VERIFICATION REPORT

for the GS Voluntary Offset Project Activity

Hunan Guanbaodu-Liangjiangkou Small-scale Hydropower Bundle Project

in

P. R. China

Report No. 01 996 9105076671

Version 02, 2014-10-11

Designated Operational Entity (DOE)

TÜV Rheinland (China) Ltd.

Unit 707, AVIC Building, No. 10B, Central Road, East 3rd Ring Road,

Chaoyang District, Beijing 100022,

People's Republic of China.

Tel.: +86 10 65 66 66 60 (ext.169)

FAX: +86 1065 66 66 67

E-mail: doe@chn.tuv.com

I. Project data:

Project title:	Hunan Guanbaodu-Liangjiangkou Small-scale Hydropower Bundle Project		**Report No.: 01 996 9105076671**	
GS Ref No.:	835		**Current revision No.: 02**	
Monitoring period:	From 01/08/2013 to 31/07/2014		**Date of current revision: 2014-10-11**	
Methodology:	ACM0002, ver.12.1.0, "Consolidated baseline methodology for grid-connected electricity generation from renewable sources"		**Date of first issue:** 2014-09-27	
Version of Gold Standard Rules	2.2			
Emission reductions:	Estimated:	**Total:** 18,431 tCO2e It is estimated based on annual emission reductions as indicated in the GS-VER-PDD (version 05, date: 22/02/2011), and the monitoring period 01/08/2013 to 31/07/2014, including both days. **Guanbaodu:** 13,230 tCO2e It is estimated based on 13,230 tCO_2e of annual emission reductions as indicated in the GS-VER-PDD (version 05, date: 22/02/2011), and the monitoring period 01/08/2013 to 31/07/2014, including both days. **Liangjiangkou:** 5,201 tCO2e It is estimated based on 5,201 tCO_2e of annual emission reductions as indicated in the GS-VER-PDD (version 05, date: 22/02/2011), and the monitoring period 01/08/2013 to 31/07/2014, including both days.	Verified:	**Total:** 15,708tCO2e of this monitoring period from 01/08/2013 to 31/07/2014, totally 365 days, including both days **Guanbaodu:** 10,392.79 tCO2e of this monitoring period from 01/08/2013 to 31/07/2014, totally 365 days, including both days. **Liangjiangkou:** 5,315.36 tCO2e of this monitoring period from 01/08/2013 to 31/07/2014, totally 365 days, including both days
GHG reducing measure/technology:	displace fossil fuel based grid power generation with renewable hydropower			

Party	Project participants	Party considered a project participant (Yes/No)	Contract Project Participant
P. R. China (Host)	Jingzhou Miao & Dong Autonomous County Guanbaodu Hydropower Co., Ltd. (project owner of Guanbaodu hydropower project)	No	☐
P. R. China (Host)	Tongdao Dong Autonomous County Liangjiangkou Hydropower Station	No	☐

	(project owner of Liangjiangkou hydropower project)		
UK	Climate Bridge Ltd.(buyer)	No	☒

II. verification team:

verification team			Role									
Full name	**Affiliation TÜV Rheinland**	**Appointed for Sectoral Scopes (Technical Areas)**	Team leader	Acting Team Leader	Local Expert	Team Member (Auditor)	Technical Expert	Acting Tech. Expert	Trainee Auditor	Technical Reviewer	Expert to TR	Trainee TR
YAN Chong	China	1.2	X									
ZHU Jiang	China	1.1, 1.2, 4.5								X		
Walter TANG	China	1.1, 1.2, 2.1, 2.2, 3.1, 4.3, 4.5, 13.1								X		

Verification Phases:

☒ Desk Review
☒ Follow up interviews
☒ Resolution of outstanding issues

Verification Status:

☐ Corrective Actions / Clarifications Requested
☒ Full Approval and Submission for Issuance
☐ Rejected

III. Verification Report:

Final approval	Released	Distribution
☒	**By: Henri Phan**	☒ No distribution without permission from the Client or responsible organizational unit
Date: 2014-10-15		☐ Unrestricted distribution

Abbreviations

CAR	Corrective Action Request
CCPG	Central China Power Grid
CDM	Clean Development Mechanism
CDM EB	Clean Development Mechanism Executive Board
CEF	Carbon Emission Factor
CH_4	Methane
CI	Clarification request
CO_2	Carbon dioxide
CO_{2e}	Carbon dioxide equivalent
DOE	Designated Operational Entity
ETN	Electricity Transaction Note
FAR	Forward Action Request
GHG	Greenhouse Gas(es)
GS	Gold Standard
IPCC	Intergovernmental Panel on Climate Change
MP	Monitoring Plan
MR	Monitoring Report
PDD	Project Design Document
PP	Project Participant
PPA	Power Purchase Agreement
UNFCCC	United Nations Framework Convention on Climate Change
VER	Voluntary Emission Reduction
VVS	Validation And Verification Standard

Verification opinion — summary

The verification team assigned by the DOE (TÜV Rheinland (China) Ltd.) concludes that the Project Activity "Hunan Guanbaodu-Liangjiangkou Small-scale Hydropower Bundle Project" in P. R. China, as described in the GS-VER-PDD (Version 06, dated 08/08/2014) and Monitoring Report (Version 1.1, dated 10/10/2014), meets all relevant requirements of Gold Standard Voluntary Offset project activity. The verification is conducted in line with the GS VER requirements.

Verification methodology and process

The verification constitutes the following steps:

- Desk review of the MR and the relevant documents
- On-site assessment (From23 Sep. 2014 to 24 Sep. 2014)
- Issuance of Verification Report

The project activity was correctly implemented according to selected monitoring methodology and monitoring plan. The monitoring equipment was installed, calibrated and maintained in a proper manner. The collected monitoring data allowed verifying the amount of achieved GHG emission reductions and monitoring of impact of the project on sustainable development. The DOE therefore is pleased to issue a positive verification opinion expressed in the attached Certification statement.

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1. Introduction

The organization "Climate Bridge Ltd." has commissioned the DOE TÜV Rheinland (China) Ltd. to perform a verification of the Project Activity "Hunan Guanbaodu-Liangjiangkou Small-scale Hydropower Bundle Project" in P. R. China (hereafter "the project"). This report summarises the findings of the verification of the project, performed on the basis of requirements of GS Voluntary Offset project activities. This report contains the findings from the verification and a certification statement for the certified GS VERs.

1.1 Objective

Verification is the periodic independent review and *ex post* determination of both quantitative and qualitative information by a Designated Operational Entity (DOE) of the monitored reductions in GHG emissions that have occurred as a result of the registered GS-VER project activity during a defined monitoring period and the impact of the project on sustainable development.

Certification is the written assurance by a DOE that, during a specific period in time, a project activity achieved the voluntary emission reductions as verified and the project contributed to the sustainable development.

The objective of this verification was to verify and certify GS voluntary emission reductions reported for the "Hunan Guanbaodu-Liangjiangkou Small-scale Hydropower Bundle Project" in country "P. R. China" for the period from 01/08/2013 to 31/07/2014 and the impact of the project on sustainable development.

The purpose of verification is to review the monitoring results and verify that monitoring methodology was implemented according to monitoring plan and monitoring data, used to confirm the reductions in anthropogenic emissions by sources and the impact of the project on sustainable development is sufficient, definitive and presented in a concise and transparent manner.

In particular, the monitoring plan, monitoring report and the project's compliance with relevant UNFCCC, host Party, and GS criteria are verified in order to confirm that the project has been implemented in accordance with previously registered design and conservative assumptions, as documented.

1.2 Scope

The scope of the verification is:

- To verify that actual monitoring systems and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan.
- To evaluate the GHG emission reduction data and express a conclusion with a reasonable level of assurance about whether the reported GHG emission reduction data is free from material misstatement.
- To verify that reported GHG emission data is sufficiently supported by evidence.
- To verify if the project has indeed contributed to sustainable development.

The verification shall ensure that reported emission reductions are complete and accurate in order to be certified.

2. Methodology

The verification consists of the following four phases:

1) Completeness check of the monitoring report;
2) Desk review of the monitoring plan, monitoring report, monitoring methodology, project design document, applicable tools in particular attention to the frequency of measurements, quality of metering equipment including calibration requirements, QA/QC procedures and other relevant documents;
3) On-site visit (including follow-up interviews with project stakeholders, when deemed necessary). The on-site assessment includes the following;
   - An assessment of implementation and operation of project activity with respect to registered GS-VER-PDD or approved revised GS-VER-PDD;
   - Review of information flows for generating, aggregating, calculating and reporting the monitoring parameters;
   - Interview with relevant personals to determine whether the operational and data collection procedures are implemented and in accordance with monitoring plan of the registered GS-VER-PDD or approved GS-VER-PDD;
   - Cross check of information and data provided in the monitoring report with plant logbooks, inventories, purchase records or similar data sources;
   - Check of monitoring equipment, calibration frequency and monitoring practice in-line with methodology and the registered GS-VER-PDD or approved GS-VER-PDD;
   - Review of assumptions made in calculating the emission reduction;
   - Implementation of QA/QC procedure in line with the registered GS-VER-PDD or approved GS-VER-PDD and methodology requirement.
4) Resolution of outstanding issues and the issuance of the final Verification Report and Certification Statement.

The following sections outline each step in more detail.

2.1 Desk review

The following table outlines the documentation reviewed during the verification:

Ref No.	Reference Document
/1/	Final Monitoring Report of Hunan Guanbaodu-Liangjiangkou Small-scale Hydropower Bundle Project, Version 1.1, dated 10/10/2014
/2/	Initial Monitoring Report of Hunan Guanbaodu-Liangjiangkou Small-scale Hydropower Bundle Project, Version 1.0, dated 12/09/2014
/3/	Registered GS-VER-PDD of Hunan Guanbaodu-Liangjiangkou-Xinglong Small-scale Hydropower Bundle Project, Version 05, dated 22/02/2011
/4/	Validation Report of Hunan Guanbaodu-Liangjiangkou-Xinglong Small-scale Hydropower Bundle Project, Version 04, dated 23/02/2011
/5/	Approved Revised GS-VER-PDD of Hunan Guanbaodu-Liangjiangkou Small-scale Hydropower Bundle Project, Version 06, dated 08/08/2014
/6/	Memo of Request for Design Changes of Project (GS 835), dated 08/08/2014
/7/	Revised Sustainable Development Assessment Matrix, dated 08/08/2014

<table>
<tr><td>/8/</td><td>Review for approval of design change by GS</td></tr>
<tr><td>/9/</td><td>Approved consolidated baseline and monitoring methodology ACM0002 “Consolidated baseline methodology for grid-connected electricity generation from renewable sources”, Version 12.1.0, EB 58</td></tr>
<tr><td>/10/</td><td>Tool to calculate the emission factor for an electricity system, Version 02, EB 50</td></tr>
<tr><td>/11/</td><td>Clean Development Mechanism Validation and Verification Standard, Version 07.0</td></tr>
<tr><td>/12/</td><td>Final: Emission reductions calculation spreadsheet</td></tr>
<tr><td>/13/</td><td>Initial: Emission reductions calculation spreadsheet</td></tr>
<tr><td>/14/</td><td>Monitoring data records covering the monitoring period from 01/08/2013 to 31/07/2014 for both Guanbaodu and Liangjiangkou hydropower projects</td></tr>
<tr><td>/15/</td><td>Electricity transaction notes (ETNs) covering the monitoring period 01/08/2013 to 31/07/2014 for both Guanbaodu and Liangjiangkou hydropower projects</td></tr>
<tr><td>/16/</td><td>2009 Baseline Emission Factors for Regional Power Grids in China issued by the National Development & Reform Commission of China, dated 02/07/2009</td></tr>
<tr><td>/17/</td><td>Electric line diagrams of both Guanbaodu and Liangjiangkou hydropower projects</td></tr>
<tr><td>/18/</td><td>Calibration certificate of electric meters issued by, details as following,
<table>
<tr><th></th><th>Meters</th><th>Type</th><th>Accuracy</th><th>Serial No.</th><th>Certificate No.</th><th>Validity</th></tr>
<tr><td rowspan="4">Guanbaodu</td><td rowspan="2">M1</td><td rowspan="2">DSSD25</td><td rowspan="2">0.5</td><td rowspan="2">0704575</td><td>HTDe12091690</td><td>19/09/2012-18/09/2013</td></tr>
<tr><td>HTDa13092022</td><td>17/09/2013-16/09/2014</td></tr>
<tr><td rowspan="2">M2</td><td rowspan="2">DSSD331</td><td rowspan="2">0.5</td><td rowspan="2">1158010043</td><td>HTDe12091691</td><td>19/09/2012-18/09/2013</td></tr>
<tr><td>HTDa13092021</td><td>17/09/2013-16/09/2014</td></tr>
<tr><td rowspan="2">Liangjiangkou</td><td rowspan="2">M1</td><td>DSSD566</td><td>0.5</td><td>0611960283</td><td>HJBV201212-02785</td><td>13/12/2012-12/12/2013</td></tr>
<tr><td>DSZ331</td><td>0.5S</td><td>010003697381</td><td>N/A (Initial verification report)</td><td>08/12/2013-07/12/2014</td></tr>
</table></td></tr>
<tr><td>/19/</td><td>Certificate of Metrological Authorization to Huitong County Quality Supervision, Inspection and Metrological Verification Institute issued by Administration of Quality and Technology Supervision of Hunan Province, Certificate No.: [2011] Xiang Liang B-biao Hui Zheng Zi 001, dated 20/11/2011 and valid to 19/11/2016</td></tr>
<tr><td>/20/</td><td>Certificate of Metrological Authorization to Hunan Huaihua Metrological Test & Verification Institute issued by Administration of Quality and Technology Supervision of Hunan Province,, Certificate No.:(Xiang) Fa Ji(2008)02013, dated 20/10/2008 and valid to 19/10/2013;
Certificate of Metrological Authorization to Huaihua City Tongdao Grid Company issued by Hunan Province Huaihua City Quality Supervision and Inspection Bureau, Certificate No.: (Huai) Fa Ji(2013)1003, dated 26/05/2013 and valid to 25/05/2016</td></tr>
<tr><td>/21/</td><td>Verification Regulation of Electrical Meters for Measuring Alternating-current Electrical Energy (JJG596-1999) issued by General Administration of Quality Supervision, Inspection and Quarantine of the People’s Republic of China, valid from 15/03/2000</td></tr>
</table>

/22/	Previous verification reports of this project via website http://mer.markit.com/br-reg/public/project.jsp?project_id=103000000002094
/23/	Guideline on the application of materiality in verifications, version 01.0, EB69, Annex 06
/24/	Power Purchase Agreement of Guanbaodu project covering the period from 10/08/2012 to 10/08/2014
/25/	Power Purchase Agreement of Liangjiangkou project covering the period from 01/04/2013 to 31/03/2015
/26/	GS Monitoring & QC manual of Guanbaodu Hydropower project
/27/	GS Monitoring & QC manual of Liangjiangkou Hydropower project
/28/	Daily operation & maintenance logs
/29/	Training records for Guabaodu Hydropower project, dated 08/03/2014 and 19/03/2014
/30/	Training records for Liangjiangkou Hydropower project, dated 08/05/2014
/31/	Operational qualifications of staff of both Guanbaodu and Liangjiangkou hydropower projects
/32/	Technical Administration Code of Electric Energy Metering(DL/T448-2000)
/33/	Monthly payroll of Guanbaodu Hydropower project for the monitoring period of 01/08/2013 to 31/07/2014
/34/	Monthly payroll of Liangjiangkou Hydropower project for the monitoring period of 01/08/2013 to 31/07/2014
/35/	Stakeholder questionnaire for Guanbaodu project, dated 15/04/2014
/36/	Stakeholder questionnaire for Liangjiangkou project, dated 15/04/2014
/37/	Management Regulation of Environment and Health for Guanbaodu project, dated in Aug. 2013
/38/	Management Regulation of Environment and Health for Liangjiangkou project, dated in Oct. 2013
/39/	Measurement Report of reservoir area for Guanbaodu project by Jingzhou Miao and Dong Autonomous County Flood Control and Drought Prevention Office in 2013, dated 17/05/2013
/40/	Measurement Report of reservoir area for Guanbaodu project by Jingzhou Miao and Dong Autonomous County Flood Control and Drought Prevention Office in 2014, dated 05/06/2014
/41/	Measurement Report of reservoir area for Liangjiangkou project by Tongdao Dong Autonomous County Reservoir and Immigration Authority in 2013, dated 20/05/2013
/42/	Measurement Report of reservoir area for Liangjiangkou project by Tongdao Dong Autonomous County Reservoir and Immigration Authority in 2013, dated 07/07/2014
/43/	Power equipment nameplate of Guanbaodu project
/44/	Power equipment nameplate of Liangjiangkou project
/45/	EIA for Guanbaodu project
/46/	EIA for Liangjiangkou project
/47/	Average salary in rural area of Hunan province http://www.hntj.gov.cn/tjgb/glgb/201403/t20140317_108101.htm

2.2 On-site visit and follow-up interviews with project stakeholders

TÜV Rheinland verification team carried out an on-site visit from 23 Sep. 2014 to 24 Sep. 2014 and performed interviews with the project representatives and stakeholders.

Table 1

	Date	Name	Organization	Topic
/i/	23/09/2014	PENG Jun/Manager SU Pingwu/Operator	Tongdao Dong Autonomous County Liangjiangkou Hydropower Station	- Project Implementation - Project operation - Monitoring devices' calibration - Management and Operational procedures - Data collection procedure - Data QA/QC procedures - Environmental impacts and mitigation measures
/ii/	23/09/2014	YANG Xiuhong/Villager WU Xiangang/Villager LONG Zhangfu/Villager	Tangzhong and Tumen Villages of Tongdao Dong Autonomous County	- Impact of project on Sustainable development
/iii/	24/09/2014	LI Yonghua/Manager LI Jing/Operator	Jingzhou Miao & Dong Autonomous County Guanbaodu Hydropower Co., Ltd.	- Project Implementation - Project operation - Monitoring devices' calibration - Management and Operational procedures - Data collection procedure - Data QA/QC procedures Environmental impacts and mitigation measures
/iv/	24/09/2014	SU Renxing/Villager SU Yanlong/Villager	Guanbaodu Village of Jingzhou Miao & Dong Autonomous County	- Impact of project on Sustainable development
/v/	23/09/2014-24/09/2014	Ms. HUANG Shanfeng/ Project manager	Climate Bridge Ltd.	- Monitoring results reporting - ER calculation

2.3 Resolution of outstanding issues

The objective of this phase of the verification is to resolve any outstanding issues (issues that require further elaboration, research or expansion) which have to be clarified prior to final DOE's conclusions on the project implementation, monitoring practices, achieved emission reductions and sustainability assessment. In order to ensure transparency a

verification protocol is completed for the project activity. The protocol shows in transparent manner criteria (requirements), means of verification and resulting statements on verification actual project activity against identified criteria.

The verification protocol serves the following purposes:

- It organises in a table form, details and clarifies the GS-VER requirements;
- It ensures a transparent verification process where the DOE will document how a particular requirement has been verified and the result of the verification.
- It ensures that the issues are accurately identified, formulated, discussed and concluded in the verification report.
- It ensures the determination of achieving credible emission reductions from the project activity and if the project has contributed to sustainable development.

The verification protocol consists of three tables. Table 1 reflects the verification requirements and reference to the materials used to verify the project activity against those requirements, as well as means of verification, reference to Table 2 and preliminary and final opinion of the DOE on every particular requirement. Table 3 reflects the carry forward actions initiated by the verification team if the monitoring and reporting require attention and/or adjustment for the next verification period. The completed verification protocol for this project is enclosed in Appendix A to this report.

Findings during the verification can be interpreted as a non-compliance with GS criteria or a risk to the compliance. Corrective action requests (CARs) are raised, in case:

(a) Non-conformities with the monitoring plan or methodology are found in monitoring and reporting and has not been sufficiently documented by the project participants, or if the evidence provided to prove conformity is insufficient;
(b) Modifications to the implementation, operation and monitoring of the registered project activity has not been sufficiently documented by the project participants;
(c) Mistakes have been made in applying assumptions, data or calculations of emission reductions which will impair the estimate of emission reductions;
(d) Issues identified in a FAR during validation/previous verification(s) that are not been resolved by the project participant(s) to be verified during current verification.

Clarification Requests(Cls) are raised, if information is insufficient or not clear enough to determine whether the applicable GS-VER requirements have been met.

A forward action request (FAR) is raised during verification to highlight issues related to project implementation/monitoring that require review during the subsequent verification of the project activity. FARs shall not relate to the GS-VER requirements for issuance.

2.4 Internal quality control

The final verification report has passed a technical review before being submitted for request for issuance. The technical review was performed by a technical reviewer qualified in accordance with TÜV Rheinland's qualification scheme for GS-VER validation and verification.

2.5 Verification team

Before the assessment begins, members of the verification team are ensured to cover the technical area(s), sectoral scope(s) and relevant host country experience including local language ability for evaluating the GS-VER verification activity. The qualification of the team is as per the criterias defined by the GS guidelines for qualification.

Table 2

verification team			Type of Involvement							
Full name	**Affiliation TÜV Rheinland**	**Appointed for Sectoral Scopes (Technical Areas)**	Supervising the work	Desk review	Site Visit + Interview	Report and protocol Writing	Technical Expert Input	Reporting Support	Trainee Technical Review	Technical Review
YAN Chong	China	1.2	X	X	X	X				
ZHU Jiang	China	1.1, 1.2, 4.5								X
Walter TANG	China	1.1, 1.2, 2.1, 2.2, 3.1, 4.3, 4.5, 13.1								X

3. Verification findings

The findings of the verification are described in the following sections. The verification criteria (requirements), the means of verification and the results of verification are documented in detail in the verification protocol in Appendix A.

3.1 Project implementation

3.1.1 The implementation of the project activity

As reflected on http://mer.markit.com/br-reg/public/project.jsp?project_id=103000000002094, the project has been registered as GS-VER project activity, under the approved consolidated baseline and monitoring methodology ACM0002, Version 12.1.0, "Consolidated baseline methodology for grid-connected electricity generation from renewable sources"/9/. The first renewable crediting period is from 01 Jan. 2009 to 31 Dec. 2015, hence the monitoring period from 01/08/2013 to 31/07/2014 is confirmed to fall within the first crediting period from 01 Jan. 2009 to 31

Dec. 2015, and also the verification for the monitoring period from 01/08/2013 to 31/07/2014 is the fourth periodical verification of the project.

By means of on-site inspection and documents review, the verification team can ensure below,

- The project is a bilateral GS-VER project activity/3/. Due to the market situation, Xinglong project voluntarily withdraw from the original bundled project/3/, which has been described in the memo of request for design changes of project/6/ and approved by GS/8/. Combined with onsite interview/v/, the current project participants are confirmed to be Climate Bridge Ltd. (GS VER buyer), Tongdao Dong Autonomous County Liangjiangkou Hydropower Station and Jingzhou Miao & Dong Autonomous County Guanbaodu Hydropower Co., Ltd., as accurately reflected in the approved revised GS-VER-PDD/5/.

- Guanbaodu project is located on the lower reach of Qushui River, 16 km from Jingzhou County with the geographical coordinates east longitude 109°44'09" and north latitude 26°40'38". Liangjiangkou project is located on the Tongdao River, 8.5 km away from Tongdao County with the geographical coordinates of east longitude 109°47'45" and north latitude 26°13'11". The project locations are in line with the approved revised GS-VER-PDD/5/ and are confirmed through onsite GPS device measurement.

- As confirmed through onsite inspection, 4MW(1MW*4) and 1.89MW(0.63MW*3) turbine and generator units have been installed for Guanbaodu and Liangjiangkou Project respectively. The Project installation is in line with the approved revised GS-VER-PDD/5/ and the validation report/4/ of the project;

- As stipulated in the signed Power Purchase Agreement (PPA)/24//25/, the electricity generated by the project is delivered to the Central China Power Grid (CCPG), which is consistent with the GS-VER-PDD/5/.

As part of the site visit, the verification team was able to confirm that the project implementation is in accordance with the project description contained in the approved revised GS-VER-PDD/5/. The verification took cognizance para.260 of VVS/11/.

Herewith, the verification team summarizes *major* changes between initial Monitoring Report and final version of Monitoring Report for submission as follows:

Table 3

Subject	Initial Monitoring Report (MR)	Correction to webhosted MR in the final MR submission for issuance with DOE assessment and reason of acceptance.
MR (participants involved/ project location)	N/A	N/A
Monitoring (parameters / frequency)	N/A	N/A

Project implementation/technology, etc.	N/A	N/A
VER calculations (formula applied/ amount of emission reduction)	N/A	N/A
The key sustainable development indicators	N/A	N/A
Please refer to Appendix A of this report for details of each change between Initial MR and the final MR for submission. The verification team has carried out the verification process based on the Initial MR and raised CARs/CIs against the project by issuing the verification protocol. *With the updated information and corrections done on final MR, the PP has addressed all the CARs /CIs that were raised by the verification team.* *It is concluded that the verification team has reviewed the project in line with the GS-VER requirements and all the evidence, corrections, justifications and updating done on the final MR with respect to CARs /CIs raised are accepted and closed by the verification team, issuing the positive verification opinion for project.*		

3.1.2 The actual operation of the project activity

As accurately reported in the monitoring report for the monitoring period from 01/08/2013 to 31/07/2014/1/, the actual operation of the project is well organized and fully in compliance with the GS-VER-PDD/5/, detailed assessment as following,

(a) Implementation status of the project activity:

As confirmed in the previous verification reports/22/, the Guanbaodu project started construction in August 2005 and started operation in January 2008; the Liangjiangkou project started construction in August 2006 and started operation in January 2008. For this monitoring period from 01/08/2013 to 31/07/2014, by means of on-site interviewing of the operators/i//iii/ and checking the daily operation & maintenance logs/28/, the verification team can confirm that the project activity operated well, and no event which may impact the applicability of the methodology occurred during this monitoring period.

(b) Technology applied by the project activity:

The installed capacity as listed in the Table 4 below from the nameplates of the turbines and generators/43//44/ is consistent with the approved revised GS-VER-PDD/5/.

Table 4

	Installed capacity	**Turbine**	**Generator**
Guanbaodu	1MW*4	GD008-WZ-275	SFW1000-10/1430
Liangjiangkou	0.63MW*3	ZD03-LH-160	SF630-24/1730

(c) Monitoring arrangement of the project activity:

As stipulated in the PPAs/24//25/, the electricity generated by the projects is delivered to the CCPG.

The installation of monitoring meters has been confirmed to be fully in compliance with the approved revised GS-VER-PDD/5/ during onsite inspection. In Guanbaodu project, one main meter (M2) and one backup meter (M1) has been installed for the measurement of the electricity supplied by the project to the grid (EG_{export}) and electricity supplied by the grid to the project (EG_{import}). In Liangjiangkou project, one meter meter (M1) has been installed for the measurement of the electricity supplied by the project to the grid (EG_{export}) and electricity supplied by the grid to the project (EG_{import}). The electric line diagram/17/ showing the meters is confirmed to be accurately indicated in the monitoring report/1/. The net electricity supplied by the project to the grid ($EG_{facility,y}$) is thus determined by subtracting EG_{import} from EG_{export} as per the approved revised GS-VER-PDD/5/ and is deemed to be appropriate.

As per the monitoring data records/14/, the EG_{export} and EG_{import} are continuously measured and monthly recorded, which is in compliance with the approved revised GS-VER-PDD/5/.

The ETNs/15/ have been provided to the verification team and has been used for cross-checking EG_{import} and EG_{export}.

The monitoring of key sustainable development indicators is also confirmed to be in line with the sustainability monitoring plan in the approved revised GS-VER-PDD/5//7/.

Table 5

Any Project Design Change been sought and approved by GS for the project?	☒ Yes ☐ No	Yes. Prior to this verification, the Xinglong Project has voluntarily withdrawn from the original bundled project/3/, and this change has been approved by GS/8/.
Any Deviation/Revision in Monitoring plan is sought and approved by GS for the project?	☐ Yes ☒ No	N/A
Any change occurred that may have impact on the GS qualification of the project	☐ Yes ☒ No	No
Does the monitoring report provide line diagram showing all relevant monitoring equipments?	☒ Yes ☐ No	Yes. The line diagram showing all relevant monitoring equipment has been provided in Section 3 of the monitoring report/1/.

In summary, the monitoring period is reasonable and the actual implementation of the project activity is appropriate.

3.2 GHG emission reduction monitoring check

3.2.1 Compliance of the monitoring plan with the monitoring methodology including applicable tool(s)

During the on-site assessment, the whole project operation process was carefully inspected and reflected the emission sources included in the project boundary to be consistent with the approved revised GS-VER-PDD/5/ and the validation report/4/.

The verification team is thus able to confirm that the monitoring plan under implementation is in compliance with ACM0002, ver.12.1.0/9/ and applicable tool/10/ applied by the registered project activity. The verification took cognizance para.264 of VVS/11/.

3.2.2 Compliance of the Actual monitoring with monitoring plan in the GS-VER-PDD

The GHG emission reduction monitoring has been carried out in accordance with the GHG emission reduction monitoring plan contained in the GS-VER-PDD/5/.

The verification team determined against all the information provided in MR to check if the actual monitoring plan is in-line with the applied monitoring methodology. The verification took cognizance para.268 of VVS/11/.

Table 6

Determination Requirements	Criteria fulfilled	Determination and reporting by the verification team
Has any MP revision or deviation been sought and approved by GS for the project.	☐ Yes ☐ No ☒ N/A	N/A
Is complete set of data for the specified monitoring period available	☒ Yes ☐ No	Yes. The monitoring data records covering the monitoring period from 01/08/2013 to 31/07/2014 has been provided to the verification team/14/, and can be confirmed to be complete for the verification.
Has the required information provided in the monitoring report been cross-checked with other sources	☒ Yes ☐ No	Yes. As reflected in the emission reductions calculation spreadsheet/12/, the ETNs have been used for cross checking/15/. And the conservative method is applied for the monitoring period 01/08/2013 to 31/07/2014, i.e. the smaller value between the monthly records and ETNs is taken as the electricity exported to the grid for emission reduction calculation, while the larger value between monthly records and ETNs is taken as the electricity imported from the grid for emission

Determination Requirements	Criteria fulfilled	Determination and reporting by the verification team
		reductions calculation.
Is the calculation of baseline emissions and project activity emissions and leakage in accordance with the formula and methods described in monitoring plan and the applied methodology.	☒ Yes ☐ No	Yes. It is confirmed by the verification team that the calculation of baseline emissions and project activity emissions and leakage, as reflected in the monitoring report/1/, is in accordance with the formula and methods described in monitoring plan of the GS-VER-PDD/5/ and the applied methodology ACM0002, ver.12.1.0/9/.
Have all assumptions used for emission calculation been justified	☒ Yes ☐ No	Yes. For the emission reductions calculation, the adopted ex-ante emission factor of 0.85285tCO_2/MWh is confirmed to be consistent with the GS-VER-PDD/5/.
Have appropriate emission factors, IPCC default values and other reference values been correctly applied	☒ Yes ☐ No	Yes. As clearly reflected in the monitoring report/1/, the ex-ante emission factor of 0.85285tCO_2/MWh is correctly applied in the emission reductions calculation.

3.2.3 Monitored parameters

- **Baseline Emissions (BE_y)**

  According to the GS-VER-PDD/5/, the baseline emissions of the project is determined as following formula,

  $BE_y = EG_{PJ,y} \bullet EF_{grid,CM,y}$

  $EG_{PJ,y} = EG_{export} - EG_{import}$

  Where:

  BE_y = Baseline emissions in year y;

  $EG_{PJ,y}$ = Net electricity generation supplied by the project activity to the grid in year y;

  EG_{export} = Electricity generation supplied by the project activity to the grid;

  EG_{import} = Electricity generation supplied by the grid to the proposed project;

  $EF_{grid,CM,y}$ = Combined margin CO2 emission factor for grid connected power generation. As reported in the GS-VER-PDD/5/, the value has been ex-ante determined as 0.85285tCO_2e/MWh and will be fixed during the first crediting period.

  Hence, the ex-post monitored parameter for the baseline emissions calculation is confirmed as listed in the Table 7,

Table 7

Monitoring parameter Requirement	Assessment/ Observation by the DOE
1. Data / Parameter: (as in monitoring plan of GS-VER-PDD):	EG_{export}

2. Type of Monitoring equipment	See Table 9
3. Measuring frequency/Time Interval:	Continuously measured
4. Reporting frequency:	Monthly recorded
5. Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes. The frequency of continuously measured and monthly recorded is fully in accordance with the monitoring plan of the GS-VER-PDD/5/ and the monitoring methodology ACM0002, ver.12.1.0/9/.
6. Is accuracy of the monitoring equipment as stated in the GS-VER-PDD? If the PDD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	**Guanbaodu:** Based on the on-site inspection, both meter M1 and meter M2 have the accuracy of 0.5, and the adopted accuracy of 0.5 is confirmed to be in compliance with the accuracy requirement as stipulated in the monitoring plan of the GS-VER-PDD/9/. **Liangjiangkou:** Based on the on-site inspection, meter M1 has the accuracy of 0.5, and the adopted accuracy of 0.5 is confirmed to be in compliance with the accuracy requirement as stipulated in the monitoring plan of the GS-VER-PDD/9/.
7. If applicable, has the reported data been cross-checked with other available data?	Yes. The reported data has been cross-checked with ETNs, and the conservative value was taken for the calculation of emission reductions.
8. How were the values in the monitoring report verified?	The verification team cross checked the complete set of monitoring data records/14/ with ETNs/15/, and could verify that the reported values in the monitoring report/1/ are conservative.
9. Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes. The GS monitoring manual has been documented in place for the project/26//27/. In addition, during the on-site assessment, the GS training records/29//30/ and operational qualifications of staff/31/ were checked valid to demonstrate the data management competence of GS monitoring team.
10. In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	N/A

Monitoring Parameter Requirement	Assessment/ Observation by the DOE

1. Data / Parameter: (as in monitoring plan of GS-VER-PDD):	EG_{import}
2. Type of Monitoring equipment	See Table 9
3. Measuring frequency/Time Interval:	Continuously measured
4. Reporting frequency:	Monthly recorded
5. Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes. The frequency of continuously measured and monthly recorded is fully in accordance with the monitoring plan of the GS-VER-PDD/5/ and the monitoring methodology ACM0002, ver.12.1.0/9/.
6. Is accuracy of the monitoring equipment as stated in the GS-VER-PDD? If the GS-VER-PDD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	**Guanbaodu:** Based on the on-site inspection, both meter M1 and meter M2 have the accuracy of 0.5, and the adopted accuracy of 0.5 is confirmed to be in compliance with the accuracy requirement as stipulated in the monitoring plan of the GS-VER-PDD/5/. **Liangjiangkou:** Based on the on-site inspection, meter M1 has the accuracy of 0.5, and the adopted accuracy of 0.5 is confirmed to be in compliance with the accuracy requirement as stipulated in the monitoring plan of the GS-VER-PDD/5/.
7. If applicable, has the reported data been cross-checked with other available data?	Yes. The reported data has been cross-checked with ETNs, and the conservative value was taken for the calculation of emission reductions.
8. How were the values in the monitoring report verified?	The verification team cross checked the complete set of monitoring data records/14/ with ETNs/15/, and could verify that the reported values in the monitoring report/1/ are conservative.
9. Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes. The GS monitoring manual has been documented in place for the project/26//27/. In addition, during the on-site assessment, the GS training records/29//30/ and operational qualifications of staff/31/ were checked valid to demonstrate the data management competence of GS monitoring team.
10. In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	N/A

- **Project Emissions (PE_y)**

  Guanbaodu:

  According to the Yearly measurement of the Area of the reservoir/39//40/, Area of reservoir measured in the surface of the water A_{PJ} for Guanbaodu project is 327,000m^2 and 327,000m^2 in year 2013 and 2014. The installed capacity Cap_{PJ} of the Guanbaodu project is 4MW as confirmed with the nameplate of the project/43/. Thus, Power density of Guanbaodu Project is calculated as 12.23 W/m^2 for Year 2013 and 12.23 W/m^2 for Year 2014 with equation $PD=\frac{Cap_{PJ}}{A_{PJ}}$ which is in line with the methodology ACM0002, version12.1.0 applied/9/. The power density of the project PD is greater than 10 W/m^2. Thus, PE is 0 for Year 2013 and 2014 according to methodology ACM0002, version12.1.0/9/.

  Liangjiangkou:

  According to the Yearly measurement of the Area of the reservoir/41//42/, Area of reservoir measured in the surface of the water A_{PJ} for Liangjiangkou project is 177,700m^2 and 176,900m^2 in year 2013 and 2014. The installed capacity Cap_{PJ} of the Liangjiangkou project is 1.89MW as confirmed with the nameplate of the project/44/. Thus, Power density of Liangjiangkou Project is calculated as 10.63 W/m^2 for Year 2013 and 10.68W/m^2 for Year 2014 with equation $PD=\frac{Cap_{PJ}}{A_{PJ}}$ which is in line with the methodology ACM0002, version12.1.0 applied/9/. The power density of the project PD is greater than 10 W/m^2. Thus, PE is 0 for Year 2013 and 2014 according to methodology ACM0002, version12.1.0/9/.

- **Leakage (L_y)**

  According to the GS-VER-PDD/5/, no leakage is considered for the project, i.e. L_y=0, which is also confirmed to be in compliance the applied methodology ACM0002, ver.12.1.0/9/. Hence the verification team confirm that no parameter is required to be monitored for the leakage.

The ex-ante parameters are summarized in the below Table:

Table 8

Default values used:	0.85285 tCO_2e/MWh for $EF_{grid,CM,y}$
Source and Verification of the source	The default value used for $EF_{grid,CM,y}$ can be verified correct by checking following sources, - GS-VER-PDD/5/; - 2009 Baseline Emission Factor for Regional Power Grids in China/16/.

In summary, the verification team confirms that all the ex-ante and ex-post parameters are monitored in accordance to the approved monitoring plan and applied methodology. The verification took cognizance para.268 of VVS/11/.

3.2.4 Monitoring responsibility

During the on-site visit, the verification team interviewed with the management representative and on-site operators/i//iii//v/, and confirmed that the structure of monitoring management team and the responsibilities of team have been defined and followed well in accordance with the GS-VER-PDD/5/. And also GS monitoring manual was found being documented in place for the monitoring of the project/26//27/.

The monitoring personnel are well trained/29//30/ and have got relevant national operation qualifications/31/, which demonstrates that they have sufficient competence to carry out the relevant monitoring tasks.

3.2.5 Accuracy of equipment and calibration frequency

The monitoring equipment has been installed in the project activity according to the monitoring plan in the GS-VER-PDD/5/.

For Guanbaodu project, no any change in the monitoring equipment can be detected for the monitoring period from 01/08/2013 to 31/07/2014 from the daily operation & maintenance logs of the project/28/.

For Liangjiangkou project, the meter M1 (SN:0611960283) with accuracy of 0.5 was replaced by the meter (SN:010003697381) with accuracy of 0.5s due to the grid requirement, as reflected in the daily operation & maintenance logs of the project/28/. Since the adopted accuracy is same, and the meter reading before meter changing was recorded well, thus the verification team can consider that the meter change does not have any impact on the monitoring of Liangjiangkou and even in the emission reductions calculation.

The table below summarizes relevant specifications of monitoring equipment:

Table 9

Monitoring Equipment:	**Guanbaodu**		**Liangjiangkou**	
	M1 (Backup Meter)	M2 (Main Meter)	M1	
Function:	Bi-directional electricity meter	Bi-directional electricity meter	Bi-directional electricity meter	Bi-directional electricity meter
Location:	Project site	Gantang subtation	Shuangjiang substation	
Monitored parameter:	EG_{export}, EG_{import}			
Type:	DSSD25	DSSD331	DSSD566	DSZ331
Serial number:	0704575	1158010043	0611960283	010003697381
Accuracy:	0.5	0.5	0.5	0.5s
Validity of last calibration	19/09/2012-18/09/2013	19/09/2012-18/09/2013	13/12/2012-12/12/2013	N/A
Calibration date	17/09/2012	17/09/2012	N/A	08/12/2013

Validity of calibration	17/09/2013-16/09/2014	17/09/2013-16/09/2014		08/12/2013-07/12/2014
Calibration certifcate no. and name of the certifier	HTDa13092022/18/	HTDa13092021/18/	HJBV201212-02785/18/	
Authority of the certifier and validity of certifier	Certificate of Metrological Authorization to Huitong County Quality Supervision, Inspection and Metrological Verification Institute issued by Administration of Quality and Technology Supervision of Hunan Province, Certificate No.:[2011]xiangliangbiaohuizhengzi001, dated 20/11/2011 and valid to 19/11/2016/19/		Certificate of Metrological Authorization to Hunan Huaihua Metrological Test & Verification Institute issued by Administration of Quality and Technology Supervision of Hunan Province,, Certificate No.:(Xiang) Fa Ji(2008)02013, dated 20/10/2008 and valid to 19/10/2013/20/	Certificate of Metrological Authorization to Huaihua City Tongdao Grid Company issued by Hunan Province Huaihua City Quality Supervision and Inspection Bureau, Certificate No.: (Huai) Fa Ji(2013)1003, dated 26/05/2013 and valid to 25/05/2016/20/
Frequency of calibration:	Yearly			
Relevant sectoral standard:	Verification Regulation of Electrical Meters for Measuring Alternating-current Electrical Energy (JJG596-1999)/21/			

In summary, the verification team is able to verify that the accuracy of the monitoring equipment were set according to the monitoring plan in the GS-VER-PDD/5/. Furthermore, all calibration procedures were carried out according to the monitoring plan in the GS-VER-PDD/5/. The verification took cognizance para.272 of VVS/11/.

3.2.6 Deviation from and/or Revision of the registered monitoring plan

Not applicable.

3.2.7 Assessment of data and calculation of greenhouse gas emission reductions

A complete set of data for the monitoring parameter $EG_{facility,y}$, $EG_{export,y}$ and $EG_{import,y}$ are available for verification/14/. Further, the electricity exported to the grid (EG_{export}), the electricity imported from the grid (EG_{import}), and the net electricity supplied to the grid $EG_{facility,y}$ have been cross-checked with ETNs/15/. If the measured electricity is different from sales receipts, the most conservative value is applied, i.e. the smaller value is taken

as the electricity exported to the grid (EG_{export}), while the larger value is taken as the electricity imported from the grid (EG_{import}).

Detailed calculation is presented in the ER calculation spreadsheet/13/, the total emission reductions is 15,708tCO2e for the monitoring period from 01/08/2013 to 31/07/2014.

Based on the assessment in the section 3.2.3, the summary of emission reductions during the monitoring period 01/08/2013 to 31/07/2014 is confirmed as listed in the Table 10-11.

Guanbaodu project:

Table 10

Monitoring period	Measured $EG_{Exported}$ (MWh)	Measured $EG_{Imported}$ (MWh)	EG_{PJ} (MWh)	BE_y (tCO_2e)	PE_y (tCO_2e)	LE_y (tCO_2e)	ER_y (tCO_2e)
	A	C	C=A-B	D=C*0.85285	E	F	G=D-E-F
2013.08	364.00	12.46	351.54	299.81	0.00	0.00	299.81
2013.09	805.00	6.44	798.56	681.05	0.00	0.00	681.05
2013.10	777.00	4.06	772.94	659.20	0.00	0.00	659.20
2013.11	644.00	5.18	638.82	544.82	0.00	0.00	544.82
2013.12	532.84	5.95	526.89	449.36	0.00	0.00	449.36
Subtotal in 2013	**3,122.84**	**34.09**	**3,088.75**	**2,634.24**	**0.00**	**0.00**	**2,634.24**
2014.01	479.99	5.67	474.32	404.52	0.00	0.00	404.52
2014.02	291.55	9.52	282.03	240.53	0.00	0.00	240.53
2014.03	775.60	2.52	773.08	659.32	0.00	0.00	659.32
2014.04	1,675.80	0.70	1,675.10	1,428.61	0.00	0.00	1,428.61
2014.05	1,551.83	0.00	1,551.83	1,323.48	0.00	0.00	1,323.48
2014.06	2,361.52	0.00	2,361.52	2,014.02	0.00	0.00	2,014.02
2014.07	1,980.86	1.54	1,979.32	1,688.06	0.00	0.00	1,688.06
Subtotal in 2014	**9,117.15**	**19.95**	**9,097.20**	**7,758.55**	**0.00**	**0.00**	**7,758.55**
Total							**10,392.79**

Liangjiangkou:

Table 11

Monitoring period	Measured $EG_{Exported}$ (MWh)	Measured $EG_{Imported}$ (MWh)	EG_{PJ} (MWh)	BE_y (tCO_2e)	PE_y (tCO_2e)	LE_y (tCO_2e)	ER_y (tCO_2e)
	A	C	C=A-B	D=C*0.85285	E	F	G=D-E-F
2013.08	268.212	1.652	266.560	227.34	0.00	0.00	227.34
2013.09	422.464	1.120	421.344	359.34	0.00	0.00	359.34
2013.10	378.280	1.260	377.020	321.54	0.00	0.00	321.54
2013.11	262.584	1.568	261.016	222.61	0.00	0.00	222.61
2013.12	308.252	1.260	306.992	261.82	0	0	261.82
Subtotal in 2013	**1,639.79**	**6.86**	**1,632.93**	**1,392.65**	**0.00**	**0.00**	**1,392.65**
2014.01	220.976	1.680	219.296	187.03	0.00	0.00	187.03
2014.02	212.520	1.036	211.484	180.36	0.00	0.00	180.36
2014.03	440.524	0.644	439.880	375.15	0.00	0.00	375.15
2014.04	848.260	0.476	847.784	723.03	0.00	0.00	723.03
2014.05	908.684	0.476	908.208	774.57	0.00	0.00	774.57
2014.06	1,142.764	0.140	1,142.624	974.49	0.00	0.00	974.49

2014.07	830.564	0.308	830.256	708.08	0.00	0.00	708.08
Subtotal in 2014	**4,604.292**	**4.760**	**4,599.53**	**3,922.71**	**0.00**	**0.00**	**3,922.71**
Total							**5,315.36**

In conclusion, to the verification team's opinion, the monitored data for this monitoring period is complete, the formulas and default values are applied correct and all results are verifiable and transparent. The verification took cognizance para.279 of VVS/11/.

3.2.8 Assessment opinion against Guideline on the Application of Materiality in Verification

Against the Guideline on the Application of Materiality in Verifications, Version 01.0/23/, the assessment on the materiality in verification is conducted in the following step-wised procedures,

1) According to the GS-VER-PDD/5/, the project is a small-scale project activity. As per the subparagraph (d) of Guidelines on the application of materiality in verifications (version 01.0)/23/, 5% materiality threshold shall be applied;
2) As stipulated in the paragraph 17 of Guidelines on the application of materiality in verifications (version 01.0)/23/, the materiality threshold shall apply to the total emission reductions or removals actually achieved. As verified in the section 3.2.7, the total emission reductions actually achieved during the monitoring period is 15,708tCO_2e, thus the materiality threshold of the project activity is identified to be 785.4 tCO_2e.
3) The risk assessment for this project was developed as following three major steps:
   a) both the monitoring data records/14/ and ETNs/15/ were checked to be complete data set to reasonably calculate the total emission reductions achieved during the monitoring period;
   b) both the calibration certificate of monitoring meters/18/ and the metrological authorization to the calibration entity/19//20/ were checked to sufficiently ensure the accuracy of all meters during the monitoring period;
   c) the emission reduction calculation was checked with the monitoring data records/14/ and ETNs/15/, no error within the data set was identified by the verification team.

To sum, the verification team can conclude that the claimed emission reductions of during the monitoring period 01/08/2013 to 31/07/2014 are free from material errors, omissions or misstatements, with a reasonable level of assurance.

3.2.9 Assessment of actual emission reductions with the estimate emission reductions in GS-VER-PDD

The emission reduction comparison between estimation of the approved revised GS-VER-PDD and the actual one of this monitoring period is summarized in the table below:

Table 12

Estimated Emission Reduction as per Registered/Approved	**Guanbaodu:** 13,230 tCO2e for monitoring period from 01/08/2013 to

GS-VER-PDD:	31/07/2014 including both days and it is based on 13,230 tCO2e of annual emission reductions as indicated in the GS-VER-PDD/5/. **Liangjiangkou:** 5,201 tCO2e for monitoring period from 01/08/2013 to 31/07/2014 including both days and it is based on 5,201 tCO2e of annual emission reductions as indicated in the GS-VER-PDD/5/.
Actual Emission Reduction for the Monitoring Period	**Total:** 15,708tCO2e of this monitoring period from 01/08/2013 to 31/07/2014, totally 365 days, including both days **Guanbaodu:** 10,392.79 tCO2e of this monitoring period from 01/08/2013 to 31/07/2014, totally 365 days, including both days. **Liangjiangkou:** 5,315.36 tCO2e of this monitoring period from 01/08/2013 to 31/07/2014, totally 365 days, including both days.
Is any increase of CER's occurred?	The actual emission reduction of Guanbaodu project is lower than the estimated emission reduction. The actual emission reduction of Liangjiangkou project is 2.2% higher than the estimated emission reduction, which is much slight and could be deemed reasonable due to the normal water flow fluctuation, based on the expertize of verification team.

3.3 Sustainability monitoring check

It is confirmed that there is no change to the key sustainable development indicators during this monitoring period. The monitoring of the contribution to sustainable development during this monitoring period following the approved revised sustainability monitoring plan/7/ is verified as follows:

Guanbaodu:

Sustainable development indicator	Data type	Frequency	Assessment by verification team
Water quality and quantity	Local/regional /global environment	Yearly	Through reviewing Management Regulation of Environment and Health/37/ as well as onsite interview, it is confirmed that waste water is treated in the septic tank before discharge which is in line with the EIA of the project/45/. The impact of the project on water quality and quantity is deemed small compared to the baseline according to the stakeholder questionnaire/35/ and this is also confirmed during the onsite stakeholder interview.
Solid wastes	Local/regional	Yearly	Through reviewing Management Regulation of

	/global environment		Environment and Health/37/ as well as onsite interview, it is confirmed that solid waste is transported to the designated deposit site before sent to the landfill which is in line with the EIA of the project/45/. The impact of the solid waste of the project is deemed small compared to the baseline according to the stakeholder questionnaire/35/ and this is also confirmed during the onsite stakeholder interview.
Biodiversity (species and habitat conservation)	Local/regional /global environment	Yearly	The impact of the project on Biodiversity (species and habitat) is deemed small compared to the baseline according to the stakeholder questionnaire/35/ and this is also confirmed during the onsite stakeholder interview.
Employment	Social sustainability and development Economic and technological development	Monthly	Through reviewing the monthly payroll of the monitoring period/33/ and onsite interview, it is confirmed that 16 local people was employed in the project compared to the baseline with salary ranging from 1,035.86 to 3,336.57RMB per month .The average salary of the employee is higher than the average salary of 698 RMB per month in rural area of Hunan Province/47/.
Livelihood of the poor	Economic and technological development	Yearly	Through reviewing the monthly payroll of the monitoring period/33/ and onsite interview, it is confirmed that 16 local people was employed in the project with salary ranging from 1,035.86 to 3,336.57RMB per month .The average salary of the employee is higher than the average salary of 698 RMB per month in rural area of Hunan Province/47/. Moreover, through onsite interview, it is confirmed that the road and bridge built and the irrigation system sponsored by the project facilitate the daily life of the local residents and thus improve the livelihood of the poor.
Access to energy service	Social sustainability and development	Monthly	According to the PPA/24/, the electricity generated by the project is sold to the Jinzhou county grid as part of the CCPG and thus facilitate the access to energy service of the local residents compared to the baseline.
Human and institutional capacity	Social sustainability and development	Monthly	Through reviewing the monthly payroll of the monitoring period/33/ and onsite interview, it is confirmed that the project has provided two job opportunities for local women. Through reviewing the training records, it is confirmed that trainings were provided to the employee/29/.

Liangjingkou:

Sustainable development indicator	Data type	Frequency	Assessment by verification team
Water quality and quantity	Local/regional /global environment	Yearly	Through reviewing Management Regulation of Environment and Health/38/ as well as onsite interview, it is confirmed that waste water is treated in the septic tank before discharge which is in line with the EIA of the project/46/. The impact of the project on water quality and quantity is deemed small compared to the baseline according to the stakeholder questionnaire/36/ and this is also confirmed during the onsite stakeholder interview.
Solid wastes	Local/regional /global environment	Yearly	Through reviewing Management Regulation of Environment and Health/38/ as well as onsite interview, it is confirmed that solid waste is transported to the designated deposit site before sent to the landfill which is in line with the EIA of the project/46/. The impact of the solid waste of the project is deemed small compared to the baseline according to the stakeholder questionnaire/36/ and this is also confirmed during the onsite stakeholder interview.
Biodiversity (species and habitat conservation)	Local/regional /global environment	Yearly	The impact of the project on Biodiversity (species and habitat) is deemed small compared to the baseline according to the stakeholder questionnaire/36/ and this is also confirmed during the onsite stakeholder interview.
Employment	Social sustainability and development Economic and technological development	Monthly	Through reviewing the monthly payroll of the monitoring period/34/ and onsite interview, it is confirmed that 11 local people was employed in the project compared to the baseline with salary ranging from 700 to 2,500RMB per month .The average salary of the employee is higher than the average salary of 698 RMB per month in rural area of Hunan Province/47/.
Livelihood of the poor	Economic and technological development	Yearly	Through reviewing the monthly payroll of the monitoring period/34/ and onsite interview, it is confirmed that 11 local people was employed in the project with salary ranging from 700 to 2,500RMB per month .The average salary of the employee is higher than the average salary of 698 RMB per month in rural area of Hunan Province/47/. Moreover, through onsite interview, it is confirmed that the road and bridge built and the irrigation system sponsored by the project facilitate the daily life of the local residents and thus improve the livelihood of the poor.
Access to energy service	Social sustainability and development	Monthly	According to the PPA/25/, the electricity generated by the project is sold to the Jinzhou county grid as part of the CCPG and thus facilitate the access to energy service of the

			local residents compared to the baseline.
Human and institutional capacity	Social sustainability and development	Monthly	Through reviewing the monthly payroll of the monitoring period/34/ and onsite interview, it is confirmed that the project has provided one work opportunity for local women. Through reviewing the training records/30/, it is confirmed that trainings were provided to the employees.

3.4 Issues remaining from the previous verification period

The verification for the monitoring period 01/08/2013 to 31/07/2014 is the fourth periodical verification of the project. By checking the validation report of the project/4/, there is no FAR during validation. However, through reviewing the previous verification report/22/, one FAR was raised during the 2nd verification period from 01/01/2011 to 31/05/2012.

FAR	Verification Team's Assessment
Liangjiangkou Project **Forward Action Request No. 1** Employment opportunities shall be equally provided in local community, including both residents in relation with members of Board and vulnerable group which has less access of direct contacts.	Through onsite interview of the PO, operators and the local residents of Liangjiangkou project/i//ii/, it is confirmed that the employed local residents who have no relationship with the board member of the project constitutes more than 50% of the total employees of the project.

Appendix A

GS-VER Verification Protocol

Hunan Guanbaodu-Liangjiangkou Small-scale Hydropower Bundle Project

in

P.R. China

to Report No. 01 996 9105076671

Checklist question	Ref.	MoV[1]	Findings, comments, references, data sources	Draft conclusion	Final conclusion
1. Implementation					
1.1 Have all physical features proposed in the registered GS-VER-PDD been implemented at the project site? para. 262 of VVS	/2//3/ /5/ /24//25/ /43//44/	DR I	Yes. The verification team conducted an on-site visit. 1) The project location and installed capacity is in line with the approved revised GS-VER-PDD. 2) By means of checking the nameplate, it is identified that the actual installation is in line with the approved revised GS-VER-PDD. 3) As per PPA, the electricity generated by the project is delivered to CCPG. To sum, the verification team can confirm that all physical features proposed in the approved revised GS-VER-PDD been implemented at the project site.	OK	OK
1.2 Has the project activity been operated in accordance with the project scenario described in the registered GS-VER-PDD and relevant guidance? Reference: <http://cdm.unfccc.int/EB/033/eb33rep.pdf>, para. 262 of VVS	/5//28/ /i//iii/	DR I	Yes. The project activity has been operated in accordance with the project scenario described in the GS-VER-PDD, as confirmed by means of on-site interview with operation supervisor/i//iii/and checking the daily operation & maintenance logs.	OK	OK
1.3 Any changes occurred since validation and have	/3//5/	DR	Yes.	OK	OK

[1] MoV = Means of Verification, DR = Document Review, I = Interview, www = internet search.

impact on the claimed emission reductions.	/8/	I	Due to the market situation, Xinglong project voluntarily withdraw from the original bundled project/3/, which has been described in the memo of request for design changes of project/6/ and approved by GS/8/. Combined with onsite interview/v/, the current project participants are confirmed to be Climate Bridge Ltd. (GS VER buyer), Tongdao Dong Autonomous County Liangjiangkou Hydropower Station and Jingzhou Miao & Dong Autonomous County Guanbaodu Hydropower Co., Ltd., as accurately reflected in the approved revised GS-VER-PDD/5/. Thus, this change has no any impact on the emission reductions.		
1.4 Any changes occurred that may have impact on the GS qualification of the project, particularly with reference to any potential changes in key parameters leading to an overall positive impact on sustainable development of the project	/5//6/ /7//8/	DR I	No	OK	OK
1.5 If the project activity is implemented on a number of different locations, has the Monitoring report provided the verifiable starting dates for each site? para. 263 (a) of VVS	/5/	DR I	Not applicable.	OK	OK

1.6 Is the start date of monitoring period consistent?	/2/	DR www	Yes	OK	OK
1.7 Is the monitoring report consistently filled with respect to all sections as required by its guideline of filling the monitoring report?	/2/	DR	CAR 1 By means of checking the MR against the approved revised PDD and previous verification reports, following issues are identified, 1) On MR cover page, the indicated monitoring period is not correct; 2) In MR Part 1, the project name is not consistent with the approved revised PDD.	~~CAR 1~~	OK
1.8 Does the ER obtained for the monitoring period fall within the limit of estimate in the registered GS-VER-PDD? Is the claimed CER's justifiable?	/2//5/ /13/	DR	Yes.	OK	OK
1.9 Is the monitoring system provided in line diagrams showing all relevant monitoring points?	/2//5/ /17/	DR	Yes. The electric line diagram showing all relevant monitoring points have been correctly indicated in the monitoring system, which is verified to be consistent with the GS-VER-PDD.	OK	OK
GHG emission reduction monitoring check					
2. Monitoring plan and methodology					
2.1 Is the monitoring plan established in accordance with the monitoring methodology? para. 264 of VVS	/2//5/ /9/	DR	Yes. The monitoring plan established for the monitoring period is in compliance with the approved revised PDD, and it is thus in accordance with the monitoring methodology ACM0002, ver.12.1.0.	OK	OK

2.2 In case the implemented monitoring plan defers from the monitoring methodology, has any requests for revision to or deviation from the monitoring methodology been officially communicated para. 287 of VVS	/2//5//9/	DR	Not applicable.	OK	OK
2.2.1 Have the above changes to the monitoring plan been approved?	/2//5//8/	DR	Not applicable.	OK	OK
3. Monitoring and the monitoring plan					
3.1 Is monitoring established in full compliance with the monitoring plan, contained in the registered GS-VER-PDD (or new monitoring plan approved)? para. 264 of VVS	/2//5//8/	DR	Yes. The monitoring is fully in compliance with the monitoring plan contained in the approved revised GS-VER-PDD.	OK	OK
3.2 Are all baseline emission parameters monitored and updated in accordance with monitoring plan, monitoring methodology and relevant requirements?	/2//5//9/	DR	Yes.	OK	OK
3.2.1 Was the monitoring equipment for baseline emission parameters controlled and monitoring results recorded as per approved frequency?	/2//5//14//i/	DR I	During the on-site visit, the monitoring equipment for baseline emission parameters was verified not controlled. And as reflected in the monitoring data records, the recording frequency of monitoring parameter is fully in accordance with the monitoring plan contained in the approved revised GS-VER-PDD.	OK	OK
3.2.2 Was the monitoring equipment for baseline emission parameters calibrated in accordance with QA&QC procedures described in the registered monitoring plan?	/2//5//18//19//20//i/	DR	The monitoring equipment for baseline emission parameters was calibrated in accordance with the registered monitoring plan, detailed assessment as seen in the section 3.2.5.	OK	OK
3.3 Are all project emission parameters monitored and	/2//5/	DR	Yes.	OK	OK

updated in accordance with monitoring plan, monitoring methodology and relevant requirements?	/39//40/ /41//42/				
3.3.1 Was the monitoring equipment for project emission parameters controlled and monitoring results recorded as per approved frequency?	/2//5/ /9/	DR	Yes.	OK	OK
3.3.2 Was the monitoring equipment for project emission parameters calibrated in accordance with QA&QC procedures described in the registered monitoring plan?	/2//5/ /9/ /39//40/ /41//42/	DR	N/A	OK	OK
3.4 Are all leakage emission parameters monitored and updated in accordance with monitoring plan, monitoring methodology and relevant CDM EB decisions?	/2//5/ /9/	DR	Not applicable since the project leakage is not considered in line with the approved revised GS-VER-PDD and the applied methodology.	OK	OK
3.4.1 Was the monitoring equipment for leakage emission parameters controlled and monitoring results recorded as per approved frequency?	/2//5/ /9/	DR	Not applicable.	OK	OK
3.4.2 Was the monitoring equipment for leakage emission parameters calibrated in accordance with QA&QC procedures described in the registered monitoring plan?	/2//5/ /9/	DR	Not applicable.	OK	OK
3.5 Were all monitoring parameters available and verifiable through the whole monitoring period?	/13//14/ /15/ /39//40/ /41//42/	DR	CL 1 The net electricity generation for Liangjiangkou in Dec. 2013 shall be transparently clarified due to the meter change, and clearly indicated in the ER calculation sheet.	~~CL 1~~	OK
3.5.1 In case, only partial monitoring data is available	/13//14/	DR	Not applicable since the monitoring data	OK	OK

and PP(s) provide estimations or assumptions for the rest of data, was it possible to verify those estimations and assumptions? Reference: <http://cdm.unfccc.int/EB/026/eb26rep.pdf>, §109(b)	/15/ /39//40/ /41//42/		records is available throughout the whole monitoring period.		
3.6 Was management and operation system established and operated in accordance with the monitoring plan?	/26//27/ /28//31/	DR	Yes. The GS monitoring manual incorporating the management and operation system has been established in accordance with the registered monitoring plan. And it has been also operated accordingly as reflected in the daily operation & maintenance logs.	OK	OK
3.7 Was is it possible to verify that involved management and operation personal is fully aware of the responsibilities and perform all operations according to the registered monitoring plan and internally developed manuals?	/29//30/ /31/	DR I	Yes. During the on-site visit, the operation staff/i//iii/ were interviewed and confirmed to be competent in performing all operations in accordance with the registered monitoring plan. In addition, the training records and the operational qualifications of operators have checked to further substantiate the above.	OK	OK
3.8 Does the monitoring system provide organizational structure, role and responsibilities, emergency procedures?	/2//5/ /26//27/	DR	Yes. As documented in the monitoring manual for the project, the organizational structure, role and responsibilities, emergency procedures are clearly defined, which is verified to be consistent with the registered monitoring plan.	OK	OK
3.9 Are any uncertainties identified and addressed?	/13//14/ /15/	DR I	No uncertainties were identified during the on-site visit.	OK	OK

	/39//40/ /41//42/				
4. Parameters					
4.1 **Monitored parameter** Title: $EG_{export,y}$ Indication: Quantity of net electricity supplied to the Grid by the project activity in year y Units: MWh Estimated value (ex-ante): Measured value (ex-post): Title: $EG_{import,y}$ Indication: Quantity of net electricity supplied by the Grid to the proposed project in year y Units: MWh Estimated value (ex-ante): Measured value (ex-post):	/13//14/ /15/ /39//40/ /41//42/	DR	See CL 1	~~CL 1~~	OK
4.2 **Default parameter** Title: $EF_{grid,CM,y}$ Indication: Combined margin CO2 emission factor for grid-connected power generation in year y Units:tCO_2/MWh Default/Used value: 0.85285	/2//4/ /5//16/		According to the approved revised GS-VER-PDD and the validation report, the combined emission factor has been ex-ante determined as 0.85285 tCO_2e/MWh and will be fixed for the whole first crediting period. Further, it can be cross checked with 2009 Baseline Emission Factors for Regional Power Grids in China. Thus, it is appropriate to apply 0.85285tCO2e/MWh of $EF_{grid,CM,y}$ in the monitoring report and the emission	OK	OK

			reductions calculation spreadsheet.		
5. Calculations					
5.1 Have all the calculations related to the baseline emissions been carried according to the formulae and methods described in the registered GS-VER-PDD and applied methodology? para. 280(c) of VVS	/2//5/ /9//13/	DR	Yes.	OK	OK
5.2 Have all the calculations related to the project emissions been carried according to the formulae and methods described in the registered GS-VER-PDD and applied methodology? para. 280(c) of VVS	/2//5/ /9//13/	DR	Yes.	OK	OK
5.3 Have all the calculations related to the leakage emissions been carried according to the formulae and methods described in the registered GS-VER-PDD and applied methodology? para. 280(c) of VVS	/2//5/ /9//13/	DR	According to the approved revised GS-VER-PDD and the applied methodology, no leakage is considered, which has been correctly applied in the monitoring report and the emission reductions calculation spreadsheet.	OK	OK
Suatainablity monitoring check					
6. SD indicators					
6.1 Is monitoring established in full compliance with the sustainability monitoring plan, contained in the registered GS-VER-PDD (or new sustainability monitoring plan approved)?	/2//5/ /7/	DR	Yes.	OK	OK
6.2 Are all sustainability parameters monitored and updated in accordance with sustainability monitoring plan and relevant requirements?	/2//5/ /7/	DR	Yes.	OK	OK
6.3 Is there any change to the key sustainable	/2//5/	DR	No	OK	OK

development indicators	/7/				

Table 2: List of Requests for Corrective Action (CAR) and Clarification (Cl)			
Observation	Reference	Summary of project owner response	Verification team conclusion
CAR 1 By means of checking the MR against the approved revised PDD and previous verification reports, following issues are identified, 1) On MR cover page, the indicated monitoring period is not correct; 2) In MR Part 1, the project name is not consistent with the approved revised PDD.	1.7	The typo has been corrected in the updated MR.	OK. The updated MR is checked, and all typos have been corrected. Therefore, CAR 1 is closed.
CL 1 The net electricity generation for Liangjiangkou in Dec. 2013 shall be transparently clarified due to the meter change, and clearly indicated in the ER calculation sheet.	3.5 4.1	The description regarding the meter replacement and relevant readings has been supplemented in the updated MR and ER spreadsheets.	OK. The meter readings when changing meters are all documented well, and they have been transparently described in the MR and ER spreadsheets. Therefore, CL 1 is closed.

Table 3: List of forward action requests (FARs)			
Observation	Reference	Summary of project participants' response	Verification team conclusion
N/A			

Appendix B

Certification Statement

to the Verification Report

Certification Statement

TÜV Rheinland (China) Ltd., the DOE, has performed the verification of the registered GS Voluntary Offset project activity “Gold standard ID 835”, “Hunan Guanbaodu-Liangjiangkou Small-scale Hydropower Bundle Project” in P. R. China. The project activity is designed to generate emission reductions by displace fossil fuel based grid power generation with renewable hydropower.

The project participants are responsible for the collection of data in accordance with the monitoring plan and the reporting of GHG emissions reductions from the project and sustainable development indicators. It is DOE’s responsibility to express an independent verification statement on the reported GHG emission reductions and impact on sustainable development from the project. The DOE does not express any opinion on the selected baseline scenario or on the validated and registered PDD. The verification is carried out in-line with the GS requirements.

The verification was performed to identify the compliance of the project activity with implementation and monitoring requirements, and to verify the actual amount of achieved emission reductions and the impact of the project on sustainable development, through obtaining evidence and information on-site that included i) checking whether the provisions of the monitoring methodology and the monitoring plan were consistently and appropriately applied and ii) the collection of evidence supporting the reported data and iii) emission reductions that are claimed is free from material errors, omissions or misstatements.

The verification is based on:

- Approved revised GS-VER-PDD/5/;
- Approved monitoring methodology ACM0002, ver.12.1.0, "Consolidated baseline methodology for grid-connected electricity generation from renewable sources"/9/;
- Approved Validation Report/3/
- Monitoring Report/1/;

This statement covers verification period of 365 days from 01/08/2013 to 31/07/2014.

The DOE has raised 1 CAR and 1 CL, all of which have been successfully resolved by PPs.

The DOE considers necessary to give reasonable assurance that reported GHG emission reductions were calculated correctly on the basis of the approved baseline and monitoring methodology and the monitoring plan contained in the Monitoring Report (Version 1.1, dated 10/10/2014) are fairly stated.

The DOE, hereby certifies that the project activity, achieved emission reductions by sources of GHG equal to 15,708tCO2e and all monitoring requirements have been fulfilled.

The DOE also states that the claimed emission reductions are free from material errors, omissions and misstatements, with a reasonable level of assurance.

2014-10-15 Date	2014-10-12 Date	2014-10-11 Date
Mr. Henri Phan DOE Manager TÜV Rheinland (China) Ltd.	Mr. Walter TANG Technical Reviewer TÜV Rheinland (China) Ltd.	Mr. YAN Chong Team Leader TÜV Rheinland (Shanghai) Ltd.

Appendix C

Certificates of Competence

Qualification

Yan, Chong /

Emission Trading
United Nations Framework Convention on Climate Change

Auditor No.:
(AuditorenRegNr)

Appointed: (Zugelassen)	☒ ja	Qualification Level: (Qualifikationsstufe)	Lead Auditor
External: (Externer)	☐ ja	Add. reviewer: (Zusätzlicher Prüfer)	☒ yes
EAC Scopes: (EAC Branchen)	CDM 01 - Energy industries (renewable - / non-renewable sources) CDM 02 - Energy distribution CDM 03 - Energy demand CDM 04 - Manufacturing industries CDM 09 - Metal production		
Add. qualification: (zus. Qualifikation)			
First Appointment: (Erstberufung)	12/15/2011	Valid to: (Gültig bis)	12/14/2014

Remarks:	Valid for TA 1.2, 2.1, 3.1, 4.3, 4.5, 9.1 + Part Time TR
Languages:	Chinese English

Experience Exchange

Date	Location	Remarks	Accredita

Monitoring

Latest Monitoring:
(letzte Beurteilung)

Next Monitoring:
(nächste Beurteilung)

Remarks:

View / Edit Monitoring

History of scope allocation

Date:	2012-01-10
Change:	EAC CDM, CDM, CDM, CDM, CDM added
By:	Manfred Brinkmann
Reason:	Valid for TA 1.2, 2.1, 3.1, 4.3, 4.5, 9.1

History

Created:	01/28/2011 10:33:30 AM	Chong Yan/Shg/Chn/TUV
Modified:	09/28/2012 11:54:16 AM	Praveen Urs/Chn/TUV
	01/10/2012 08:49:02 AM ZE9	Manfred Brinkmann/Jpn/TUV
	11/14/2011 06:09:04 PM	Chong Yan/Shg/Chn/TUV
	01/28/2011 10:33:53 AM	

Export to ICMS

Last Export:

Qualification

Zhu, Jiang /

Emission Trading
United Nations Framework Convention on Climate Change

Auditor No.:
(AuditorenRegNr)

Appointed: (Zugelassen)	☒ ja	Qualification Level: (Qualifikationsstufe)	Lead Auditor
External: (Externer)	☐ ja	Add. reviewer: (Zusätzlicher Prüfer)	☒ yes
EAC Scopes: (EAC Branchen)	CDM 01 - Energy industries (renewable - / non-renewable sources) CDM 04 - Manufacturing industries		
Add. qualification: (zus. Qualifikation)			
First Appointment: (Erstberufung)	2009/03/08	Valid to: (Gültig bis)	2015/03/07

Remarks:	CDM 01: valid for TA 1.1, 1.2 CDM 04: valid for TA 4.5 - Other WHR and Fuel Switch + Part Time TR
Languages:	Chinese English

Experience Exchange

Date	Location	Remarks	Accredita
2011-06-18	Beijing	Beijing CDM Seminar-EB61/62	United Nations Framework Convention Change
2010-12-21	Beijing	GC CDM Auditor Experience Exchange, Beijing, 2010-12-21to23	United Nations Framework Convention on Climate Change

Monitoring

Latest Monitoring: (letzte Beurteilung)	Next Monitoring: (nächste Beurteilung)

Remarks:

History of scope allocation

Date:	2009-03-08
Change:	EAC CDM added
By:	Manfred Brinkmann
Reason:	

History

Created:	2008/03/20 13:56:52	Daxun Li/Bj/Chn/TUV
Modified:	2012/09/28 11:52:16	Praveen Urs/Chn/TUV
	2012/09/28 11:27:35	Praveen Urs/Chn/TUV
	2012/03/12 15:05:17	Praveen Urs/Chn/TUV
	2012/03/07 14:06:06	
	2011/01/13 15:24:11 ZE9	
	2011/01/13 15:22:23 ZE9	
	2010/11/10 18:24:28 ZE9	
	2010/11/10 18:23:35 ZE9	
	2008/03/20 13:57:07	

Export to ICMS

Last Export:

Qualification

Tang, Walter /

Emission Trading
United Nations Framework Convention on Climate Change

Auditor No.:
(AuditorenRegNr)

Appointed: (Zugelassen)	☒ ja	Qualification Level: (Qualifikationsstufe)	Lead Auditor
External: (Externer)	☐ ja	Add. reviewer: (Zusätzlicher Prüfer)	☒ yes

EAC Scopes: (EAC Branchen)	CDM 01 - Energy industries (renewable - / non-renewable sources) CDM 02 - Energy distribution CDM 03 - Energy demand CDM 13 - Waste handling and disposal CDM 04 - Manufacturing industries
Add. qualification: (zus. Qualifikation)	

First Appointment: (Erstberufung)	2011/10/11	Valid to: (Gültig bis)	2015/09/11

Remarks:	Appointed as Technical Reviewer for TA 1.1, 1.2, 2.1, 2.2, 3.1 Direct work experience. TA 4.3, 4.5, 13.1 based on Annex D para 9 of the Accrediation Standard
Languages:	Chinese simplified English

Experience Exchange

Date	Location	Remarks	Accredita

Monitoring

Latest Monitoring: (letzte Beurteilung)	Next Monitoring: (nächste Beurteilung)

Remarks:

History of scope allocation

Date: 2012-02-13
Change: EAC CDM added
By: Praveen Urs
Reason:

Date: 2012-02-13
Change: EAC CDM, CDM, CDM, CDM added
By: Praveen Urs
Reason:

History

Created:	2011/12/06 17:00:51	Walter Tang/Chn/TUV
Modified:	2012/07/06 16:47:48	Praveen Urs/Chn/TUV
	2012/07/02 15:08:57	Praveen Urs/Chn/TUV
	2012/07/02 15:08:48	Praveen Urs/Chn/TUV
	2012/05/15 15:30:46	
	2012/02/13 20:00:10	
	2011/12/06 17:01:30	

Export to ICMS

Last Export: