(s) which use the hydropower and supply electricity to the regional grid.	<p>The following documents will be applied to verify the compliance: (1) FSR and its approval/PDR and its approval of each plant; (2) If available. Grid connected approval or relevant document confirmed by local power department/company.</p> <p>This complies with the standard EB65 Annex 3 para. 14(e). The mentioned documents provide a clear picture the type of project and grid connection arrangement. It also complies the applicability conditions of Para 1, 2 &amp; 3 in</p>



		AMS-I.D version 17.0/41/.
5.2	No capacity addition, retrofit or replacement of (an) existing plant(s) involved in the proposed PoA.	<p>The following documents will be applied to verify the compliance: (1) FSR and its approval/ PDR and its approval of each plant; (2) EIA and its approval of each plant.</p> <p>This complies with the standard EB65 Annex 3 para. 14(e). CME is clearly mentioned each CPA shall be new facilities (Greenfield plant). It also complies the applicability conditions of Para 7&amp;8 in AMS-I.D version 17.0.</p>
5.3	No co-fired or co-generation units involved in the CPA. Only renewable hydropower units can be eligible of inclusion of the PoA.	<p>The following documents will be applied to verify the compliance: (1) FSR and its approval/ PDR and its approval of each plant; (2) Business license of each plant developer.</p> <p>This complies with the standard EB65 Annex 3 para. 14(e). CME indicates only hydropower units with the total installed capacity equal or less than 15 MW for each CPA, and any CPA with cogeneration or co-fired system is not eligible to include to the PoA. It also complies the applicability conditions of Para 5&amp;6 in AMS-I.D version 17.0.</p>
5.4	Hydropower project(s) with reservoirs involved in CPAs should satisfy one of the following conditions: a) the project activity involved in each CPA implemented in an existing reservoir with no change of reservoir volume, b) with increase of reservoir volume but power density is greater than $4W/m^2$ , or c) result in a new reservoir with power density greater than $4W/m^2$ .	<p>The following documents will be applied to verify the compliance: FSR and its approval/ PDR and its approval of each plant.</p> <p>This complies with the standard EB65 Annex 3 para. 14(e). CME indicates it is eligible to hydropower plants/ projects. It also complies the applicability conditions of Para 4 in AMS-I.D version 17.0.</p>
6	The additionality for each CPA can be demonstrated by any one of the following approaches:	<p>The full analysis will be demonstrated in specific the CPA-DD in detail.</p> <p>This fulfills the standard EB65 Annex 3 para.14(f). In PoA-DD Section A.4.3, it</p>



	<p><b>Approach 1:</b> Demonstrating additionality according to “Guidelines for Demonstrating Additonality of Microscale Project Activities” (Version 04.0).</p> <p>In case of Approach 1, the projects included in the CPA should meet relevant requirements in paragraph 2 (a) of “Guidelines for demonstrating additionality of microscale project activities”, including:</p> <ul style="list-style-type: none"> <li>• The total installed capacity of the project activity is no more than 5MW;</li> <li>• The geographic location of the project activity is in a special underdeveloped zone (SUZ) of the host country.</li> </ul> <p>OR</p> <p><b>Approach 2:</b> Demonstrating addtionality according to “Guidelines on the demonstration of additionality of small-scale project activities” (Version 09.0).</p> <p>In case of Approach 2, the additionality for each CPA will be demonstrated by investment analysis. The IRR of every project included in the CPA should be lower than the selected benchmark, which is indicated in investment decision document (such as FSR).</p>	<p>has clearly indicated the additionality of each CPA will be either approach 1 or approach 2. This is in line with EB65 Annex 3 para. 7-9 regarding the demonstration of addiitonality in the PoA and its CPAs. After the detailed assessment and results in Section 3.7 of this report, the validation team confirms the correct approaches being demonstrated by the CME in the PoA-DD.</p>
7	<p>In the proposed PoA, both the local stakeholder consultations and environmental impact analysis would be done at CPA level.</p>	<p>The following document shall be provided: (1) EIA and its approval for environment impact analysis of each plant; (2) Stakeholder questionnaires and/or meeting records for local stakeholder consultations of each plant.</p> <p>This complies with the standard EB65 Annex 3 para. 14(g). According to the PoA-DD Section D, local stakeholder consultation will be held in CPA level.</p>



		<p>According to the VVM para. 128, stakeholder consultation shall be done prior to the PoA-DD GSP.</p> <p>The validation team considers this criterion is correctly addressed and appropriate supporting evidences were mentioned</p>
8	No public funding from Annex 1 Parties has been involved in each CPA under the proposed PoA.	<p>The following document applied to verify the compliance: confirmation letter from each CPA implementer. This will also be confirmed by on-site interview.</p> <p>This fulfills the standard EB65 Annex 3 para. 14(h). CME considers the method to handle any public funding from Annex I parties. Confirmation letter from CPA Implementer shall be provided to address this issue.</p>
9	Hydropower project(s) involved in each CPA should be newly constructed and the total capacity for each CPA should be no more than 15MW during every year of crediting period of the CPA	<p>The following documents shall be provided: (1)FSR and its approval/PDR and its approval of each plant; (2)EIA and its approval.</p> <p>This fulfills the standard EB65 Annex 3 para. 14(k). The CME addressed each CPA to fulfill the small-scale or microscale threshold.</p>
10	<p>The proposed small-scale CPA is not a debundled component of a large scale activity, which satisfies both conditions (a) and (b) below:</p> <p>a)Has the same activity implementer as the proposed small scale CPA or has coordinating or managing entity, which also manages a large scale PoA of the same technology measure, and;</p> <p>(b) The boundary is within 1 km of the boundary of the proposed small-scale CPA at the closest point.</p>	<p>The following methods and documents shall be applied to verify the compliance: (1) Public Data base and CDM/PoA project information published on the authoritative websites such as UNFCCC/DNA website; (2) Contract between the CPA implementer and CME to confirm that each plant involved in each CPA is not a debundled component of a large scale activity.</p> <p>This fulfills the standard EB65 Annex 3 para. 14(l) and in line to “Guidelines on assessment of de-bundling for SSC project activities” (version 03), EB54, Annex 13.</p>
11	Confirmation on the crediting period of the SSC-CPA which shall not	The full analysis will be demonstrated in the specific CPA DD in detail.



	exceed the length of the PoA (28 years) regardless of the time of inclusion of CPA in the PoA.	This fulfills the Procedures for registration of a programme of activities as a single CDM project activity and issuance of certified emission reductions for a programme of activities version 04.1/32/ para.7(c).
12	The SSC-CPA shall be in line with laws and regulations available at the time of inclusion of the CPA into the PoA.	<p>According to the &lt;industrial structure adjustment guidance catalogue&gt; published by NDRC of China in Mar, 2011/31/, the hydropower project is an encouraged industrial in China. Furthermore, on-site interview will be applied to check this provision.</p> <p>This fulfills the host party regulations requirements.</p>



CAR02 was raised requesting to identify the CPA eligibility criteria according to the PoA standard and the chosen methodology. The corresponding eligibility criteria have been clearly stated in the revised PoA-DD, and they are validated to be in compliance with the requirements of the PoA standard and applied methodology. Hence CAR02 was closed.

Based on above assessment to each eligibility criteria, the validation team can conclude as below:

- All of eligibility criteria are appropriate to the PoA and its CPA inclusion;
- All of eligibility criteria are verifiable;
- All of eligibility criteria are sufficiently objective and comprehensive to permit validation team on assessment of the inclusion of CPA(s) in the PoA.

The eligibility criteria has been clearly stated in PoA-DD section A.4.2.2 according to PoA standard (EB65, Annex 3) and applicability conditions in AMS-I.D. As per on-site interview CME, CDM Quality Management Manual/23/ and PoA-DDs, the target group, distribution mechanisms and sampling requirements is not applicable in the PoA. Since no sampling is involved in the PoA, the electricity generated by the CPA will be delivered to the regional Grid. In addition, as per PoA-DD Section A.4.4 (detailed assessment in section 3.4) and provided supporting evidences, the validation team considers that the CME ZCNI has developed and implemented a clear, transparent operation and management system for checking any potential CPA inclusion so as to ensure each CPA that meets all requirements of eligibility criteria. The validation team checked the below components.

A CDM Quality Management Manual /23/ was established to address the compliance check of eligibility criteria by referring with PoA standard. In the Manual, management system such as (i) organization chart, (ii) responsibility of each position, (iii) training, (iv) document control, (v) procedures for technical review of CPA inclusion, (vi) procedures for avoiding double counting, (vii) Non-conformity and corrective & preventive actions, (viii) Continuous Improvement, etc. are mentioned. A well-established quality management system for CPA inclusion can be seen.

In conclusion, the validation team considers that the stated eligibility criteria in the PoA-DD complies with the VVM requirements and the Standard EB65 Annex 3 para.13-18.

### **3.6 Baseline and Monitoring Methodology**

#### **3.6.1 Applicability of the Selected Methodology**

As per the PoA-DD Section E.1, a CPA under the PoA applies the approved baseline and monitoring methodology AMS-I.D version 17.0 “Grid connected renewable electricity generation” /41/ in connection with the “Tool to calculate emission factor for an electricity system (version 02.2.1)”/37/. AMS-I.D version 17.0 is valid from 17 June 2011 onwards and was previously approved by the CDM EB.

The methodology is applicable to the proposed PoA, because:

*1. The applicability of the selected methodology to the proposed CDM project activity has been assessed as it is applicable to renewable energy generation units such as photovoltaic, hydro, tidal/wave, wind, geothermal and renewable biomass:*



- a) Supplying electricity to a national or a regional grid; or*
- b) Supplying electricity to an identified consumer facility via national/regional grid through a contractual arrangement such as wheeling.*

All CPAs under the proposed PoA will consist of renewable energy generation units (hydro) that supplies electricity to regional grids CCPG or CSPG in China. This has been confirmed through on-site visit and reviewing the latest delineation “2011 Baseline Emission Factors for Regional Power Grids in China”, issued by China DNA, dated on 20/10/2011/34/.

*2. This methodology is applicable to project activities that:*

- a) Install a new power plant at a site where there was no renewable energy power plant operating prior to the implementation of the project activity (Greenfield plant);*
- b) Involve a capacity addition;*
- c) Involve a retrofit of (an) existing plant(s); or*
- d) Involve a replacement of (an) existing plant(s).*

All CPAs under the proposed PoA will install new hydropower plant(s) at a site where there was no renewable energy power plant operating prior to the implementation of the CPA (Greenfield plant). The activities described in (b) (c) or (d) does not involve under the PoA. This has been confirmed during on-site visit and interview.

*3. Hydro power plants with reservoirs that satisfy at least one of the following conditions are eligible to apply this methodology:*

- a) The project activity is implemented in an existing reservoir with no change in the volume of reservoir;*
- b) The project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the project emissions section, is greater than 4 W/m<sup>2</sup>;*
- c) The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the project emissions section, is greater than 4 W/m<sup>2</sup>.*

Hydro power plants with reservoirs will be eligible to include to the proposed PoA only when one of the followings can be satisfied, this has been confirmed during on-site visit and interview.

- The project activity is implemented in an existing reservoir with no change in the volume of reservoir;
- The project activity is implemented in an existing reservoir with the increased of the volume, the power density is greater than 4W/m<sup>2</sup>;
- The project activity in each CPA results in new reservoirs and power density is greater than 4W/m<sup>2</sup>.

*4. If the new unit has both renewable and nonrenewable components (e.g. a wind/diesel unit), the eligibility limit of 15MW for a small-scale CDM project activity applies only to the renewable component. If the new unit co-fires fossil fuel, the capacity of the entire unit shall not exceed the limit of 15MW.*



Not applicable. Only renewable component will be involved in each CPA. This has been confirmed during on-site visit and interview.

*5. Combined heat and power (co-generation) systems are not eligible under this category.*

Not applicable. The proposed PoA does not include combined heat and power systems.

*6. In the case of project activities that involve the addition of renewable energy generation units at an existing renewable power generation facility, the added capacity of the units added by the project should be lower than 15 MW and should be physically distinct from the existing units.*

All CPAs under the proposed PoA are Greenfield projects and do not involve the addition of renewable energy generation units at an existing renewable energy generation facility. This has been confirmed during on-site visit and interview.

*7. In the case of retrofit or replacement, to qualify as a small-scale project, the total output of the retrofitted or replacement unit shall not exceed the limit of 15 MW.*

All CPAs under the proposed PoA are Greenfield projects and do not involve retrofit or replacement in an existing facility for renewable energy generation. This has been confirmed during on-site visit and interview.

CEC confirms the applicability of the selected methodology AMS-I.D version 17.0 to the proposed PoA. The latest version of the PoA-DD adequately describes the different applicability conditions of the methodology and no deviation from the methodology has been necessary. During on-site visit and document review (including checking the PoA-DD, generic CPA-DD, CPA-001 DD and relevant documents, such as FSR and EIA of CPA-001, it is confirmed the proposed PoA complies the applicability of the selected methodology AMS-I.D version 17.0.

The proposed PoA is not expected to result in emissions other than those allowed by the methodology, and there are no greenhouse gas emissions occurring within the proposed CDM project activity boundary as a result of the implementation of the proposed CDM project activity which are expected to contribute more than 1% of the overall expected average annual emissions reductions, which are not addressed by the applied methodology.

Complying with Para.6 of the PoA Standard, there is no “cross effects” exist for the proposed project, as only one methodology is applied and one measure was involved in the proposed PoA.

### **3.6.2 Programme Boundary**

As per the methodology AMS-I.D version 17.0, for each SSC-CPA under the proposed PoA, the spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system that the SSC-CPA is connected to.

The physical delineation of the CPA under the PoA and the description of the emission sources and GHGs that are included in the CPA boundary are appropriate for the purpose of calculating project and baseline emissions for each CPA. In addition, all emission sources and GHGs related included and excluded from the project boundary are clearly identified and described in a complete manner in the latest version of the PoA-DD.





The validation team states that the identified boundary and the selected sources and gases are correctly justified in the PoA-DD, and they are in accordance with the methodology AMS-I.D version 17.0. There are no other emission sources that will be affected by the programme of activities and are not addressed by the applied methodology.

### 3.6.3 Baseline Identification

As per the PoA-DD, each CPA is the installation of new grid-connected renewable hydropower plant(s). According to the applied methodology AMS-I.D. Version 17.0 (clause 10 & 11), the baseline scenario is prescribed as:

The baseline scenario of all CPAs under the PoA is, that the electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid.

The baseline emissions are the product of electrical energy baseline  $EG_{BL,y}$  expressed in MWh of electricity produced by the renewable generating unit multiplied by the grid emission factor. The grid emission factor is calculated by applying the latest "Tool to calculate the emission factor for an electricity system" (v02.2.1).

The approved methodology that is selected by the proposed PoA prescribes the baseline scenarios and no further analysis is required, thus it is not necessary to identify credible alternatives to the project activity in order to determine the most realistic baseline scenario (VVM v01.2 para.105). Therefore, the baseline determination is considered as transparent and reasonable.

### 3.7 Additionality demonstration

The validation team assessed the additionality of the PoA with the following steps as below, and confirmed that the latest Demonstrating additionality according to "Guidelines for Demonstrating Additonality of Microscale Project Activities" (version 04.0)/35/, Guidelines on the demonstration of additionality of small-scale CDM project activities" (version 09.0) /36/ and "Tool for the demonstration and assessment of additionality" (version 06.0.0) /37/ have been applied.

#### 3.7.1 Additionality of the PoA and a typical CPA

The additionality analysis was chosen to be performed for SSC CPAs under the proposed PoA. Basic analysis method was also provided in PoA level. The approach used in the PoA-DD has been assessed initially through the document review followed by on-site discussions. Finally, the data, rationales, assumptions, justifications, and documentation provided have been verified using local knowledge as well as sectoral and financial expertise.

The proposed PoA is a voluntary action by ZCNI. Based on the submitted documents and substantiation it is evident that this voluntary coordinated action would not be implemented in the absence of the PoA.

It has been clearly demonstrated that there is no mandatory policy or regulation in the host country enforcing the implementation of hydropower plant. This was confirmed based on the on-site interviews and the host country experience of the audit team.



In addition, the PoA-DD establishes in Sections A.4.2.2 (eligibility criteria) and E.5 the conditions that ensure that CPAs meet the requirements pertaining to the demonstration of the additionality. Two approaches have been chosen to demonstrate CPA additionality:

*Approach 1: Demonstrating additionality according to the Guidelines for demonstrating additionality of microscale project activities (version 04.0).*

This approach is applicable only for individual project activities complying with the applicability conditions in the “Guidelines for demonstrating additionality of microscale project activities” /35/.

In case of Approach 1, the projects included in the CPA should meet relevant requirements in paragraph 2 (a) of “Guidelines for demonstrating additionality of microscale project activities”, including:

- The total installed capacity of the project activity is no more than 5MW;
- The geographic location of the project activity is in a special underdeveloped zone (SUZ) of the host country, where the definition and condition of SUZ is demonstrated in paragraph 2(a) of “Guidelines for demonstrating additionality of microscale project activities”.

If the project activity/ies in the CPA under the PoA can satisfy the above applicable criteria, it /they could be deemed as additional directly.

*Approach 2: Demonstrating additionality according to “Guidelines on the demonstration of additionality of small-scale project activities”(version 09.0).*

This approach is applicable to any individual project activities up to 15MW not eligible under the microscale additionality guidelines. Under this approach, additionality is demonstrated based on the Guidelines on the demonstration of additionality of small-scale project activities”(version 09.0) /36/ and “Tool for the demonstration and assessment of additionality” (version 06.0.0) /37/.

Under the proposed PoA, the demonstration of additionality under this approach shall be conducted through the demonstration of the investment barrier with IRR (Internal Rate of Return) as the financial indicator. In addition, the investment analysis shall be conducted in line with the provisions of the latest version of the “Guidelines on the assessment of the investment analysis” (version 05)/38/ and following the steps provided in the section E.5.1 of the PoA-DD.

Benchmark analysis is justified to be applied by the CPA under the proposed PoA which adopts the approach 2 to determine the additionality, and IRR is the most suitable financial/economic indicator for the proposed CPA. The applicable national benchmark or relevant EB guidance used for investment decision will be adopted for the investment analysis. Furthermore, choice of applying benchmark analysis in CPA level is confirmed to be credible by checking other CDM hydropower projects..

For the proposed PoA and CPAs, if CERs revenue is not considered, the IRR will be lower than the benchmark, then the CPAs will not be financial feasible. Considering CERs revenue, the financial situation will be improved. The Financial Analysis Spreadsheet template /40/ was checked to be correct. So the PoA and CPAs are not financially attractive without CDM



application

In summary, the validation team considers that the approach 1 and approach 2 of demonstrating additionality in CPA level under the PoA have been reasonably and transparently demonstrated. Therefore, it is judged the additionality was justified in accordance with the requirements derived from the latest PoA standard, thus, based on the assessment above, the PoA is assessed to be additional by the validation team.

CL08 was raised regarding version number of Attachment A to Appendix B “the Simplified Modalities and Procedures for Small-scale CDM Project Activities” is missing in POA-DD. As attachment A to Appendix B “the Simplified Modalities and Procedures for Small-scale CDM Project Activities” is replaced by Guidelines on the demonstration of additionality of small-scale CDM project activities”(Version 09.0), the additionality for each CPA will be demonstrated as per the latest guidelines. It is confirmed to be in accordance with the PoA standard. Hence CL08 is closed.

### 3.7.2 PoA Starting Date

The starting date of the proposed PoA is defined as 27/04/2012 (the date of PoA-DD GSP), as it is verified that no component of the programme will commerce prior to the starting date of PoA validation, hence *prior CDM consideration is not applicable to the PoA*. Thus the starting date is deemed appropriate, thus accepted by the validation team.

According to the definition of starting date of a CPA in glossary of CDM terms (version 06.0), it states the starting date of a CPA is the earliest date at which either the implementation or construction or real action of a programme activity begins. The starting date of the CPA cannot be prior to the commencement of validation of the PoA, i.e. the date on which the PoA-DD is first published for GSP. Via checking the real case CPA-001, it is confirmed this requirement is satisfied.

Therefore, it is justified all of CPAs being included to the PoA with valid starting date have automatically met the requirement of prior CDM consideration since the starting date of a CPA is not prior to the PoA-DD GSP. No further discussion is required.

CAR04 was raised requesting to describe prior CDM considering for a typical CPA and further demonstrate the CPAs additionality as per the latest guidelines. The prior CDM considering has been provided in the final PoA-DD, and the the CPAs additionality has been further demonstrated as per the latest guidelines. Hence CAR04 was closed.

CL06 was raised requesting to justify how the start date of the PoA and the start date of the crediting period of PoA determined. The CME justified the start date of the PoA is defined as 27/04/2012, which is the GSP date for the PoA DD; the start date of crediting period for the proposed PoA was chosen to be 01/10/2013, which is the estimated start date of the crediting period of the CPA-001. The justification is validated to be appropriate. Hence CL06 was closed.

### 3.8 Emission Reductions

The calculations of emission reductions have been checked by the validation team. The parameters and equations presented in the POA-DD and further documentation have been



compared with the information and requirements presented in applied methodology and respective tools.

According to the selected methodology AMS-I.D version 17.0, the emission reductions ( $ER_y$ ) by a CPA during the crediting period is the difference between the baseline emissions ( $BE_y$ ), project emissions ( $PE_y$ ) and emissions arising from leakage ( $LE_y$ ), which is expressed as follows:

$$ER_y = BE_y - PE_y - LE_y$$

Where:

$ER_y$  are the total emissions reductions during the year  $y$  in tons of  $CO_2$

$PE_y$  are the emissions from the project activity during the year  $y$  in tons of  $CO_2$

$BE_y$  are the baseline emissions for the project activity during the year  $y$  in tons of  $CO_2$ .

$LE_y$  are the emissions arising from leakage during the year  $y$  in tons of  $CO_2$

### **Baseline Emissions:**

Since there are only installation of a new grid-connected hydropower plants/units involved in each CPA, The baseline emissions are the product of electrical energy baseline  $EG_{BL,y}$ , expressed in MWh of electricity produced by the renewable generating unit multiplied by the grid emission factor.

$$BE_y = EG_{BL,y} * EF_{CO_2,grid,y}$$

Where:

$BE_y$  =Baseline Emissions in year  $y$  (t  $CO_2$ )

$EG_{BL,y}$  =Quantity of net electricity supplied to the grid as a result of the implementation of the CDM project activity in year  $y$  (MWh)

$EF_{CO_2,grid,y}$  = $CO_2$  emission factor of the grid in year  $y$  (t  $CO_2$ /MWh)

For newly built hydropower project.

$$EG_{BL,y} = EG_{facility,y}$$

Where:

$EG_{facility,y}$  =Quantity of net electricity supplied to the grid in year  $y$  (MWh)

$$EF_{CO_2,grid,y} = EF_{grid,CM,y}$$

$EF_{grid,CM,y}$  = $CO_2$  emission factor of the grid in year  $y$  (t  $CO_2$ /MWh) calculated using the “Tool to calculate the emission factor for an electricity system”( ver.02.2.1)

The  $EF_{grid,CM,y}$  is calculated and fixed ex-ante as per the latest approved version methodology AMS-I.D version17.0/41/, which refers to the Tool to calculate the emission factor for an



electricity system version 02.2.1/42/. The detailed  $EF_{grid,CM,y}$  calculation will be determined in specific CPAs based on the most recent information available.

*Step 1: Identify the relevant electricity systems.*

Using the boundary definition of the applicable methodology, the spatial extent of the project boundary includes all power plants physically connected to CSPG/CCPG in China which the CPA is connected to. This has been validated and it is in compliance with the latest delineation of electricity system given by Chinese DNA “2011 Baseline Emission Factors for Regional Power Grids in China” /34/. CSPG covers Guangdong, Yunnan, Guizhou, Hainan Province and Guangxi Zhuang Autonomous Region, and CCPG covers Henan, Hubei, Hunan, Jiangxi, Sichuan Province and Chongqing City.

*Step 2: Choose whether to include off grid power plants in the project electricity system (optional).*

The option I has been chosen and grid power plants are only included in the calculation.

*Step 3: Select a method to determine the operating margin (OM)*

For the calculation of the OM emission factor, the simple OM emission factor calculation method is selected because low cost/ must-run projects constitute less than 50% of the total grid generation and the ex-ante option is adopted by using 3-year generation-weighted average based on the most recent data.

It has been validated that the option of simple OM and the ex-ante option with a 3-year generation weighted average, based on the most recent data available at the time of submission of the CPA-DD to the DOE for validation, without requirement to monitor and recalculate the emission factor during the first crediting period of the CPA.

*Step 4: Calculate the operating margin emission factor according to the selected method.*

It has been validated that simple OM is calculated using option B, based on the total net electricity generation of all power plants serving the system, fuel types and total fuel consumption of the project electricity system. This has been verified to be in compliance with the methodology, the “Tool to calculate the emission factor for an electricity system” and latest China DNA delineation.

*Step 5: Calculate the build margin (BM) emission factor*

The sample group of power units used to calculate build margin is defined as the set of power capacity additions in the electricity system that comprise 20% of the system capacity, instead of the set of five power units that started to supply energy to the grid most recently.

Moreover, for the proposed project activity, in terms of vintage of data, for the first crediting period the BM emission factor will be calculated ex-ante, based on the most recent information available on plants already built at the time of the CPA-DD submission for validation.

*Step 6: Calculate the combined margin (CM) emission factor*

According to the “Tool to calculate the emission factor for an electricity system”, the default weights: OM = 0.5 for operating margin and BM = 0.5 for build margin in the first crediting period for hydropower projects are adopted. Therefore the combined baseline emission factor



is determined ex-ante and will remain fixed during the first crediting period of the CPA.

In summary, the baseline methodology AMS-I.D version 17.0 and the tools have been applied correctly to calculate baseline emissions.

### **Project Emissions:**

According to AMS-I.D version 17.0, “for the following categories of project activities, project emissions have to be considered following the procedure described in the most recent version of ACM0002. As per ACM0002 version 13.0.0, for hydro power project activities that result in new reservoirs and hydro power project activities that result in the increase of existing reservoirs, project proponents shall account for CH<sub>4</sub> and CO<sub>2</sub> emissions from the reservoir if the power density of the project activity is greater than 4W/m<sup>2</sup> and less or equal to 10 W/m<sup>2</sup>. In these cases, PE<sub>e</sub> will be calculated as:

$$PE_y = \frac{EF_{Res} \cdot TEG_y}{1000}$$

Where:

$PE_y$  = Project emissions from water reservoirs in year y (tCO<sub>2</sub>e/yr)

$EF_{Res}$  = Default emission factor for emissions from reservoirs of hydro power plants in year y (kg CO<sub>2</sub>e/MWh)

$TEG_y$  = Total electricity produced by the project activity, including the electricity supplied to the grid and the electricity supplied to internal loads, in year y (MWh)

If the power density of the project activity (PD) is greater than 10 W/m<sup>2</sup>,

$$PE_y = 0$$

The power density of the project activity (PD) is calculated as follows:

$$PD = \frac{Cap_{PJ} - Cap_{BL}}{A_{PJ} - A_{BL}}$$

Where:

$PD$  = Power density of the project activity (W/m<sup>2</sup>)

$Cap_{PJ}$  = Installed capacity of the hydro power plant after the implementation of the project activity (W)

$Cap_{BL}$  = Installed capacity of the hydro power plant before the implementation of the project activity (W). For new hydro power plants, this value is zero.

$A_{PJ}$  = Area of the reservoir measured in the surface of the water, after the implementation of the project activity, when the reservoir is full (m<sup>2</sup>)

$A_{BL}$  = Area of the reservoir measured in the surface of the water, before the implementation of the project activity, when the reservoir is full (m<sup>2</sup>). For new reservoirs, this value is zero

CEC confirms that the calculation of the Project Emissions included in the latest version of the



PoA-DD is correct according to the applied methodology and all the formulae have been correctly described and used.

**Leakage:**

No leakage has been considered for emission reduction calculations as the equipment bought will be new. This is a criterion for eligibility of the CPAs, so it can be assured that no leakage will be produced due to the PoA according to AMS-I.D version 17.0.

**Emission Reductions:**

According to the baseline methodology AMS-I.D version 17.0, the Emissions Reductions have been calculated as follows:

$$ER_y = BE_y - PE_y - LE_y$$

In summary, the baseline methodology AMS-I.D version 17.0 and the tools have been applied correctly to calculate project emissions, baseline emissions, leakages and emission reductions.

CL09 was raised: Please clarify whether the ex-ante calculation of emission factor will be taken place at PoA level or CPA level. PP explained the ex-ante calculated emission factor is chosen to taken place at CPA level, and the detailed  $EF_{grid,CM,y}$  calculation will be determined in specific CPAs based on the most recent information available at the time of CPA-DD submission to the DOE for validation. This is in accordance with the CDM requirement. Hence CL09 is closed.

CEC confirms that all assumptions and data used by the PP are listed in the final PoA-DD, including their references and sources. Furthermore, all documentation used by project participants as the basis for assumptions and source of data is correctly quoted and interpreted in the PoA-DD and all values used in the PoA-DD are considered reasonable in the context of the proposed CDM project activity that result in a conservative estimate of emission reductions.

Complying with Para.92 and 93 of VVM ver.01.2, by validating the assumptions, calculations and rationales used, as described in the PoA-DD, and cross checking with official approvals, the validation team is able to confirm that:

- (a) All assumptions and data used by the project participants are listed in the PoA-DD, including their references and sources.
- (b) All documentation used by project participants as the basis for assumptions and source of data is correctly quoted and interpreted in the PoA-DD.
- (c) All values used in the PoA-DD are considered reasonable in the context of the proposed CDM project activity.
- (d) The baseline methodology and corresponding tool(s) have been applied correctly to calculated project emissions, baseline emissions, leakage and emission reductions.
- (e) All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PoA-DD.





### 3.9 Monitoring plan

#### 3.9.1 Compliance of the monitoring plan with the approved methodology

As stated above, the PoA and CPAs use the approved methodology AMS-I.D version 17.0 for grid connected renewable electricity generation. Applicability of this methodology is justified in the final PoA-DD as it involves grid connected renewable power generation using hydro energy.

The combined margin emission factor is determined ex-ante based on the most recent information available at the time of CPA-DD submission to the DOE for validation. Accordingly, the monitoring plan includes net electricity generated by the project as relevant parameter to be monitored. The final PoA-DD clearly identifies the parameters to monitor in compliance with the applicable methodology:

**EG<sub>facility,y</sub>**: Quantity of net electricity supplied to the grid in year y. Measured by electricity meter(s). Continuous monitoring and monthly recording, and the measurement results will be cross-checked with records for sold/purchased electricity.

**CAP<sub>PJ</sub>**: Installed capacity of the hydro power plant after the implementation of the project, verified on site yearly.

**A<sub>PJ</sub>**: Area of the reservoir measured in the surface of the water, after the implementation of the project activity, when the reservoir is full. Yearly measured from topographical surveys, maps, satellite pictures, etc.

**TEG<sub>y</sub>**: Total electricity produced by the project activity, including the electricity supplied to the grid and the electricity supplied to internal loads, in year y. Continuous measurement and monthly recording. This parameter is only applicable to hydro power project activities with a power density of the project activity (PD) greater than 4 W/m<sup>2</sup> and less than or equal to 10 W/m<sup>2</sup>.

Roles and responsibilities, training actions, archiving, measuring and calculation procedures, equipment details, and calibration requirements are clearly mentioned in the PoA-DD. Therefore, in the opinion of CEC the PP will be able to implement the monitoring plan.

CAR05 was raised: parameter TEG<sub>y</sub> applicable to hydro power project activities with a power density of the project activity (PD) greater than 4 W/m<sup>2</sup> and less than or equal to 10 W/m<sup>2</sup> is missing in E.7.1, installed capacity of the hydro power plant after the implementation CAP<sub>PJ</sub> and Area of the reservoir A<sub>PJ</sub> are not included in "Data Collection and Management" in the monitoring plan. Training and emergency handling are not included in the QA/QC procedures. PP has revised the PoA-DD, parameter TEG<sub>y</sub> is included in E.7.1, both the parameters have been indicated in "Data Collection and Management" in the monitoring plan. Training and emergency handling have also been indicated in the final PoA-DD. Hence CAR05 is closed.

CL05 was raised: Please clarify whether there is sampling process involved in the monitoring plan. During document review and on-site interview, it is confirmed by the validation team there is no sampling process involved in the proposed PoA and CPAs. Hence CL05 is closed.

Therefore, in opinion of CEC, all necessary parameters required by the selected approved methodology are contained in the monitoring plan. They are clearly described and the means





of monitoring, described in the plan, comply with the requirements of the methodology. The monitoring of the parameters involved in the emission reductions has been established in a transparent and clear way. Thus, the monitoring plan is in compliance with the requirements of the applied methodology.

### **3.9.2 Implementation of the Monitoring Plan**

After the review of evidence provided by the CME, the interview and communications with CME, CEC confirms that monitoring arrangements described in the monitoring plan are feasible within the project design and that the means considered for the implementation, including data management, quality and assurance control procedures, are sufficient to ensure that the emission achieved resulting from the proposed PoA can be reported ex post and verified.

Finally, CEC considers that the project participant is able to implement the monitoring plan stated in the PoA-DD taking into account all the reasons explained above.

### **3.10. Environmental Impacts**

Environmental Analysis is chosen to be done at CPA level as individual nature of each hydropower project (geography, capacity, with or without dam etc.) is different. And each and every CPA will have the relevant permits and licenses ensuring the compliance with the relevant applicable regulation.

This is validated to be in compliance with the Environmental Impact Assessment Law issued by Ministry of Environmental Protection on 28/10/2002 /30/.

CL07 was raised requesting to clarify the environmental impact analysis section in the generic CPA-DD. The relevant information has been clarified in the final generic CPA-DD, it is validated to be credible. Hence CL07 was closed.

### **3.11. Local Stakeholder Consultation**

Local stakeholder consultation is chosen to be done at CPA level, taking into consideration the differences of circumstances and opinions of each and every community in which each CPA is located.

The consultation meeting or a questionnaire survey will be carried out in each project involved in a CPA and the comments by local stakeholders will be recorded. This method is more suitable to receive feedback of local stakeholders and react.

By considering the local stakeholders' comments for each specific CPA, the proposed PoA ensures that the impact of the specific CPA in the neighbor communities will be considered.

### **3.12. Comments by Parties, Stakeholders and NGOs**

The POA-DD was made publicly available from 27/04/2012 in accordance with paragraph 40(b) of the modalities and procedures for the CDM, within 30 days, comments from Parties, stakeholders and UNFCCC accredited non-governmental organizations and make them



publicly available.

<http://cdm.unfccc.int/ProgrammeOfActivities/Validation/DB/DASBAJQEXMUBIAZ8EW97E84X6UKNAO/view.html/43/>

During the public period from 27/04/2012 to 26/05/2012, no comments were received.



#### 4. Validation Opinion

China Environmental United Certification Center Co., Ltd. (CEC) has performed a validation of SSC proposed programme “Zhongying Changjiang Small-scale Hydropower Programme of Activities” project based on UNFCCC criteria for the Clean Development Mechanism and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The review of the programme design documentation and additional documents related to baseline and monitoring methodology, and the subsequent background investigation, follow-up interviews and review of comments by parties and stakeholders have provided CEC with sufficient evidence to validate the fulfilment of the stated criteria.

The conclusions can be summarized in detail as follows:

- The PoA is in line with all relevant host country criteria of China, with the Letter of Approval from the China DNA and with all relevant UNFCCC requirements for Programme of Activities.
- The operational and management plan established by the coordinating entity is suitable for the PoA validated.
- The baseline has been appropriately identified as per the applied methodology.
- Eligibility criteria in the PoA-DD are sufficient to ensure that all CPAs would comply with the CDM requirements applicable to the proposed PoA. These requirements include the means of demonstrating the additionality of the CPA and the applicability of the applied methodology.
- The PoA's additionality is sufficiently justified in the PoA-DD.
- The monitoring plan and the Operational and Management Plan are transparent and adequate.
- The calculation of validated CPA emission reductions has been carried out in a transparent and conservative manner, following the approved methodology AMS-I.D version 17.0.
- Information on the local stakeholders' consultation by the project participants prior to submitting the PoA for validation is sufficiently provided in the PoA-DD.
- All information has been also consistently applied in the PoA-DD form and generic CPA-DD form.

It is CEC's opinion that “Zhongying Changjiang Small-scale Hydropower Programme of Activities” project, as described in the POA-DD version 02 dated 30/09/2012, and meets the relevant UNFCCC requirements for the CDM Programme of Activities and the relevant host country criteria. It correctly applies the baseline and monitoring methodology AMS-I.D version 17.0, and also meets the stated validation criteria. CEC thus requests the registration of the



project as a CDM programme of activities.

Beijing, 13/11/2012

A handwritten signature in black ink, appearing to be '刘清志' (Liu Qingzhi), is positioned below the date.

LIU Qingzhi

Validation Team Leader

Beijing, 16/11/2012

A handwritten signature in black ink, appearing to be '唐定定' (Tang Dingding), is positioned below the date.

TANG Dingding

Chairman of Board



## 5. References

- /1/ PoA-DD, version 01 dated 18/04/2012
- /2/ PoA-DD, version 02 dated 30/09/2012
- /3/ CPA-001 DD, version 01 dated 18/04/2012
- /4/ CPA-001 DD, version 02 dated 30/09/2012
- /5/ LoA approved by China DNA, document No. 4697 dated 19/10/2012
- /6/ MOC of the proposed PoA, dated 01/11/2012
- /7/ Business license of Zhongying Changjiang International New Energy Investment Co., Ltd, valid from 06/12/2005
- /8/ Business license of Cangyuan Kaidi Hydropower Development Investment Co., Ltd, valid from 23/06/2010
- /9/ PoA and CME qualification approval issued by Yunnan Province Development and Reform Committee on 22/05/2012
- /10/ FSR of CPA-001, finished by China Water Resource Pearl River Planning Surveying & Designing Co.,Ltd. in Feb. 2011
- /11/ Certificate of China Water Resource Pearl River Planning Surveying & Designing Co.,Ltd. with Level A
- /12/ CPA-001 FSR approval issued by Lincang City Development and Reform Committee on 28/11/2011, document no.[2011]1010
- /13/ EIA of CPA-001, finished by Yunnan Luhong Environmental Technology Co.,Ltd in Sep. 2011
- /14/ CPA-001 EIA approval issued by Yunnan Province EPB on 24/11/2011, document no.[2011]299
- /15/ Certificate of Yunnan Luhong Environmental Technology Co.,Ltd with Level B
- /16/ Grid-in connection approval of CPA-001, issued by Lincang branch of Yunnan Power Grid on 21/04/2011, document no.[2011]42
- /17/ Geographical Coordinates statement of the proposed PoA and CPA-001, dated 24/09/2012
- /18/ Agreement for CME designation and relinquishing CER right, signed between CME and Cangyuan Kaidi Hydropower Development Investment Co., Ltd
- /19/ Construction contract signed between Cangyuan Kaidi Hydropower Development Investment Co., Ltd and Yunnan Small Hydropower Construction Engineering Company on 15/05/2012
- /20/ Board meeting minutes for CDM decision of CPA-001 on 18/01/2012
- /21/ Questionnaires for local stakeholder consultation in Dec. 2011
- /22/ Registration table for local stakeholder consultation on 20/12/2011
- /23/ CDM Quality Management Manual, finished by CME, version 1.0 valid from 24/09/2012
- /24/ Validation and Verification Manual (VVM) version 01.2, EB55, Annex 1



- /25/ Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities (PoA Standard) version 01.0, EB65, Annex 3.
- /26/ Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities version 03.0
- /27/ Announcement of newly approved projects, China DNA, <http://cdm.ccchina.gov.cn/>
- /28/ Small-scale CDM programme activity design document form(CDM SSC-CPA-DD) version 01.0, EB33, Annex 44
- /29/ Small-scale CDM programme of activities design document form (CDM SSC-PoA-DD) version 01.0, EB33, Annex 43.
- /30/ Environmental Impact Assessment Law issued by Ministry of Environmental Protection on 28/10/2002
- /31/ Industrial structure adjustment guidance catalogue, published by NDRC of China in Mar. 2011
- /32/ Procedures for registration of a programme of activities as a single CDM project activity and issuance of certified emission reductions for a programme of activities, version 04.1 EB 55, Annex 38
- /33/ Guidelines on assessment of de-bundling for SSC project activities version 03, EB 54 Annex 13
- /34/ 2011 Baseline Emission Factors for Regional Power Grids in China", issued by China DNA, dated on 20/10/2011
- /35/ Guidelines for demonstrating additionality of microscale project activities, version 04.0
- /36/ Guidelines on the demonstration of additionality of small-scale CDM project activities "(version 09.0), EB68, Annex 27.
- /37/ Tool for the demonstration and assessment of additionality (version 06.0.0), EB65, Annex 21.
- /38/ Guidelines on the assessment of the investment analysis version 05.0, EB62, Annex 5.
- /39/ National standard SL16-2010 The Economic Evaluation Code for Small Hydropower Projects
- /40/ Financial Analysis Spreadsheet template of the proposed PoA
- /41/ Approved methodology AMS-I.D version 17.0
- /42/ Tool to calculate the emission factor for an electricity system v02.2.1
- /43/ POA-DD generic CPA-DD and CPA-001 DD were made publicly available from 27/04/2012,  
<http://cdm.unfccc.int/ProgrammeOfActivities/Validation/DB/DASBAJQEXMUBIAZ8EW97E84X6UKNAO/view.html>
- /44/ Glossary of CDM Terms, version 06.0, EB66, Annex 63.
- /45/ IRR calculation spreadsheet of CPA-001 under the PoA
- /46/ Confirmation letter on no public funding from Annex 1 Parties involved in CPA-001, provided by CME and the CPA-001 implementer, dated 23/10/2012.
- /47/ <http://cdm.unfccc.int>



- /48/ <http://cdm.ccchina.gov.cn/web/index.asp>
- /49/ China Electric Power Yearbook from 2006 to 2010 (published annually)
- /50/ China Energy Statistical Yearbook from 2008 to 2010(published annually)
- /51/ IPCC 2006 default values
- /52/ Guideline for the reporting and validation of plant load factors (EB48 annex11)
- /53/ China NDRC website: [www.sdpc.gov.cn](http://www.sdpc.gov.cn)
- /54/ IRR template of the proposed PoA
- /55/ ER spreadsheet of CPA-001 under the PoA
- /56/ Geographic coordinates of Yunnan Province  
[http://www.yn.gov.cn/yn\\_yngk/yn\\_sqgm/201111/t20111107\\_1894.html](http://www.yn.gov.cn/yn_yngk/yn_sqgm/201111/t20111107_1894.html)
- /57/ Geographic coordinates of Henan Province, <http://www.henan.gov.cn/hngk/zrdl/>
- /58/ Geographic coordinates of Sichuan Province, <http://baike.baidu.com/view/7627.htm>
- /59/ Geographic coordinates of Hubei Province,  
[http://www.hubei.gov.cn/hbgk/zrdl/201204/t20120406\\_344448.shtml](http://www.hubei.gov.cn/hbgk/zrdl/201204/t20120406_344448.shtml)

## 6. Personnel interviewed

Name	Organization
Zhang Heng	Cangyuan Kaidi Hydropower Development Investment Co., Ltd
Jiang Zhi	Mengsheng Town Power Supply
Tian Xuewen	Cangyuan County Environment Protection Bureau
Shi Lini	Cangyuan County Development and Reform Committee
Zhang Langming	Villager
Xu Yong	Innovative Carbon Investment Co., Ltd.
Li Zhilin	Innovative Carbon Investment Co., Ltd.
Wang Zhiliang	Zhongying Changjiang International New Energy Investment New Energy Investment Co., Ltd



## Appendix A Validation Protocol

**Table 1 PoA-DD Requirement Checklist**

Checklist Question	MoV	Comments	Draft Concl	Final Concl
MoV=Means of Validation, DR=Document Review, I=Interview, O=Observation				
<b>A. General Description of SSC Programme of activities</b>				
<b>A.1. Title of the Programme of activities</b>				
A.1.1 Does the project title clearly identify the unique CDM activity?	DR	Yes.The project title is “Zhongying Changjiang Small-scale Hydropower Programme of Activities”, which identifies the unique CDM programme of activity clearly. The project title is consistent with that indicated in Host Party LoA and MoC. The title of the project and version number of the document and data is complete and correct.	OK	OK
A.1.2 Are there any indication concerning the history of the versions?	DR	Yes. The version 01 was compiled for the GSP in UNFCCC website.  The final revised PoA-DD version 02 is dated 30/09/2012.	OK	OK
A.1.3 Does the PoA-DD apply the latest UNFCCC template?	DR	Yes. The PoA-DD and CPA-DD of the proposed PoA and CPA apply the latest UNFCCC templates (Programme design document form for small-Scale CDM programme of activities, v01 and Small-scale CDM programme activity design document form (CDM-SSC-CPA-DD) v01) completely and accurately.	OK	OK
<b>A.2. Description of the small-scale programme of activities (PoA)</b>				





<p>A.2.1 Is the description delivering a transparent overview of the general operating and implementing framework of the PoA?</p>	<p>DR O</p>	<p>Yes. The small scale proposed PoA is to to implement a small-scale hydropower PoA in Hubei, Yunnan, Henan and Sichuan province of China. The PoA aims at newly built small-scale hydropower projects throughout Hubei, Yunnan, Henan and Sichuan province that supply electricity to grid, then replace the fossil fuel-fired power generation in the regional grids CCPG/CSPG and achieve the GHG emission reductions. Each small-scale CDM Program Activity (referred to later on as CPA) under this PoA will comprise one or more such hydropower plants and have a combined installed capacity of no more than 15 MW, namely the threshold for small-scale CDM projects.</p> <p>Zhongying Changjiang International New Energy Investment Co., Ltd (called ZCNI) is the coordinating/managing entity (CME) of the proposed SSC PoA, it will support the SSC CPA implementer(s) in implementing the proposed PoA.</p> <p>As it is verified that there are no mandatory requirements in Hubei, Yunnan, Henan and Sichuan province and in China requiring the use of hydropower, and all the participation involved in the proposed PoA are validated to be voluntarily take part in the programme, it is confirmed the proposed PoA is a voluntary action by the CME.</p>	<p>OK</p>	<p>OK</p>
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A.2.2 What proofs are available demonstrating that the project description is in compliance with the actual situation or planning?	DR	<p>The following documents are major evidences available and checked against the information in POA-DD by the validation team:</p> <ul style="list-style-type: none"> <li>• Business licence of CME and CPA-001 implementer</li> <li>• CPA-001 approval by Lincang City Development and Reform Committee</li> <li>• PoA and CME qualification approval issued by Yunnan Province Development and Reform Committee on 22/05/2012</li> <li>• EIA and its approval of CPA-001</li> </ul>	OK	OK
A.2.3 Is the policy/measure or stated goal of the PoA clearly and unambiguously presented?	DR	<p>Yes, it has been clearly presented that the proposed PoA is to newly built small-scale hydropower projects throughout Hunan, Yunnan, Henan and Sichuan province that supply electricity to grids. Each small-scale CDM Program Activity (referred to later on as CPA) under this PoA will comprise one or more such hydropower plants and have a combined installed capacity of no more than 15 MW, namely the threshold for small-scale CDM projects. It helps to solve the electricity shortage problem in these areas, strengthen the rural infrastructure construction, improve the living condition of the local residence, increase employment opportunities, increase incomes, protect ecology, and promote new rural community construction for the country. Also it can reduce corresponding CO<sub>2</sub> emissions during power generation.</p>	OK	OK



A.2.4 Is there a valid confirmation that the proposed PoA is a voluntary action by the coordinating/managing entity?	DR	Yes, it has been indicated that there are no mandatory laws or regulations in place in China that require hydropower plants to seek CDM services, hence the proposed PoA is a voluntary action by Zhongying Changjiang International New Energy Investment Co., Ltd (called ZCNI). This has been verified against the Environmental Impact Assessment Law issued by MEP of China.	OK	OK
A.2.5 Is the information provided by the POA-DD consistent with the information provided by proofs?	DR	Yes. The information indicated in the proposed PoA-DD is consistent with that in the evidences.	OK	OK
A.2.6 Is the project a large scale project, a small scale project with average annual emission reductions above 15,000 t or a bundled small scale project? Has on-site visit been carried out?	DR I O	The proposed PoA is a small scale programme of activities, because each CPA under this PoA will comprise one or more such hydropower plants and have a combined installed capacity of no more than 15 MW.  During 10/06/2012-12/06/2012, the validation team performed an on-site visit and interviews with project participants, local officials and stakeholders to confirm the provided information.	OK	OK
A.2.7 Does the programme of activities involve alternation of existing installation? If so, have the differences between pre-project and post-project activity been clearly described in the POA-DD?	DR I O	Through document review and on-site visit, it is confirmed that the proposed PoA does not involve alteration of existing installations.	OK	OK



A.2.8 Does the description of the technology to be applied provide sufficient and transparent input to evaluate its impact on the greenhouse gas balance?	DR	Yes, the proposed PoA will promote the development of renewable energy and facilitate the abatement of greenhouse gas emissions through the replacement of fossil fuel-fired power generation in the grid as well, the description of technology to be applied provides sufficient and transparent input to evaluate its impact on the greenhouse gas balance.	OK	OK
<b>A.3 Coordinating/managing entity and participants of SSC-POA</b>				
A.3.1 Is the CME clearly indicated in the PoA-DD?	DR	Yes. Zhongying Changjiang International New Energy Investment Co., Ltd (called ZCNI) is clearly indicated as the CME of the proposed SSC PoA in the PoA-DD.  This has been confirmed via reviewing CME qualification approval by Yunnan Development and Reform Committee.	OK	OK
A.3.2 Is the information of CME consistent in the whole PoA-DD?	DR	The information of the CME is consistent in the whole PoA-DD, including that in the annex 1.	OK	OK
A.3.3 Is the form required for the indication of project participants correctly applied?	DR	Yes. The form is correctly applied.	OK	OK
A.3.4 Does it clearly specify all the Parties and project participants?	DR	Yes, ZCNI is the participating private entity, and China is the Host Party. China is directly involved as a PP.	OK	OK



A.3.5	Is the participation of the listed entities or Parties confirmed by each one of them?	DR	ZCNI as the CME of the proposed PoA, it is also a project participant.  <b><u>CAR01</u></b>  LoA from DNA of China has not been provided. If the project is a unilateral project, then the Host Party shall be recognized as a project participant in section A.3.	CAR01	OK
A.3.6	Is all information on participants /Parties provided in consistency with details provided by further chapters of the PDD (in particular annex 1)?	DR	Please refer to CAR01.	CAR01	OK
A.3.7	Is the Coordinating Agency a project participant authorized by all participating host countries DNAs involved and identified in the modalities of communication as the entity which communicates with the Board?	DR	Please refer to CAR01.	CAR01	OK
A.3.8	Does the written approval from the host country confirm that the project contributes to the sustainable development in the country?	DR	Please refer to CAR01.	CAR01	OK
<b>A.4 Technical description of the small-scale programme of activities</b>					
<b>A.4.1 Location of the programme of activities</b>					



A.4.1 Does the information provided on the location of the programme allow for a clear definition identification of the boundary for the PoA in terms of a geographical area, within which all CPAs included in this PoA will be implemented?	DR	<p>Yes.The Programme of Activities will be implemented within the geographical limits of Yunnan, Henan, Sichuan and Hubei Province of China.</p> <p><b><u>CL01</u></b></p> <p>Please provide evidence for the geographic coordinates for the PoA boundary.</p>	CL01	OK
A.4.2 Do the requirement that all applicable national and/or sectoral policies and regulations of the host country within the boundaries chosen taken into account?	DR	Yes. The boundaries of the Programme have been well established, and all sectoral policies and regulations of the host country have been taken into account	OK	OK
<b>A.4.2 Description of a typical small-scale CDM programme activity (CPA)</b>				
<b>A.4.2.1 Technology or measures to be employed by the SSC-CPA</b>				



A.4.2.1.1 Is it unambiguously stated which technology or measures are to be employed by the SSC-CPA?	DR O	<p>A typical CPA under this PoA comprises one or more small hydropower plants with an installed capacity below or equal to 15 MW, which will supply electricity to the regional grid. The hydropower plants are newly constructed and generate electricity from hydropower resource.</p> <p>Although the technical characteristics of each CPA may differ, the general structures include: headpond or reservoir, dam or weir, access road, penstock, powerhouse, hydro-turbine and generator, substation, transmission line, tailrace etc.</p> <p><b><u>CL02</u></b></p> <p>Please clarify whether a typical CPA involves a capacity addition or a retrofit of (an) existing plant(s) or a replacement of (an) existing plant(s) as per the applied methodology; Please further clarify the technology employed by a typical CPA.</p>	CL02	OK
A.4.2.1.2 Does the technical design of the programme of activities reflect current good practices?	DR	Yes. Via document review and on-site visit, it is confirmed the proposed PoA and CPAs will promote the development of renewable hydropower and facilitate the abatement of greenhouse gas emissions through the replacement of fossil fuel-fired power generation in the grid.	OK	OK
A.4.2.1.3 Does the description of the technology to be applied provide sufficient and transparent input/information to evaluate its impact on the greenhouse gas balance?	DR	<p>Yes. The description of the technology is complete, relative document evidences have been provided and checked.</p> <p>The proposed PoA will promote the development of renewable hydropower and facilitate the abatement of greenhouse gas emissions through the replacement of fossil fuel-fired power generation in the grid as well, the description of technology to be applied provides sufficient and transparent input to evaluate its impact on the greenhouse gas balance.</p>	OK	OK



A.4.2.1.4 Is the technology implemented by the programme of activities environmentally safe?	DR	Yes, as the proposed PoA will promote the development of renewable hydropower, the technology implemented by the programme of activities is environmentally safe.	OK	OK
A.4.2.1.5 Does the implementation of the programme of activities require any technology transfer from Annex I countries to the host country (ies)?	DR	No. No technology transfer is involved.	OK	OK
A.4.2.1.6 Does the project require extensive initial training and maintenance efforts in order to be carried out as scheduled during the project period?	DR	The proposed PoA does not require extensive initial training and maintenance effort.	OK	OK
A.4.2.1.7 Is the information provided by the generic CPA consistent with the information in PoA?	DR	Yes. It is consistent.	OK	OK
A.4.2.1.8 Do the CPAs involve alternation of existing installation? If so, have the differences between pre-project and post-project activity been clearly described in the POA-DD?	DR	Via documents review and on-site interview, it is confirmed that CPAs only involves newly built hydropower plant, no alternative of existing installation involved in CPAs.	OK	OK
<b>A.4.2.2 Eligibility criteria for inclusion of a SSC-CPA in the PoA</b>				





<p>A.4.2.2.1 Are there clear and unambiguous eligibility criteria for the inclusion of a SSC-CPA into the PoA?</p>	<p>DR I</p>	<p><b><u>CAR02</u></b></p> <p>1. Please clarify whether the CME have the competencies to check the features of potential CPAs and ensure that each CPA meets all requirements and eligibility criteria before inclusion in the registered PoA;</p> <p>2. Please further identify eligibility criteria for including CPAs in the PoA-DD as per EB65 annex 3 and AMS-I.D version 17.0.</p> <p>In the final PoA-DD, the eligibility criteria has been stated clearly with regards to the following:</p> <p>1.Geographical boundary check.</p> <p>2.Avoid double counting check.</p> <p>a) Each CPA under the PoA and each hydropower plant involved in one CPA shall have a unique programme loge, such as CPA-001 for CPA level, HP-00101 for project level in each CPA.</p> <p>b) Contract with the CME to confirm that: (1) They are aware of and have agreed that their activity is being subscribed to the PoA. (2) They have neither already been registered as a CDM project, nor as a CPA of another PoA</p> <p>3.Installed capacity check and must not involve capacity addition, retrofitting or modifying of an existing facility for renewable energy generation.</p> <p>4.Starting date check: any CPA is not, or will not be, prior to the commencement of validation of the programme of activities.</p>	<p>CAR02</p>	<p>OK</p>
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<p>A.4.2.2.1 Are there clear and unambiguous eligibility criteria for the inclusion of a SSC-CPA into the PoA?</p>	<p>DR</p>	<p>5. Comply with applicability and other requirements of the applied methodology AMS-I.D (Version 17.0).</p> <p>5.1 The project activity under each CPA should be (a) new hydropower plant(s) which use the hydropower and supply electricity to the regional grid.</p> <p>5.2 No capacity addition, retrofit or replacement of (an) existing plant(s) involved in the proposed PoA.</p> <p>5.3 No co-fired and co-generation units involved in the CPA. Only renewable hydropower units can be eligible of inclusion of the PoA.</p> <p>5.4 Hydropower project(s) with reservoirs involved in each CPA should satisfy one of the following conditions: a) the project activity involved in each CPA implemented in an existing reservoir with no change of reservoir volume, b) with increase of reservoir volume but power density is greater than <math>4W/m^2</math>, or c) result in a new reservoir with power density greater than <math>4W/m^2</math>.</p> <p>6. Additionality check, one of the following methods should be chosen for each CPA:</p> <p>a) If the installed capacity of a CPA is below or equal to 5 MW and located in an underdeveloped zone of the country as identified by the Chinese Government, it will be considered as additional and can be included into the PoA according to "Guidelines for demonstrating additionality of microscale project activities" version 04.0.</p> <p>b) For CPAs <math>&gt;5</math> MW and <math>\leq 15</math> MW or <math>&lt;5</math> MW but not in underdeveloped zone identified by government, additionality demonstration is based on the requirement of Guidelines on the demonstration of additionality of small scale project activities" version 09.0.</p>	<p>CAR02</p>	<p>OK</p>
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		<p>7. In the proposed PoA, both the local stakeholder consultations and environmental impact analysis would be done at CPA level.</p> <p>8. No public from Annex 1 Parties has been involved in each CPA under the proposed PoA</p> <p>9. Hydropower project(s) involved in each CPA should be newly constructed and the total capacity for each CPA should be no more than 15MW during every year of crediting period of the CPA.</p> <p>10. Non-debundled component check</p> <p>11. Confirmation on the crediting period of the SSC-CPA which shall not exceed the length of the PoA (28 years) regardless of the time of inclusion of CPA in the PoA</p> <p>12. The SSC-CPA shall be in line with laws and regulations available at the time of inclusion of the CPA into the PoA</p>	OK	OK
A.4.2.2.2 Are the eligibility criteria for CPAs sufficient to ensure that all CPAs would comply with the CDM requirements applicable to the PoA?	DR	Please refer to the <u>CAR02</u> above.	CAR02	OK
<b>A.4.3 Description of how the anthropogenic emissions of GHG by sources are reduced by a SSC-CPA below those that would have occurred in the absence of the registered PoA (assessment and demonstration of additionality)</b>				



<p>A.4.3.1 Is the PoA additionality assessed according to current versions of :</p> <ul style="list-style-type: none"> <li>• Applicable methodology;</li> <li>• Tool used to demonstrate the Additionality;</li> <li>• Procedures for Registration of a Programme of Activities as a Single CDM Project Activity and issuance of Certified Emission Reductions for a Programme of Activities</li> </ul>	<p>DR</p>	<p>It is validated there are no mandatory laws or regulations in China stipulating to apply CDM to develop hydropower facilities. Therefore, the proposed PoA is a voluntary coordinated action of the CME. The CME have planned to implement the PoA all over Henan, Hubei, Yunan and Sichuan Province. Due to investment barriers, technology barriers, lack of infrastructure construction and so on, the proposed PoA would not be implemented in the absence of the PoA.</p> <p>The additionality for each CPA can be demonstrated by any one of the following approaches:</p> <p><b>Approach 1:</b> Demonstrating additionality according to “Guidelines for demonstrating additonality of microscale project activities” (version 04.0).</p> <p>In case of Approach 1, the projects included in the CPA should meet relevant requirements in paragraph 2 (a) of “Guidelines for demonstrating additionality of microscale project activities”, including:</p> <ul style="list-style-type: none"> <li>• The total installed capacity of the project activity is no more than 5MW;</li> <li>• The geographic location of the project activity is in a special underdeveloped zone (SUZ) of the host country.</li> </ul> <p>OR</p> <p><b>Approach 2:</b> Demonstrating addtionality according to “Guidelines on the demonstration of additionality of small-scale project activities”(version 09.0).</p> <p>In case of Approach 2, the additionality for each CPA will be demonstrated by investment analysis. The IRR of every project included in the CPA should be lower than the selected benchmark, which is indicated in investment decision document (such as FSR).</p>	<p>OK</p>	<p>OK</p>
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A.4.3.2 Has it been demonstrated that the PoA is a voluntary coordinated action that would not be implemented in the absence of CDM?		Yes, the PoA is a voluntary coordinated action that would not be implemented in the absence of CDM.  <b><u>CL03</u></b>  Format of Section A.4.3 is not in accordance with the published POA-DD template.	CL03	OK
A.4.3.3 If the PoA is implementing a mandatory policy/regulation, has it been demonstrated whether the policy/regulation is not being enforced? If it is enforced, has it been demonstrated that the PoA will lead to a higher level of enforcement?	DR	Not applicable. The programme is not implementing a mandatory policy/regulation.	OK	OK
A.4.3.4 Are all assumptions stated in a transparent and conservative manner?	DR	Yes, they have been stated in a transparent and conservative manner.	OK	OK
A.4.3.5 Is sufficient evidence provided to support the relevance of the arguments made?	DR	The final PDD details the sources and evidences to back up the additionality of the PoA, and they have been provided to the validation team and deemed adequate.	OK	OK
<b>A.4.4 Operational, management and monitoring plan for the programme of activities (PoA)</b>				
<b>A.4.4.1 Operational and management plan</b>				



A.4.4.1.1 Does the PoA-DD clearly state the coordinating/managing entity?	DR	Yes. ZCNI is identified to be the coordinating/managing entity of the PoA. This has been confirmed by reviewing the CME qualification approval issued by Yunnan Development and Reform Committee.	OK	OK
A.4.4.1.2 Are the operational and management arrangements established by the coordinating/managing entity suitable for the PoA being validated?	DR	<p>According to para.17 of the PoA standard, the CME has established an operational and management system which is included in the CDM Quality Management Manul.</p> <p><b><u>CAR03</u></b></p> <p>1. Please state the respective responsibilities of CME and CPA implementer;</p> <p>2. Please further clarify the system/procedure to avoid double accounting.</p> <p><b><u>CL04</u></b></p> <p>Entity/individual responsible for the CPA shall be indicated in section A.3 in generic CPA-DD.</p>	<p>CAR03</p> <p>CL04</p>	OK



<p>A.4.4.1.3 Is record keeping system for each CPA under the PoA suitable?</p>	<p>DR</p>	<p>Yes, each CPA will maintain an appropriate records system with standardized formats, which includes the following information:</p> <ul style="list-style-type: none"> <li>• Number and address of the CPA and its installed capacity</li> <li>• The name and contact details of each participating CPA implementer</li> <li>• The geographical coordinates of each CPA (for example, GPS coordinates of dam and power house)</li> <li>• The record of technical specification of each hydropower plant in the CPA</li> <li>• Monitoring parameters of each CPA</li> </ul> <p>Based on CEC local and sectoral knowledge, it is judged the record keeping system is appropriate to the proposed PoA.</p>	<p>OK</p>	<p>OK</p>
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<p>A.4.4.1.4 Are methods to avoid double counting suitable?</p>	<p>DR</p>	<p>ZCNI seeks confirmation in SSC-CPA when conducting CPA eligibility check .The methods to avoid double counting are as following:</p> <p>Each SSC-CPA has unique geographical boundary as defined by the project area. To confirm that no CPA or CDM project activity developed in the proposed project area, the relevant information, about the projects using the same methodology AMS-I.D or the same measure/technology, on websites of UNFCCC and Chinese DNA will be checked before applying for CDM and implementation of the CPA in Yunnan, Henan, Sichuan and Hubei Province.</p> <p>Besides this, the proposed CPA implementer will sign a contract with the CME to confirm that: (a)They are aware of and have agreed that their activity is being subscribed to the PoA. (b)They have neither already been registered as a CDM project, nor as a CPA of another PoA.</p> <p>Based on CEC sectoral knowledge, it is judged the methods to avoid counting are appropriate.</p>	<p>OK</p>	<p>OK</p>
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A.4.4.1.5 Is there procedure to check for de-bundling?	DR	<p>CME maintained a criteria to check for de-bundling, it is in line with EB guidance "Guidance on assessment of de-bundling for SSC project activities" version 03: hydropower projects with a size greater than 1% of the small thresholds will perform the de-bundling check. The criteria to check for de-bundling is as following</p> <p>(1)The database described in the above record keeping system (including geological coordinates, addresses, project titles and implementers' name) will be used to perform the de-bundling check. and</p> <p>(2)Moreover, the project implementers will be made aware of the de-bundling rules and will confirm that the proposed CPA is not a de-bundled part of a bigger hydropower project.</p> <p>Therefore it is judged the criteria for non-debundling check are appropriate.</p>	OK	OK
A.4.4.1.6 Is there procedure for awareness of CPA implementers on PoA provisions?	DR	Before inclusion of a specific CPA, ZCNI will sign an agreement with SSC-CPA implementer(s) for that the SSC-CPA implement(s) are aware of and have agreed that their activity is being subscribed to the PoA.	OK	OK
<b>A.4.4.2 Monitoring plan</b>				
A.4.4.2.1 Is the management system for monitoring plan described transparently?	DR I	Yes, the monitored parameters, responsibilities of CME and CPA implementers, operation and monitoring manual, data collection and archiving, etc. have been described in the PoA-DD.	OK	OK



A.4.4.2.2 Does the monitoring plan provide for the collection and archiving of all relevant data necessary for estimation or measuring the greenhouse gas emissions within the programme boundary during the crediting period?	DR I	<p>The monitoring plan clearly provide for the collection and archiving of all relevant data with in the project boundary during the crediting period.</p> <p>Based on document review and on-site visit, it is judged the CME has the ability to implement the monitoring plan.</p> <p><b><u>CL05</u></b></p> <p>Please clarify whether there is sampling process involved in the monitoring plan.</p>	CL05	OK
<b>A.4.5 Public funding of the programme of activities (PoA)</b>				
A.4.5.1 Is any public funding from Annex I countries available to the proposed project?	DR I	<p>No. According to the document review and on-site auditing, there is no public funding involved in the proposed PoA.</p> <p>In addition, according to the CPA eligibility criteria, before CPA inclusion, a confirmation letter from each CPA implementer will be provided and checked by the CME.</p>	OK	OK
A.4.5.2 Is the information provided in compliance with actual situation or planning?	DR I O	<p>Yes. By document review, on-site visit and interviews, it is confirmed that the information is in compliance with actual planning.</p> <p>The confirmation letter from CPA-001 has been checked.</p>	OK	OK
A.4.5.3 Is all information provided consistent with the details given in remaining chapters of the POA-DD?	DR	Yes, the information provided is consistent.	OK	OK



<b>Section B Duration of the programme of activities (PoA)</b>				
<b>B.1 Starting date of the programme of activities (PoA)</b>				
B.1.1 Is the start date of PoA indicated and justified?	DR	<b>CL06</b>  Please justify how the start date of the PoA and the start date of the crediting period of PoA determined.	CL06	OK
B.1.2 Is the start date of the crediting period of PoA indicated and justified?	DR	Please refer to <b>CL06</b> .	CL06	OK
<b>B.2 Length of the programme of activities (PoA)</b>				
B.2.1 Is the length of the PoA clearly indicated?	DR	28 years for the length of the PoA is clearly indicated in the PoA-DD.	OK	OK
B.2.2 Is the length of the PoA compliance to the EB requirements?	DR	Yes, it is.	OK	OK
<b>Section C Environmental Analysis</b>				
<b>C.1 Please indicate the level at which environmental analysis as per requirements of the CDM modalities and procedures is undertaken. Justify the choice of level at which the environmental analysis is undertaken</b>				



C.1.1 Is the environment analysis undertaken at POA level? In negative case, is this issue correctly described and reflected in the CDM-POA-DD?	DR	<p>It is justified that the environmental analysis will be done in CPA level, as individual nature of each hydropower project under the proposed PoA is different.</p> <p>Based on CEC local knowledge, it is judged the environment analysis undertaken at proposed CPA level is appropriate.</p>	OK	OK
C.1.2 Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, has an EIA been approved?	DR	Via checking the enforcement of "Environmental Impact Assessment law" issued by MEP of China, it is confirmed EIA is a must for the hydropower plant, and this regulation has been complied by the CME.	OK	OK
<b>C.2 Documentation on the analysis of the environmental impacts, including transboundary impacts</b>				
C.2.1 Has the analysis of the environmental impacts of the project activity been sufficiently described?	DR	<p>Yes. Analysis of the environmental impacts of the project activity will be detailed described in specific CPA-DD. ZCNI will require itself and SSC-CPA implementer(s) to take suitable measures to contribute to the prevention of mercury pollution from the CPA project activity.</p> <p><b><u>CL07</u></b></p> <p>Considering the actual situation of CPA-001, please clarify the environmental impact analysis section in the generic CPA-DD.</p>	<del>CL07</del>	OK
<b>C.3 Please state whether in accordance with the host Party laws/regulations, an environmental impact assessment is required for a typical CPA, included in the programme of activities (PoA)</b>				



D.1.1 Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, has an EIA been approved?	DR	Via checking the enforcement of "Environmental Impact Assessment law" issued by MEP of China, it is confirmed EIA is a must for the hydropower plant, and this regulation has been complied by the CME.	OK	OK
D.1.2 Will the Programme create any adverse environmental effects? Have they identified as significant?	DR	Not applicable, the proposed PoA aims to use renewable hydropower and does not create any adverse environmental effects.	OK	OK
D.1.3 Were transboundary environmental impacts identified in the analysis?	DR	Not applicable, the proposed PoA does not create any transboundary environmental impacts.	OK	OK
<b>Section D Stakeholders' comments</b>				
<b>D.1 Please indicate the level at which local stakeholder comments are invited. Justify the choice</b>				
D.1.1 Is the stakeholders' consultation process undertaken at POA level? In negative case, is this issue correctly described and reflected in the CDM POA-DD?	DR	It is justified that the stakeholders' consultation process undertaken at CPA level. Taking into consideration the differences of circumstances and opinions of each and every community in which each CPA is located, it is judged the stakeholders' consultation process undertaken at CPA level is appropriate.	OK	OK



D.1.2 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?	DR	Not applicable, as a stakeholder consultation process is not required by regulations/laws in the host country.	OK	OK
D.1.3 Is the undertaken stakeholder process that was carried out described in a complete and transparent manner?	DR	Not applicable, as the stakeholders' consultation process undertaken at CPA level.	OK	OK
<b>D.2 Brief description how comments by local stakeholders have been invited and compiled</b>				
D.2.1 Have relevant stakeholders been consulted?	DR	A consultation meeting or a questionnaire survey will be carried out in each hydropower project involved in a CPA and the comments by local stakeholders will be recorded.	OK	OK
D.2.2 Have appropriate media been used to invite comments by local stakeholders?	DR	Not applicable, as the stakeholders' consultation process undertaken at CPA level.	OK	OK
<b>D.3 Summary of the comments received</b>				
D.4.1 Is a summary of the received stakeholder comments provided?	DR	Not applicable, as the stakeholders' consultation process undertaken at CPA level.	OK	OK



<b>D.4 Report on how due account was taken of any comments received</b>				
D.4.1 Has due account been taken of any stake-holder comments received?	DR	Not applicable, as the stakeholders' consultation process undertaken at CPA level.	OK	OK
<b>Section E Application of a baseline and monitoring methodology</b>				
<b>E.1 Title and reference of the approved SSC baseline and monitoring methodology applied to a SSC-CPA included in the PoA</b>				
E.1.1 Are reference number, version number, and title of the approved baseline and monitoring methodology clearly indicated?	DR	Yes. The reference number and title of the approved baseline and monitoring methodology AMS-I.D version 17.0 is clearly indicated.  The referred tools are also described in the PoA-DD. The latest versions of the tools are applied.	OK	OK
E.1.2 Is the type and category of project activities correctly identified and indicated?	DR I	Yes, the proposed PoA belongs to Type I and Category is "Grid connected renewable electricity generation". It is correctly identified and indicated.	OK	OK
E.1.3 Is the applied version the most recent one and/or is this version still applicable?	DR	Yes. The applied version is the latest at the commencement of the validation.	OK	OK
E.1.4 Does the POA-DD refer to the corresponding tools with their latest approved versions?	DR	Yes, the referred tools are also described in the PoA-DD. The latest versions of the tools available at the commencement of validation are applied.	OK	OK
<b>E.2 Justification of the choice of the methodology and why it is applicable to a SSC-CPA</b>				



E.2.1 Is the baseline methodology applicable to Programmes of Activities?	DR	Yes. According to the technology/measures employed by the proposed PoA, the AMS-I.D version 17.0 is applicable to the proposed PoA.	OK	OK
E.2.2 Criterion 1: This methodology comprises renewable energy generation units such as, photovoltaic, hydro, tidal/wave, wind, geothermal and renewable biomass that supply electricity to a national or a regional grid.	DR	Applicability is justified. All CPAs under the proposed PoA will consist of renewable energy generation units (hydro) that supplies electricity to regional grids CCPG or CSPG of China.	OK	OK
E.2.3 Criterion 2: This methodology is applicable to project activities that (a) install a new power plant at a site where there was no renewable energy power plant operating prior to the implementation of the project activity (Greenfield plant); (b) involve a capacity addition; (c) involve a retrofit of (an) existing plant(s); or (d) involve a replacement of (an) existing plant(s).	DR	Applicability is justified. All CPAs under the proposed PoA will install new hydropower plant(s) at a site where there was no renewable energy power plant operating prior to the implementation of the CPA (Greenfield plant). The activities described in (b) (c) or (d) does not involve under the PoA.	OK	OK





<p>E.2.4 Criterion 3: Hydropower plants with reservoirs that satisfy at least one of the following conditions are eligible to apply this methodology:</p> <p>(a) The project activity is implemented in an existing reservoir with no change in the volume of reservoir;</p> <p>(b) The project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the Project Emissions section, is greater than <math>4 \text{ W/m}^2</math>;</p> <p>(c) The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the Project Emissions section, is greater than <math>4 \text{ W/m}^2</math>.</p>	DR	<p>Applicability is justified. Hydro power plants with reservoirs will be eligible to include to the proposed PoA only when one of the followings can be satisfied:</p> <ul style="list-style-type: none"> <li>• The project activity is implemented in an existing reservoir with no change in the volume of reservoir;</li> <li>• The project activity is implemented in an existing reservoir with the increased of the volume, the power density is greater than <math>4 \text{ W/m}^2</math>;</li> <li>• The project activity in each CPA results in new reservoirs and power density is greater than <math>4 \text{ W/m}^2</math>.</li> </ul>	OK	OK
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E.2.5 Criterion 4: If the new unit has both renewable and non-renewable components (e.g., a wind/diesel unit), the eligibility limit of 15MW for a small-scale CDM project activity applies only to the renewable component. If the new unit co-fires fossil fuel, the capacity of the entire unit shall not exceed the limit of 15 MW.	DR	It is not applicable to the proposed PoA, as there are only renewable component involved in each CPA. This has been confirmed via document review and on-site visit.	OK	OK
E.2.6 Criterion 5: Combined heat and power (co-generation) systems are not eligible under this category.	DR	It is not applicable to the proposed PoA, as the proposed PoA does not include combined heat and power systems. This has been confirmed via document review and on-site visit.	OK	OK
E.2.7 Criterion 6: In the case of project activities that involve the addition of renewable energy generation units at an existing renewable power generation facility, the added capacity of the units added by the project should be lower than 15 MW and should be physically distinct from the existing units.	DR	It is not applicable to the proposed PoA, as all CPAs under the proposed PoA are Greenfield projects and do not involve the addition of renewable energy generation units at an existing renewable energy generation facility. This has been confirmed via document review and on-site visit.	OK	OK
E.2.8 Criterion 7: In the case of retrofit or replacement, to qualify as a small-scale project, the total output of the retrofitted or replacement unit shall not exceed the limit of 15 MW.	DR	It is not applicable to the proposed PoA, as all CPAs under the proposed PoA are Greenfield projects and do not involve retrofit or replacement in an existing facility for renewable energy generation. This has been confirmed via document review and on-site visit.	OK	OK



<b>E.3 Description of the sources and gases included in the SSC-CPA boundary</b>				
E.3.1 Does the information regarding GHG emissions occurring within the proposed project boundary as a result of the implementation of the proposed project which are expected to contribute more than 1% of the overall expected average annual emissions reductions, including those not addressed by the applied methodology?	DR O	Yes, all the sources and gases included in the boundary of the proposed PoA (baseline scenario, project scenario and leakage) are in accordance with the applied methodology. No other sources not addressed by the applied methodology contribute more than 1% of the emission reductions is found.	OK	OK
E.3.2 Do the spatial and technological boundaries as verified on-site comply with the discussion provided by the POA-DD?	DR	Yes, they comply.	OK	OK
E.3.3 In case of grid connected electricity POAs, is the relevant grid correctly identified in accordance with EB guidance and the underlying methodology?	DR	Yes, the relevant grid is regional grid CCPG or CSPG of China. This is in line with the applied methodology and latest delineation issued by China DNA.	OK	OK
<b>E.4 Description of how the baseline scenario is identified and description of the identified baseline scenario:</b>				



E.4.1 Have all technically feasible baseline scenario alternatives to the project activity been identified and discussed by the PoA-DD? Why can this list be considered as being complete?	DR	<p>As the PoA aims at newly built small-scale hydropower projects throughout Hubei, Yunnan, Henan and Sichuan province that supply electricity to grid. Each small-scale CDM Program Activity (referred to later on as CPA) under this PoA will comprise one or more such hydropower plants and have a total installed capacity of no more than 15 MW, namely the threshold for small-scale CDM projects. According to the applied methodology AMS-I.D version 17.0, the baseline scenario of all CPAs under the PoA is prescribed and identified as that, the electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid.</p> <p>The baseline emissions are the product of electrical energy baseline <math>EG_{BL,y}</math> expressed in MWh of electricity produced by the renewable generating unit multiplied by the grid emission factor, which is calculated as per the “Tool to calculate the emission factor for an electricity system” (Version 02.2.1)</p>	OK	OK
E.4.2 Does the project identifies correctly and excludes those options not in line with regulatory or legal requirements?	DR	The baseline scenario is identified as per the applied methodology AMS-I.D version 17.0, no other scenarios shall be considered.	OK	OK
E.4.3 Have applicable regulatory or legal requirements been identified?	DR	See above.	OK	OK



E.4.4 Does the PDD identify the most likely baseline scenario in absence of the project activity?	DR	Yes. The most likely baseline scenario is identified as per the applied methodology AMS-I.D version 17.0.	OK	OK
E.4.5 Is this identification supported by official and/or verifiable documents (e.g. studies, web pages, certificates, etc)?	DR	The baseline scenario is identified as per the applied methodology AMS-I.D version 17.0.	OK	OK
<b>E.5 Description of how the anthropogenic emissions of GHG by sources are reduced below those that would have occurred in the absence of the SSC-CPA being included as registered PoA (assessment and demonstration of additionality of SSC-CPA)</b>				
<b>E.5.1 Assessment and demonstration of additionality for a typical SSC-CPA</b>				



<p>E.5.1.1 Is the approach described for demonstrating additionality of a CPA in accordance with the using the current versions of the procedure provided?</p>	<p>DR</p>	<p>Yes, the additionality of each CPA will be assessed according to Guidelines for demonstrating additionality of microscale project activities version 04.0 or the guidance provided by Guidelines for demonstrating additionality of microscale project activities version 09.0.</p> <p>The additionality for each CPA can be demonstrated by any one of the following approaches:</p> <p><b>Approach 1:</b> Demonstrating additionality according to “Guidelines for demonstrating additionality of microscale project activities” (version 04.0).</p> <p>In case of Approach 1, the projects included in the CPA should meet relevant requirements in paragraph 2 (a) of “Guidelines for demonstrating additionality of microscale project activities”, including:</p> <ul style="list-style-type: none"> <li>• The total installed capacity of the project activity is no more than 5MW;</li> <li>• The geographic location of the project activity is in a special underdeveloped zone (SUZ) of the host country.</li> </ul> <p>OR</p> <p><b>Approach 2:</b> Demonstrating additionality according to “Guidelines on the demonstration of additionality of small-scale project activities”(version 09.0).</p> <p>In case of Approach 2, the additionality for each CPA will be demonstrated by investment analysis. The IRR of every project included in the CPA should be lower than the selected benchmark, which is indicated in investment decision document (such as FSR).</p> <p><b>CL08</b></p> <p>Version number of Attachment A to Appendix B “the Simplified Modalities and Procedures for Small-scale CDM Project Activities” is missing in POA-DD.</p>	<p>CL08</p>	<p>OK</p>
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E.5.1.2 Does the PoA define the type of information which is to be provided for each CPA to ensure the adequate demonstration of additionality?	DR	<p>A list of information required for each CPA is included in section E.5 of the PoA-DD.</p> <p><b>CAR04</b></p> <p>Requirements regarding prior CDM considering is missing in assessment and demonstration of additionality for a typical CPA.</p>	GAR04	OK
<b>E.5.2 Key criteria and data for assessing additionality of a SSC-CPA</b>				
E.5.2.1 Is the additionality of a typical CPA demonstrated?	DR	It will be demonstrated at a CPA level. The detail demonstration methods refer to E.5.1.1.	OK	OK
E.5.2.2 Is sufficient evidence provided to support the relevance of the arguments made?	DR	Yes, the sources and evidences provided are deemed correct.	OK	OK
<b>E.6 Estimation of Emission reductions of a CPA</b>				
<b>E.6.1 Explanation of methodological choices, provided in the approved baseline and monitoring methodology applied, selected for a typical SSC-CPA</b>				
E.6.1 Is it explained how the procedures provided in the methodology are applied by the proposed Programme of Activities?	DR	Yes, the procedures determined in the methodology and tools are included in the POA-DD.	OK	OK



E.6.2 Is every selection of options offered by the methodology correctly justified and is this justification in line with the situation verified on-site?	DR	The options proposed by the PoA are: OM and BM ex-ante calculated. The steps provided in the Tool to calculate the emission factor of an electricity system (version 02.2.1) are followed. The selections of options offered by the methodology are correctly justified and the justification is in line with the situation verified on-site.	OK	OK
<b>E.6.2 Equations, including fixed parametric values, to be used for calculation of emission reductions of a SSC-CPA</b>				
E.6.2.1 Are the formulae required for the determination of emissions reductions correctly presented and used? (Open excel, traceable data, etc)	DR	<p>The formulae for the determination of emission reduction are corrected stated in the PoA-DD and spreadsheets provided to CEC. The spreadsheets can be reproduced.</p> <p><b>Baseline Emissions:</b> The baseline emissions are the product of electrical energy baseline <math>EG_{BL,y}</math>, expressed in MWh of electricity produced by the renewable generating unit multiplied by the grid emission factor.</p> $BE_y = EG_{BL,y} * EF_{CO_2,grid,y}$ $EG_{BL,y} = EG_{facility,y} \quad \text{and}$ $EF_{CO_2,grid,y} = EF_{grid,CM,y}$ <p>The combined margin (CM) is adopted to calculate the emission reductions. The calculating process will be in accordance with steps of Tool to calculate the emission factor for an electricity system (version 02.2.1) and the latest version of <i>Baseline Emission Factors for Regional Power Grids in China</i> published by Chinese DNA at the time of CPA-DD submitted to the DOE for validation.</p> <p><b>CL09</b></p> <p>Please clarify the ex-ante calculated emission factor will be taken place at PoA level or CPA level.</p>	CL09	OK





	DR	<p><b>Project emissions:</b> project emissions from water reservoirs of hydro power plants have to be considered following the procedure described in the most recent version of ACM0002.</p> <p>(1) If the power density of the project activity (<math>PD</math>) is greater than <math>4 \text{ W/m}^2</math> and less than or equal to <math>10 \text{ W/m}^2</math>:</p> $PE_y = \frac{EF_{\text{Res}} \cdot TEQ_x}{1000}$ <p>(2) If the power density of the project activity (<math>PD</math>) is greater than <math>10 \text{ W/m}^2</math> <math>PE_y = 0</math></p> <p>The power density of the project activity (<math>PD</math>) is calculated as follows:</p> $PD = \frac{Cap_{PJ} - Cap_{BL}}{A_{PJ} - A_{BL}}$ <p><b>Leakage:</b> According to the methodology AMS-I.D. version 17.0, the project activity leakage does not take into account, the <math>LE_y = 0</math>.</p>	OK	OK
E.6.2.2 Are all the data and assumptions listed in the PoA-DD and are appropriate and calculations result in a conservative estimate of emission reductions?	DR	Yes, all data and assumptions detailed in the final version of the PoA-DD are clearly listed and stated in accordance with the applied methodology.	OK	OK
E.6.2.3 Are the formulae required for the determination of emission reductions correctly presented?	DR	Yes, the formulae are correctly presented in the PoA-DD and they are stated in accordance with the applied methodology and tool.	OK	OK
E.6.2.4 Have conservative assumptions been used when calculating the emission reductions?	DR	Yes, conservative assumptions have been used when calculating the emission reductions.	OK	OK



E.6.2.5 Are uncertainties in the emission reduction estimates properly addressed?	DR	No uncertainties have been detected.	OK	OK
E.6.2.6 Is additional background information on baseline data provided in Annex 3 of the POA-DD? Is this information consistent with data presented by other sections of the POA-DD?	DR	Please refer to <b>CL09</b> .	<del>CL09</del>	OK
<b>E.6.3 Data and parameters that are to be reported in CDM SSC-CPA-DD form</b>				
E.6.3.1 Is the list of parameters presented in chapter E.6.3 considered to be complete with regard to the requirements of the applied methodology?	DR	Yes, a complete list of parameters have been presented in the PoA-DD, they are in compliance with the applied methodology.	OK	OK
E.6.3.2 Is the choice of ex-ante or ex-post vintage of grid emission factors clearly specified in the POA-DD?	DR	$EF_{grid,CM,y}$ will be calculated as per the latest approved version methodology AMS-I.D, Tool to calculate the emission factor for an electricity system, and fix the value ex-ante.	OK	OK
E.6.3.3 Are all the data derived from official data sources or replicable records and have been correctly quoted?	DR	Yes, they are derived from official data sources and they have been correctly quoted.	OK	OK



E.7 Application of the monitoring methodology and description of the monitoring plan				
E.7.1 Data and parameters to be monitored by each SSC-CPA				
E.7.1.1 Are the parameters to be monitored in accordance with the requirement of the applied methodology?	DR	<p>Yes. According to the AMS-I.D version 17.0, the parameters to be monitored are listed in the POA-DD.</p> <p>Monitored parameters are:</p> <p><b>EG<sub>facility,y</sub></b>: Quantity of net electricity supplied to the grid in year y</p> <p><b>CAP<sub>PJ</sub></b>: Installed capacity of the hydro power plant after the implementation of the project</p> <p><b>A<sub>PJ</sub></b>: Area of the reservoir measured in the surface of the water, after the implementation of the project activity, when the reservoir is full.</p> <p>Regarding the parameter TEG<sub>y</sub>, please refer to <b>CAR05</b> below.</p>	CAR05	OK
E.7.1.2 Are the means of monitoring of all parameters contained in the monitoring plan in accordance with the requirements of the applied methodology? (such as name of the data/parameter, data unit, description, source of data, measurement equipment, monitoring frequency, QA/QC procedures)	DR	<p>Yes. The information about all parameters contained in the monitoring plan, including name, data unit, description, source of data, measurement equipment, monitoring frequency and QA/QC procedures are stated clearly and transparently.</p>	OK	OK
E.7.2 Description of the monitoring plan for a SSC-CPA				



E.7.2.1 Does the monitoring methodology provide a consistent approach in the context of all parameters to be monitored and further information provided in the PoA-DD? Are the monitoring provisions and data parameters that a CPA has to apply correctly described?	DR	<p>The description of the monitoring and the parameters to be monitored in each CPA are correctly described in the final version of the PoA-DD sections E 7.1. Procedures for collection, processing and archiving monitoring data, QA/QC, training and emergency procedure have been provided and checked by the validation team.</p> <p><b><u>CAR05</u></b></p> <p>1. Parameter <math>TEG_y</math> applicable to hydro power project activities with a power density of the project activity (PD) greater than <math>4 \text{ W/m}^2</math> and less than or equal to <math>10 \text{ W/m}^2</math> is missing in E.7.1.</p> <p>2. Installed capacity of the hydro power plant after the implementation <math>CAP_{PJ}</math> and Area of the reservoir <math>A_{PJ}</math> are not included in “Data Collection and Management” in the monitoring plan.</p> <p>3. Training and emergency handling are not included in the QA/QC procedures.</p>	CAR05	OK
E.7.2.2 Is the proposed sampling methodology used by the DOE for verification correctly described?	DR	Not applicable. No sampling methodology will be used.	OK	OK
E.7.2.3 In case of no sampling methodology would be used; the system used to assure that no double counting occurs and that the status of verification can be determined anytime for each CPA is transparently described?	DR	Yes, no double counting methodology is clearly detailed in the section A.4.4.1 of the PoA-DD.	OK	OK



E.7.2.4 Are the provisions made for archiving Programme of Activities emission data sufficient to enable later verification?	DR	Yes, they are sufficient.	OK	OK
E.7.2.5 Does the monitoring plan provide a clear description of the organization structure involved in monitoring activities and their responsibilities?	DR	Yes, a clear description of the organization structure involved in monitoring activities is included in PoA-DD.	OK	OK
E.7.2.6 If applicable: Does annex 4 provide useful information enabling a better understanding of the envisioned monitoring provisions?	DR	No additional information has been included in Annex 4 of the PoA-DD.	OK	OK
<b>E.8 Date of completion of the application of the baseline study and monitoring methodology and the name of the responsible person(s)/entity(ies)</b>				
E.8.1 Is there any indication of a date when the baseline and monitoring was determined?	DR	Yes, the baseline and monitoring were determined on 18/04/2012 for GSP PoA-DD version 01.	OK	OK
E.8.2 Is this consistent with the time line of the PoA-DD history?	DR	Yes, it is consistent.	OK	OK
E.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?	DR	Yes, The baseline and monitoring sections have been prepared by Innovative Carbon Investment Co., Ltd. the entity is not a project participant.	OK	OK



E.8.4 Is information provided whether this person / entity is also considered a project participant?	DR	Yes, information on the nature of the entity is provided, Innovative Carbon Investment Co., Ltd. is not PP.	OK	OK
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**Table 2 Resolution of Corrective Action and Clarification Requests**

<b>CL/CAR/FAR Requests</b>		<b>Ref. to table 1</b>	<b>PP's Response</b>	<b>Validation Team's Conclusion</b>
CAR01	LoA from DNA of China has not been provided. If the project is a unilateral project, then the Host Party shall be recognized as a project participant in section A.3.	A.3.5	The LoA from DNA has been provided to the DOE.	OK.  The information in the LoA is verified to be authentic, the host party is identified as PP directly involved in the proposed PoA.  CAR01 is closed.
CAR02	1. please clarify whether the CME have the competencies to check the features of potential CPAs and ensure that each CPA meets all requirements and eligibility criteria before inclusion in the registered PoA;  2. Please further identify eligibility criteria for including CPAs in the PoA-DD as per EB65 annex 3 and AMS-I.D version 17.0.	A.4.2.2.1	1. It has demonstrated that the CME has the competencies to check the features of potential CPAs and ensure that each CPA meets all requirements and eligibility criteria before inclusion in the registered PoA. Please refer to the PoA-DD for details.  2. The eligibility criteria have been clearly stated in the revised PoA-DD according to the relevant requirements of PoA standard (EB65, Annex 3) and the applicability conditions in methodology AMS-I.D (version 17.0). Please refer to the PoA-DD for details.	OK.  Competencies of CME to check the features of potential CPAs and ensure that each CPA meets all requirements and eligibility criteria before inclusion in the registered PoA have been verified against CDM Quality Management Manual and on-site interview.  The identified eligibility criteria for CPAs inclusion has been validated to be in accordance with EB65 annex 3 and AMS-I.D version 17.0.  CRA02 is closed.



CAR03	<p>Please state the respective responsibilities of CME and CPA implementer;</p> <p>Please further clarify the system/procedure to avoid double accounting.</p>	A.4.4.1.2	<p>The respective responsibilities of CME and CPA implementer have been stated in the revised PoA-DD. Please refer to the PoA-DD for details.</p> <p>The system/procedure to avoid double accounting also has been further clarified.</p>	<p>OK.</p> <p>It is confirmed the respective responsibilities of CME and CPA implementer can ensure the CPAs inclusion credible.</p> <p>The clarified system/procedure to avoid double accounting in the final PoA-DD is validated to be in accordance with the requirements of the PoA standard.</p> <p>CAR03 is closed.</p>
CAR04	<p>Requirements regarding prior CDM considering is missing in assessment and demonstration of additionality for a typical CPA.</p>	E.5.1.2	<p>Requirements regarding prior CDM considering has been added in the revised PoA-DD, please refer to the PoA-DD for details.</p>	<p>OK.</p> <p>Relevant information has been indicated in the final PoA-DD, and it is validated to be in accordance with the requirements of the CDM project standard.</p> <p>CAR04 is closed.</p>
CAR05	<p>1. Parameter <math>TEG_y</math> applicable to hydro power project activities with a power density of the project activity (PD) greater than <math>4 \text{ W/m}^2</math> and less than or equal to <math>10 \text{ W/m}^2</math> is missing in E.7.1.</p>	<p>E.7.1.1</p> <p>E.7.2.1</p>	<p>Parameter <math>TEG_y</math> is included in E.7.1 in the final PoA-DD.</p> <p>Installed capacity of the hydro power plant after the implementation <math>CAP_{PJ}</math> and Area of the reservoir <math>A_{PJ}</math> have been included in "Data</p>	<p>OK.</p> <p>Parameter <math>TEG_y</math> has been included in final PoA-DD. It is in line with the applied methodology. Besides, the parameter <math>EF_{Res}</math> has been included in</p>





	<p>2. Installed capacity of the hydro power plant after the implementation CAP<sub>PJ</sub> and Area of the reservoir A<sub>PJ</sub> are not included in “Data Collection and Management” in the monitoring plan.</p> <p>3. Training and emergency handling are not included in the QA/QC procedures.</p>		<p>Collection and Management” in the monitoring plan.</p> <p>Training and emergency handling have been included in the QA/QC procedures.</p> <p>Please refer to the PoA-DD for details.</p>	<p>E.6.3.</p> <p>Both the parameters have been indicated in “Data Collection and Management” in the monitoring plan.</p> <p>Training and emergency handling have also been indicated in the final PoA-DD.</p> <p>CAR05 is closed.</p>
CL01	Please provide evidence for the geographic coordinates for the PoA boundary.	A.4.1.1	The evidence for the geographic coordinates for the PoA boundary has been added in the PoA-DD, please refer to the PoA-DD for details.	<p>OK.</p> <p>The official linkage has been validated to be credible. The coordinates have been cross-checked against the Geographical Coordinates statement of the proposed PoA and CPA-001 dated 24/09/2012.</p> <p>CL01 is closed.</p>
CL02	Please clarify whether a typical CPA involves a capacity addition or a retrofit of (an) existing plant(s) or a replacement of (an) existing plant(s) as per the applied methodology; Please further clarify the technology employed by a typical CPA.	A.4.2.1	<p>A typical CPA under the PoA does not involve in a capacity addition or a retrofit or replacement of (an) existing plant(s). Only new hydropower plants can be considered as a potential CPA included into the PoA.</p> <p>The technology information has been</p>	<p>OK.</p> <p>Technology applied by a typical CPA does not involve a capacity addition or a retrofit of (an) existing plant(s) or a replacement of (an) existing plant(s). The detailed technology</p>



			supplemented in Section A.4.2.1 and a diagram which shows the basis technological process of hydropower plant has been added in the revised PoA-DD. Please refer to the PoA-DD for details.	information has been verified through document review and on-site visit.  CL02 is closed.
CL03	Format of Section A.4.3 is not in accordance with the published POA-DD template.	A.4.3.2	Section A.4.3 has been revised according to the published PoA-DD template, please refer to the PoA-DD for details.	OK.  The revised section is validated to be in line with the PoA-DD template.  CL03 is closed.
CL04	Entity/individual responsible for the CPA shall be indicated in section A.3 in generic CPA-DD.	A.4.4.1.2	CME and implementer of the CPA have been indicated in section A.3 in the revised generic CPA-DD, please refer to the generic CPA-DD for details.	OK.  Entity/individual responsible for the CPA has been indicated in the revised generic CPA-DD.  CL04 is closed.
CL05	Please clarify whether there is sampling process involved in the monitoring plan.	A.4.4.2.2	There will be no sampling process involved in the monitoring plan, so the PoA-DD has been revised accordingly. Please refer to the PoA-DD for details.	OK.  During document review and on-site interview, it is confirmed that there is no sampling process involved in the proposed PoA and CPAs.  CL05 is closed.
CL06	Please justify how the start date of the PoA	B.5.1	The start date of is defined as 27/04/2012,	OK.



	and the start date of the crediting period of PoA determined		<p>which is the date of global stakeholder consultation commenced. The typo 30/04/2012 has been corrected to 27/04/2012.</p> <p>The start date of the crediting period of PoA is defined as 01/10/2013, which is the estimated start date of crediting period of CPA-001.</p>	<p>The start date of the PoA and the start date of the crediting period of PoA is correctly identified in the final PoA-DD.</p> <p>CL06 is closed.</p>
CL07	Considering the actual situation of CPA-001, please clarify the environmental impact analysis section in the generic CPA-DD.	C.2.1	The environmental impact analysis section in the generic CPA-DD has been revised; please refer to the generic CPA-DD for details.	<p>OK.</p> <p>The environmental impact analysis will be detailed in the specific CPA-DD. Via checking the CPA-001 DD, it is confirmed the description is correct in the final generic CPA-DD.</p> <p>CL07 is closed.</p>
CL08	Version number of Attachment A to Appendix B “the Simplified Modalities and Procedures for Small-scale CDM Project Activities” is missing in POA-DD.	E.5.1.1	<p>The additionality for each CPA can be demonstrated by any one of the following approaches:</p> <p>Approach 1: Demonstrating additionality according to “Guidelines for demonstrating additonality of microscale project activities” (Version 04.0).</p> <p>In case of Approach 1, the projects included in the CPA should meet relevant requirements in paragraph 2 (a) of “Guidelines for demonstrating additionality of microscale</p>	<p>OK.</p> <p>As attachment A to Appendix B “the Simplified Modalities and Procedures for Small-scale CDM Project Activities” is replaced by Guidelines on the demonstration of additionality of small-scale project activities”(Version 09.0), the additionality for each CPA will be demonstrated as per the latest guidelines.</p>



			<p>project activities”, including:</p> <p>The total installed capacity of the project activity is no more than 5MW;</p> <p>The geographic location of the project activity is in a special underdeveloped zone (SUZ) of the host country.</p> <p>OR</p> <p>Approach 2: Demonstrating addtionality according to “Guidelines on the demonstration of additionality of small-scale project activities”(Version 09.0).</p> <p>In case of Approach 2, the additionality for each CPA will be demonstrated by investment analysis. The IRR of every project included in the CPA should be lower than the selected benchmark, which is indicated in investment decision document (such as FSR).</p>	<p>It is confirmed to be in accordance with the PoA standard.</p> <p>CL08 is closed.</p>
CL09	Please clarify the ex-ante calculated emission factor will be taken place at PoA level or CPA level.	<p>E.6.2.1</p> <p>E.6.2.6</p>	<p>The ex-ante calculated emission factor is chosen to be taken place at CPA level, and the detailed <math>EF_{grid,CM,y}</math> calculation will be determined in specific CPAs based on the most recent information available at the time of CPA-DD submission to the DOE for validation.This is in accordance with the CDM requirement.</p>	<p>OK.</p> <p>The ex-ante calculated emission factor will be taken place at CPA level. This is in accordance with the CDM requirement.</p> <p>CL09 is closed.</p>

## Appendix B Certificate of Competence

### LIU Qingzhi

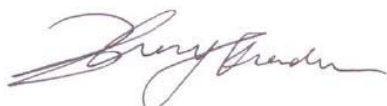
Qualification in accordance with CEC-4001C-B/8 *Operation Instruction for Personal Competence Assessment* for CDM

CDM Auditor: Yes

Industry Sector Expert for Technical Area(s): 1.2, 5.1, 8.2/10.2, 11.1, 12.1

Beijing, 12 May 2012

ZHANG Xiaodan



CDM Supervisor, Technical Director

XU Linghua



Quality Assurance Management Division

### LIU Yaotian

Qualification in accordance with CEC-4001C-B/7 *Operation Instruction for Personal Competence Assessment* for CDM

CDM Auditor: Yes

Industry Sector Expert for Technical Area(s): 1.2

Beijing, 01 Dec 2011

ZHANG Xiaodan



CDM Supervisor, Technical Director

XU Linghua



Quality Assurance Management Division

## QIN Boya

Qualification in accordance with CEC-4001C-B/8 *Operation Instruction for Personal Competence Assessment* for CDM

CDM Auditor: Yes

Industry Sector Expert for Technical Area (s): 1.1,1.2

Beijing, 12 May 2012

ZHANG Xiaodan



CDM Supervisor, Technical Director

XU Linghua



Quality Assurance Management Division

## XU Linghua

Qualification in accordance with CEC-4001C-B/7 *Operation Instruction for Personal Competence Assessment* for CDM

CDM Auditor: Yes

Industry Sector Expert for Technical Area(s): 1.2, 5.1, 11.1, 12.1, 13.1

Beijing, 01 Dec 2011

ZHANG Xiaodan



CDM Supervisor, Technical Director

ZHANG Ruizhi



Project Implementation Management Division