

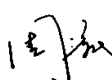


Validation report form for post-registration changes for CDM project activities

(Version 01.0)

Complete this form in accordance with the "Attachment: Instructions for filling out the validation report form for post-registration changes for CDM project activities" at the end of this form.

VALIDATION REPORT ON POST-REGISTRATION CHANGES (PRCs)

Title and reference number of the project activity	China Yongzhou Xiangqi Hydropower Project
Process track	<input type="checkbox"/> Prior approval <input checked="" type="checkbox"/> Issuance <input type="checkbox"/> Renewal of crediting period
Version number of the validation report on PRCs	Version 01
Completion date of the validation report on PRCs	05/08/2015
Type(s) of PRCs	<input type="checkbox"/> Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline <input type="checkbox"/> Corrections <input type="checkbox"/> Changes to the start date of the crediting period <input type="checkbox"/> Inclusion of a monitoring plan to a registered project activity <input checked="" type="checkbox"/> Permanent changes from registered monitoring plan, monitoring methodology or standardized baseline <input type="checkbox"/> Changes to the project design of a registered project activity <input type="checkbox"/> Types of changes specific to afforestation and reforestation project activities
Version number of PDD to which this report applies	Version 03
Project participant(s)	Huaneng Hunan Xiangqi Hydropower Co., Ltd. Climate Bridge Ltd. Luso Carbon Fund
Host Party	China
Sectoral scope(s), selected methodology(ies), and where applicable, selected standardized baseline(s)	Sectoral scope 1: Energy industries (renewable-/non-renewable resources) ACM0002: "Consolidated methodology for grid-connected electricity generation from renewable sources", Version 13.0.0
Name of DOE	China Certification Center, Inc. (CCCI)
Name, position and signature of the approver of the validation report on PRCs	Mr. Zhou Hong, Director of GHG Department 

SECTION A. Executive summary

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CCCI has performed the validation on post-registration changes for China Yongzhou Xiangqi Hydropower Project, CDM Registration Reference Number 8164. The project is located on the main stream of Xiangjiang River at the junction of Huangnitang Town, Qiyang County, Yongzhou City and Guiyang Town, Qidong County, Hengyang City in Hunan Province of China with the geo-coordinates of east longitude 112.1596° and north latitude 26.5122°. The project activity is a hydro power project with a total installed capacity of 80MW, including four sets of 20MW turbine-generator unit for power generation, and supplied to the Central China Power Grid (CCPG).

The objective of the validation is to provide a through and independent third party assessment of the post registration changes. In particular, the changes' compliance with relevant UNFCCC and host country criteria are validated in order to confirm that the changes meet the applicable CDM requirements and the identified criteria.

The validation consisted of the following three phases: i) desk review of the project design documents and additional background documents; ii) on site inspection and follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final validation report and opinion.

CCCI assessed the post registration changes described in the monitoring plan of the revised PDD version 03. Based on the validation activities undertaken, CCCI confirms that the permanent changes in the monitoring plan do not impact either:

- a) The compliance of the monitoring plan with applied monitoring methodology; or
- b) The level of accuracy of the monitoring and calculation of emission reductions compared with the requirements contained in the registered monitoring plan.

The permanent change to the monitoring plan is of a type that change of location of meters as per a PPA. According to the Clause 5 (c) in Appendix 1 of CDM Project Standard version 09.0 /1/, this type of change does not need prior approval.

CCCI therefore requests approval of the post registration changes concurrent with the submission of the Request for Issuance for the monitoring period 01/04/2014-30/06/2015.

SECTION B. Validation team, technical reviewer and approver

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B.1. Validation team member

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk review	On-site inspection	Interview(s)	Validation findings
1.	Team Leader	IR	Luo	Peng	Central office of CCCI	Yes	Yes	Yes	Yes

B.2. Technical reviewer and approver of the validation report on PRCs

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical reviewer	IR	Tang	Xuemei	Central office of CCCI
2.	Approver	IR	Zhou	Hong	Central office of CCCI

SECTION C. Means of validation**C.1. Desk review**

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CCCI received the revised PDD (version 03, dated 03/07/2015) from the project participants on 03/07/2015.

The validation team conducted a desk review of revised PDD (Version 03)/2/, the registered PDD (Version 02.1)/3/ and supporting documents, to verify whether the revised PDD was completed using the valid version of the applicable PDD form and the information presented is materially the same as that in the registered PDD, and whether the changes to the registered monitoring plan described in the revised PDD is in compliance with the applied methodology. Particular attention was given to the accuracy of monitoring.

In addition to the project design documentation provided by the project participants, the validation reviews:

- ✓ The registered PDD and the monitoring plan /3/;
- ✓ The project design document form (version 06.0) /4/;
- ✓ The applied monitoring methodology, i.e. ACM0002 version 13.0.0 /5/;
- ✓ CDM Validation and Verification Standard Version 09.0 /6/;
- ✓ Relevant decisions, clarifications and guidance from the CMP and the CDM Executive Board ;

Appendix 3 of this report contains a complete list of all documents and proofs reviewed by the validation team.

C.2. On-site inspection

Duration of on-site inspection: 30/07/2015				
No.	Activity performed on-site	Site location	Date	Team member
1.	Opening meeting by CCCI	Powerhouse of the project	30/07/2015	Luo Peng
2	Site Observation: Location of meters, line diagrams, on site monitoring system, operation log book etc.	Powerhouse of the project	30/07/2015	Luo Peng
3	Document Review: Operation log book Monitoring manual Power Purchase Agreement etc.	Powerhouse of the project	30/07/2015	Luo Peng

C.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Huang	Jinglin	Huaneng Hunan Xiangqi Hydropower Co., Ltd.	30/07/2015	Project implementation and overview of monitoring system including location of meters, line diagrams, on site monitoring system.	Luo Peng
2	Wu	Duo	Huaneng Hunan Xiangqi Hydropower Co., Ltd.	30/07/2015		
3	Li	Yu	Huaneng Hunan Xiangqi Hydropower Co., Ltd.	30/07/2015		
4	Zhu	Feng	Huaneng Hunan Xiangqi Hydropower Co., Ltd.	30/07/2015		
5	Tao	Bolin	Huaneng Hunan Xiangqi Hydropower Co., Ltd.	30/07/2015		
6	Zhu	Zijie	Huaneng Hunan Xiangqi Hydropower Co., Ltd.	30/07/2015		

C.4. Clarification requests, corrective action requests and forward action requests raised

Areas of validation findings	No. of CL	No. of CAR	No. of FAR
Compliance with PDD form	0	0	0
Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline	0	0	0
Corrections	0	0	0
Changes to the start date of the crediting period	0	0	0
Inclusion of a monitoring plan to a registered project activity	0	0	0
Permanent changes from registered monitoring plan, monitoring methodology or standardized baseline	0	0	0
Changes to the project design of a registered project activity	0	0	0
Types of changes specific to afforestation and reforestation project activities	0	0	0
Others (please specify)	0	0	0
Total	0	0	0

SECTION D. Validation findings**D.1. Compliance with PDD form**

Means of validation	Comparing the revised PDD version 03 (both in tracked-change and clean versions) /2/ with the PDD form provided by CDM EB listed in UNFCCC website /4/ and the registered PDD version 02.1 /3/.
Findings	No findings raised in this section.
Conclusion	The validation team confirms: ✓ The revised PDD (both in tracked-change and clean versions) was completed using the valid version of the applicable PDD form; ✓ The information transferred to the revised PDD is materially the same as that in the registered PDD.

D.2. Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline

Not Applicable.

D.3. Corrections

Not Applicable.

D.4. Changes to the start date of the crediting period

Not Applicable.

D.5. Inclusion of a monitoring plan to a registered project activity

Not Applicable.

D.6. Permanent changes from registered monitoring plan, monitoring methodology or standardized baseline

By reviewing the revised PDD version 03 /2/ and the registered PDD version 02.1 /3/, the permanent changes from registered monitoring plan are summarized as below:

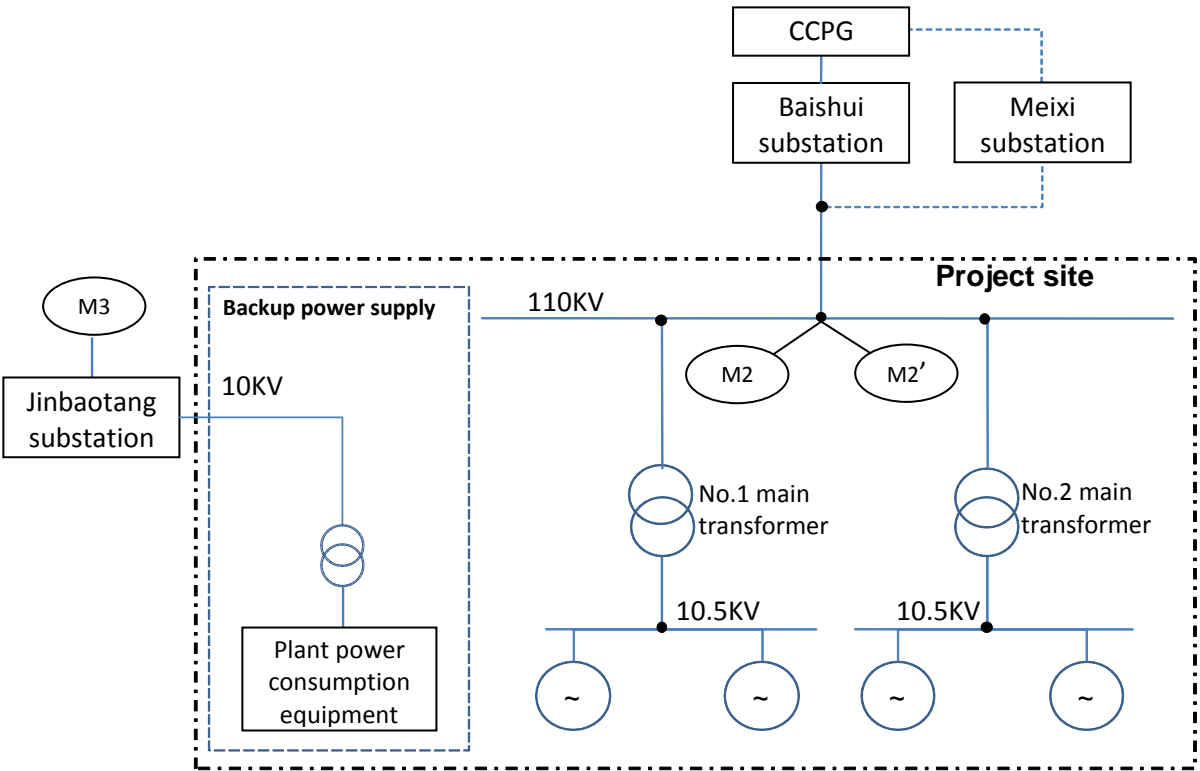
The monitoring system is established to monitor the net electricity delivered to the grid by the project ($EG_{facility,y}$). For the determination of $EG_{facility,y}$, electricity supplied by the project activity to the grid ($EG_{export,y}$), electricity imported from the grid by the proposed project ($EG_{import,y}$) and electricity imported from the grid by the 10kV backup line ($EG_{Emergency,import,y}$) shall be measured:

$$EG_{facility,y} = EG_{export,y} - EG_{import,y} - EG_{Emergency,import,y}$$

In the registered PDD, there were two bi-direction main meters (M1 and M2) and two bi-direction backup meters (M1' and M2') located at the higher voltage side of each main transformer for monitoring $EG_{export,y}$ and $EG_{import,y}$, the readings of M1 plus M2 were the total quantity. And one meter M3 installed at the substation for monitoring $EG_{Emergency,import,y}$.

However, the monitoring system has been changed on 26/11/2013 /9/ by the power grid as per the Power Purchase Agreement (PPA) /7/. The meter M1 and M1' have been removed and meter M2 and M2' were relocated at the higher voltage side of the two main transformers for monitoring the total quantity of $EG_{export,y}$ and $EG_{import,y}$.

Please refer to the below diagram for an overview on how the project activity is connected to the grid, and the location of the electricity meters described above.



Means of validation	<p>The permanent changes from the registered monitoring plan was confirmed by interviews with key personnels, on-site inspection of the monitoring system including location of meters and line diagrams, and review of following documents:</p> <ul style="list-style-type: none">• Electricity line diagram /8/• Removal and installation records of the meter /9/• Power Purchase Agreement (PPA) /7/
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	<p>The compliance of the permanent changes from the registered monitoring plan to the applied methodology was confirmed by review of the applied methodology ACM0002 version 13.0.0 /3/</p> <p>The validation team also compared the revised monitoring plan /2/ against the registered monitoring plan /3/, and confirmed the accuracy level of the meters was not changed, therefore the permanent changes from the registered monitoring plan do not reduce the level of accuracy of the monitoring compared with the requirements contained in the registered monitoring plan, and the changes are unlikely to lead to a reduction in the accuracy of the calculation of emission reductions.</p> <p>By reviewing the Power Purchase Agreement /7/, the validation team confirmed the permanent change to the monitoring plan is of a type described in the Project Standard Appendix 1 that does not need prior approval, since the change of location of meters are required by the Power Purchase Agreement.</p>
Findings	No findings raised in this section.
Conclusion	<p>The validation team confirms:</p> <ul style="list-style-type: none"> ✓ The permanent changes to the registered monitoring plan described in the revised PDD /2/ are in compliance with the applied methodology /5/; ✓ The permanent changes from the registered monitoring plan do not reduce the level of accuracy of the monitoring compared with the requirements contained in the registered monitoring plan, and are unlikely to lead to a reduction in the accuracy of the calculation of emission reductions; ✓ The permanent change to the monitoring plan is of a type described in the Project Standard Appendix 1 /1/ that does not need prior approval.

D.7. Changes to the project design of a registered project activity

Not Applicable.

D.8. Types of changes specific to afforestation and reforestation project activities

Not Applicable.

SECTION E. Internal quality control

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The validation report underwent an Internal Technical Review (ITR) before requesting approval of changes.

The ITR is an independent process performed to examine thoroughly that the process of validation has been carried out in conformance with the requirements of the validation scheme as well as internal CCCI procedures.

The Team Leader provides a copy of the validation report to the reviewer, including any necessary validation documentation. The reviewer reviews the submitted documentation for conformance with the validation scheme. This will be a comprehensive review of all documentation generated during the validation process.

When performing an Internal Technical Review, the reviewer ensures that:

- The validation activity has been performed by the team by exercising utmost diligence and complete adherence to the CDM rules and requirements.
- The review encompasses all aspects related to applicable post-registration changes, closure of CARs and CLs during the validation exercise, review of sample documents.

The reviewer may raise Clarification Requests to the validation team and will discuss these matters with the Team Leader.

After the agreement of the responses to the Clarification Requests from the validation team as well as the PP(s), the finalized validation report is accepted for further processing.

SECTION F. Validation opinion

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CCCI has performed the validation on post-registration changes for China Yongzhou Xiangqi Hydropower Project, CDM Registration Reference Number 8164. The project is located on the main stream of Xiangjiang River at the junction of Huangnitang Town, Qiyang County, Yongzhou City and Guiyang Town, Qidong County, Hengyang City in Hunan Province of China with the geo-coordinates of east longitude 112.1596° and north latitude 26.5122°. The project activity is a hydro power project with a total installed capacity of 80MW, including four sets of 20MW turbine-generator unit for power generation, and supplied to the Central China Power Grid (CCPG).

The validation consisted of the following three phases: i) desk review of the project design documents and additional background documents; ii) on site inspection and follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final validation report and opinion.

CCCI assessed the post registration changes described in the monitoring plan of the revised PDD version 03 /2/. Based on the validation activities undertaken, CCCI confirms that the permanent changes in the monitoring plan do not impact either:

- a) The compliance of the monitoring plan with applied monitoring methodology; or
- b) The level of accuracy of the monitoring and calculation of emission reductions compared with the requirements contained in the registered monitoring plan.

The permanent change to the monitoring plan is of a type described in the Project Standard Appendix 1 that does not need prior approval.

CCCI therefore requests approval of the post registration changes concurrent with the submission of the Request for Issuance for the monitoring period 01/04/2014-30/06/2015.

Appendix 1. Abbreviations

Abbreviations	Full texts
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction(s)
CL	Clarification Request
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	Executive Board
ER	Emission Reduction
FAR	Forward Action Request
GHG	Greenhouse Gas
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
PCP	Project Cycle Procedure
PDD	Project Design Document
PP	Project Participant
PS	Project Standard
UNFCCC	United Nations Framework Convention for Climate Change
VVS	CDM Validation and Verification Standard
CCPG	Central China Power Grid

Appendix 2. Competence of team members and technical reviewers

Luo Peng	Team Leader	Mr. Luo Peng is an experienced auditor for CDM projects. He received comprehensive training of CDM, has more than 6 years' experience in CDM projects and has participated in more than 50 CDM projects, including wind power, hydro power, biomass, municipal solid waste incineration projects. He has worked at all the stages in the process of CDM project, including validation and verification. Before joining CCCI, Luo Peng worked with the world leading CDM development company EcoSecurities and the Designated Operational Entity ERM CVS.
Tang Xuemei	Technical Reviewer	Ms. Tang Xuemei has worked in CDM projects since 2006 and gained extensive experience in the development and implementation of CDM projects, working in the area of project-based mechanisms. Her background includes both project validation and verification, in different sectoral scopes, including thermal energy generation, renewable energy, cement and lime production, mining and mineral process, solid waste and wastewater and manure. From year 2008 onwards she has been involved in validation and verification of CDM projects and also as a technical reviewer.

Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
/1/	CDM EB	CDM Project Standard Version 09.0	https://cdm.unfccc.int/Reference/Standards/index.html	Others
/2/	Climate Bridge Ltd	Revised Project Design Document version 03 dated 03/07/2015	-	Project participants
/3/	Changsha WuSeShi Environmental Protection Technology Co., Ltd & Climate Bridge Ltd	Registered Project Design Document version 02.1 dated 21/09/2012	http://cdm.unfccc.int/Projects/DB/TUEV-RHEIN1352706366.92/view	Others
/4/	CDM EB	Project design document form (version 06.0)	https://cdm.unfccc.int/Reference/PDDs_Fo rms/index.html	Others
/5/	CDM EB	ACM0002: Consolidated baseline methodology for grid-connected electricity generation from renewable sources" (Version 13.0.0)	http://cdm.unfccc.int/methodologies/PAmethodologies/approved	Others
/6/	CDM EB	CDM Validation and Verification Standard Version 09.0	https://cdm.unfccc.int/Reference/Standards/index.html	Others
/7/	Co-signed by the Huaneng Hunan Xiangqi Hydropower Co., Ltd. and the State Grid Hunan Electric Power Company	Power Purchase Agreement dated 20/11/2013	-	Project participants
/8/	Huaneng Hunan Xiangqi Hydropower Co., Ltd.	Electricity line diagram	-	Project participants
/9/	State Grid Hunan Electric Power Company	Removal and Installation records of the meters dated 26/11/2013	-	Project participants

Appendix 4. Clarification requests, corrective action requests and forward action requests

No CLs, CARs and FARs from this validation