SUSTAINABILITY VERIFICATION REPORT

2nd Sustainability Verification
for the GS - CDM Project Activity

Federal Intertrade Haiyuan Solar Cooker Project

(GS Ref. No.: 710)

In

P.R. China

Report No. 01 997 91050 53901-2ND VE

Version 01.2, 2013-11-28

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. 288)
FAX: +86 10 65 66 66 67
E-mail: doe@chn.tuv.com

I. Project data:

Project title:	Federal Intertrade Haiyuan Solar Cooker Project		**Report No.:** 01 997 91050 53901-2ND VE	
GS Ref. No.:	710		**Current revision No.:** 01.2	
Monitoring period:	2012-09-01 to 2013-08-31 (both days included)		**Date of current revision:** 2013-11-28	
Methodology:	AMS-I.C. version 14		**Date of first issue:** 2013-11-04	
Average emission reductions:	Estimated:	33,482 tCO2e from 2012-09-01 to 2013-08-31 (both days included) based on annual emission reductions as indicated in the approved revised PDD (version 12, dated 2012-12-08)	Verified in total:	35,078 tCO2e from 2012-09-01 to 2013-08-31 (both days included) After deducting 2% of the CER for the CDM Adaptation Fund, the verified GS CER is confirmed as 34,376 tCO_2e.
GHG reducing measure/technology:	Household solar cookers convert solar radiation to heat for daily cooking, which replace the coal consumption for similar purpose in absence of project activity			

Party	Project participants	Party considered a project participant	Contract party
P.R. China (Host)	Ningxia Federal Intertrade Co., Ltd.	No	☒
Netherlands	Swiss Re Global Markets Limited	No	☐
Switzerland	Post 2012 Carbon Credit Fund CV	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**
Mr. Harold HAI	China	1.2, 6.1, 13.1	X		X		X					
Ms. LIU Jia		1.2		X	X	X	X					
Mr. Walter TANG		1.1, 1.2,2.1, 2.2, 3.1, 4.3, 4.5, 13.1								X		

III. Verification Report:

Verification Phases	Verification Status
☒ Desk Review	☐ Corrective Actions / Clarifications Requested
☒ Follow up interviews	☒ Full Approval and Submission for Issuance
☒ Resolution of outstanding issues	☐ Rejected

Final approval	Released	Distribution
☒	**By: Mr. Henri Phan**	☐ No distribution without permission from the Client or responsible organizational unit
Date: 2013-11-29		☒ Unrestricted distribution

Abbreviations

CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction(s)
CL	Clarification request
CO_2	Carbon dioxide
CO_{2e}	Carbon dioxide equivalent
DOE	Designated Operational Entity
FAR	Forward Action Request
GHG	Greenhouse Gas(es)
GS	Gold Standard
GSF	Gold Standard Foundation
GQSI	Quality Supervision and Inspection Station for Energy-saving Products in Gansu Province
HRES	Haiyuan County Rural Energy Station
IPCC	Intergovernmental Panel on Climate Change
MP	Monitoring Plan
MR	Monitoring Report
MW	Mega Watt
NXFI	Ningxia Federal Intertrade Co.
PDD	Project Design Document
PP	Project Participant
SMR	Sustainability Monitoring Report
TUV R	TUV Rheinland (China) Ltd
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation And Verification Standard

Verification opinion — summary

Ningxia Federal Intertrade Co., Ltd. has commissioned the DOE (TÜV Rheinland (China) Ltd.) to perform a sustainability verification of the GS CDM Project Activity "Federal Intertrade Haiyuan Solar Cooker Project" (UNFCCC Project 3520, GS Ref. No.: 710) in P.R. China (hereinafter referred as "the project activity"). The verification is based on the currently valid documentation of the UN Framework Convention on Climate Change (UNFCCC) and the Gold Standard Foundation (GSF). The project activity reduces GHG emissions by capturing solar energy, which replaces the coal consumption for the same provision of thermal energy demand for cooking in the absence of project activity.

This verification is to verify whether the sustainability monitoring plan, covering the period from 2012-09-01 to 2013-08-31 (including both days, hereinafter referred as "the indicated sustainability monitoring period"), were implemented in compliance with the revised approved PDD and GS Passport and hence to verify the amount of GS CERs for the indicated sustainability monitoring period.

The sustainability verification has been performed with the following steps:

- Desk review of the revised approved PDD (version 12, 2012-12-08), the registered GS Passport (version 8, 2013-05-10), the registered GS Validation Report (version 1.5, 2013-05-10) and the preliminary sustainability monitoring report (version 1.0, 2013-09-10), CDM Verification Report (version 01.1, 2013-10-22) and the Monitoring Report (version 2, 2013-10-09);
- Uploading of the preliminary sustainability monitoring report to GS Foundation;
- On-site visit with stakeholder interviews (2013-09-24 to 2013-09-26)
- Issuance of checklist with corrective action requests (CARs), clarification requests (CLs)
- Desk review of the final GS sustainability monitoring report (version 2.0, 2013-11-12))
- Review of the corrections and clarifications
- Issuance of final Verification Report

The project activity is to disseminate 17,000 units of solar cookers in 16 townships of Haiyuan County, Ningxia Hui Autonomous Region, China. Until the end of the indicated sustainability monitoring period from 2012-09-01 to 2013-08-31 (both days included), a total of 17,000 units solar cookers were delivered and installed.

According to the revised approved PDD and the validation report, the project activity applies the GHG monitoring methodology AMS-I.C. / version 14. And the registered GS Passport has described the sustainability monitoring plan for the project activity. The PP has implemented the GHG monitoring plan accordingly. 35,078 tCO_2e CERs has been requested for issuance for the 2nd periodic CDM monitoring period (i.e. 2012-09-01 to 2013-08-31). After deducting 2% of the CER for the CDM Adaptation Fund, the verified GS CER is confirmed as 34,376 tCO_2e.

The project activity was implemented according to the selected monitoring methodology, the GHG monitoring plan and the sustainability monitoring plan. The revised approved PDD (version 12, 2012-12-08) and monitoring report (version 2, 2013-10-09) are confirmed in compliance with the applied methodology as well as all relevant requirements of the UNFCCC for CDM project activities. The results of sustainability monitoring, as shown in the final sustainability monitoring report (version 2.0, 2013-11-12), were assessed against the registered GS Passport and relevant GS requirements. 1 CL and 1 FAR are raised in the verification process and all the issues are satisfactorily resolved. The DOE is therefore pleased to issue a positive verification opinion for the sustainability monitoring period of the project activity expressed in the attached Certification Statement.

TABLE OF CONTENTS

1. INTRODUCTION 6
1.1 Objective 6
1.2 Scope 6

2. METHODOLOGY 7
2.1 Desk review 7
2.2 On-site visit and follow-up interviews with project stakeholders 9
2.3 Resolution of outstanding issues 10
2.4 Internal quality control 11
2.5 Verification Team 11

3. VERIFICATION FINDINGS 13
3.1 Project implementation 13
3.2 Compliance of the GHG monitoring plan with the GHG monitoring methodology 16
3.3 Compliance of the actual sustainability monitoring with the sustainability monitoring plan and Gold Standard conservativeness principle 16
3.4 Assessment of data and calculation of GHG emission reductions 20
3.5 Assessment of contributions to sustainable development 21
3.6 Issues remaining from the previous verification period 21

Appendix A: Verification Protocol
Appendix B: Certification statement
Appendix C: Certificates of Competence

1. Introduction

1.1 Objective

Ningxia Federal Intertrade Co., Ltd. has commissioned the DOE TÜV Rheinland (China) Ltd. to perform a sustainability verification of the gold Standard CDM Project Activity "Federal Intertrade Haiyuan Solar Cooker Project" in P.R. China. The verification team was assigned by the DOE to conduct the verification assessment on the sustainability monitoring in accordance with the revised approved PDD, GS Passport and relevant GS requirements/ guidelines.

The purpose of the verification is to have an independent third party assess the sustainability monitoring implementation for the indicated sustainability monitoring period. In particular, the project's GS monitoring report, and the project's compliance with relevant Gold Standard requirements and host Party criteria are validated in order to confirm that the project is implemented according to the sustainability monitoring plan. This report summarizes the findings of the verification of the project activity, performed on the basis of Gold Standard criteria for the verification of GS CER, as well as criteria given to provide for consistent project operations, monitoring and reporting.

1.2 Scope

The verification comprises a review of the sustainability monitoring report over the indicated sustainability monitoring period from 2012-09-01 to 2013-08-31 (including both days) based on the revised approved PDD and the registered GS Passport, approved CDM monitoring report and verification report, with regard to the sustainability monitoring plan and the monitored indicators, approved GHG emission reduction calculation spreadsheet, GHG monitoring methodology and all related evidences provided by project participants. These documents have been reviewed against the requirements of the Kyoto Protocol, the CDM Modalities and Procedures and rules and guidance of Gold Standard.

On-site visit and stakeholder interviews were also performed from 2013-09-24 to 2013-09-26 as part of the verification process.

The verification team considers both quantitative and qualitative information on GHG emission reductions and the monitored sustainability indicators. The verification is not meant to provide any consulting towards the client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project design.

2. Methodology

The verification consists of the following four phases:

1. Making the preliminary monitoring report publicly available in the Gold Standard Foundation;
2. Desk review of the monitoring plan, monitoring report, GS passport, project design document and other relevant documents;
3. On-site visit (including follow-up interviews with project stakeholders, when deemed necessary);
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*
Project related document	
/1/	30 sets questionnaires filled by the users
/2/	GS710 Questionnaires to User – Analysis and Conclusion
/3/	Manufacturer questionnaires, 2013-08-15
/4/	Project owner's statement, NXFI, 2013-08-14
/5/	Training records of photos and confirmations
/6/	Service Agreement for project operation, management and monitoring, Ningxia Federal Intertrade Co. (NXFI) and Haiyuan County Rural Energy Station (HRES), 2010-08-05
/7/	Solar Cooker Purchase Contract with technical specifications, NXFI and Pingluo County Ningwei Solar Cooker Co., Ltd., Contract No.: 10CDMH001, 2010-09-01
/8/	Solar Cooker Purchase Contract with technical specifications, NXFI and Xiji County Dongfanghong Solar Energy Co., Ltd., Contract No.: 10CDMH002, 2010-09-01
/9/	Solar Cooker Purchase Contract with technical specifications, NXFI and Pengyang County Yongming Solar Cooker Factory, Contract No.: 10CDMH003, 2010-09-01
/10/	Solar Cooker Purchase Contract with technical specifications, NXFI and Yinchuan Jiuyitong New Energy Technology Co., Ltd., Contract No: 10CDMH004, 2010-09-01
/11/	Solar Cooker Testing Report, Quality Supervision and Inspection Station for Energy-saving Products in Gansu Province (GQSI), Report No: NYW2009-0052, 2009-05-06 (Product Manufacturer: Pingluo County Ningwei Solar Cooker Co., Ltd.)
/12/	Solar Cooker Testing Report, GQSI, Report No: NYW2009-0106, 2009-07-17 (Xiji County Dongfanghong Solar Energy Co., Ltd.)
/13/	Solar Cooker Testing Report, GQSI, Report No: NYW2009-0107, 2009-07-17 (Product Manufacturer: Pengyang County Yongming Solar Cooker Factory)
/14/	Solar Cooker Testing Report, GQSI, Report No: NYW2010-0040, 2010-02-21 (Product Manufacturer: Yinchuan Jiuyitong New Energy Technology Co., Ltd.)
/15/	17,000 Solar Cookers' sales receipts from 4 signed solar cooker manufacturers
/16/	Participation agreement and equipment receiving records, NXFI and solar cooker users
/17/	Screenshot of random sampling process for random selection of 79 sampling users by applying "Random" function of MS Excel for this monitoring period on 2012-08-02
/18/	Project monitoring organization chart of management and monitoring personnel, NXFI
/19/	Project monitoring records for monitoring parameter A which is to measure the numbers of solar cookers engaged in the project during the crediting period, HRES and NXFI, covering this monitoring

	period
/20/	Project monitoring records for monitoring parameter B which is to measure the average operating hour of each solar cooker during the crediting period, original records from HRES are organized by NXFI, covering this monitoring period for 79 sampled households
/21/	Daily usage time records done by monitoring personnel once per month (for crosschecking purpose), HRES, covering this monitoring period
/22/	Monitoring agreement for 79 sampling users, NXFI and sampling users
/23/	CDM monitoring training for NXFI's monitoring personnel regarding monitoring parameter A for this monitoring period, NXFI, 2013-06-28
/24/	CDM monitoring training for HRES's monitoring personnel regarding monitoring parameter A and B for this monitoring period, NXFI, 2012-08-07
/25/	Solar cooker operation on-site training records for the household users, NXFI
/26/	Training plan for users about solar cooker installation, usage and daily maintenance, NXFI
/27/	Ningxia Federal Intertrade solar cooker project maintenance and repair method, NXFI
/28/	Flowchart of maintenance and repair works for solar cooker projects, NXFI
/29/	Operation and maintenance records (covering this monitoring period), NXFI
/30/	CDM Manual (including monitoring scheme, method, working process, responsibility, QA/QC procedures and etc.), NXFI
/31/	Product Quality Control, Inspection Procedures and Standards, NXFI
/32/	Parabolic type solar cooker standard (NY/T219-2003), China National Standard, 2003
Sustainability Monitoring Report	
/33/	Preliminary Sustainability Monitoring Report, version 1.0, 2013-09-10
/34/	Final Sustainability Monitoring Report, version 2.0, 2013-11-12
GS, UNFCCC Standard, Procedure, Guideline, Guidance, Form and other document	
/35/	GS Requirement and Toolkit, Version 2.1, 2009-07-01
/36/	GS Guidance Note, Annex I – Guidance on Sustainability Assessment
/37/	GS Guidance Note, Annex K – Outline for Validation and Verification Reports
/38/	Registered Passport, version 8, 2013-05-10
/39/	Registered Sustainability Validation Report, version 01.5, 2013-05-10
/40/	Registered Local Stakeholder Consultation Report, 2009-08-25
/41/	Email confirmation with GS Technical Expert, 08/08/2013
/42/	Revised PDD for CDM project "Federal Intertrade Haiyuan Solar Cooker Project" approved by EB on 2013-03-19, Registration No. 3520, version 12, 2012-12-08
/43/	Validation report for CDM project "Federal Intertrade Haiyuan Solar Cooker Project", version 01.2, 2010-03-11
/44/	Documents of previous verifications (Monitoring report, verification report, ER calculation sheet): 1st period MR, version 3.1, 2012-12-09 1st period verification report, version 01.2, 2012-12-09 1st GHG Emission Reduction Calculations Spreadsheet 2nd period MR, version 2, 2013-10-09 2nd period verification report, version 01.1, 2013-10-22 2nd GHG Emission Reduction Calculations Spreadsheet
/45/	Approved monitoring methodology: AMS-I.C. "Thermal energy for the user with or without electricity", version 14
/46/	CDM-MR - Monitoring report form, version 03.1
/47/	Guidelines for completing the monitoring report form (EB75, Annex 7, version 04.0)
/48/	Clean Development Mechanism Validation and Verification Standard (version 05.0)

/49/	Clean Development Mechanism Project Cycle Procedure (version 05.0)
/50/	Clean Development Mechanism Project Standard (version 05.0)
/51/	Guidelines on the application of Materiality in Verifications (EB 69, Annex 6, version 01.0)
/52/	Guidelines for sampling and surveys for CDM project activities and programme of activities (EB75, Annex 8, version 03.0)
/53/	Standard for sampling and surveys for CDM project activities and programme of activities (EB74, Annex 6, version 04.0)
/54/	Guidelines for demonstrating additionality of microscale project activities (EB73, Annex 13, version 05.0)
/55/	List of National Poverty Alleviation and Development Key Counties, The State Council Leading Group Office of Poverty Alleviation and Development http://www.cpad.gov.cn/publicfiles/business/htmlfiles/FPB/gggs/201203/175445.html
/56/	General description of Haiyuan County, Government of Haiyuan County http://www.hy.gov.cn/zjhy/hygk/fm/333047.shtml
/57/	Revised 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Table 2.5, Page 2.22, Chapter 2, Volume 2
/58/	Solar cooker Thermal Efficiency Testing Results, Ningxia Rural Energy Station (NRES), Ref. No.: Ning Nong (Neng) Fa [2010] 55, 2010-12-10
/59/	Study on Practical Lifetime of Aluminum / Glass Mirror in Solar Cooker, Hu Jiping, Gansu Natural Energy Research Institute Gansu Academy of Science
/60/	Haiyuan County 1999-2008 Irradiance Data in Haiyuan County, Ningxia Meteorological Archives, 2009-04-20

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

TÜV Rheinland verification team carried out an on-site visit dated (2013-09-24 to 2013-09-26) and performed interviews with the project representatives and stakeholders.

Prior to the interview salient points to be discussed were planned. Date of interview, interviewee and points discussed are given in the following table.

	Date	Name	Organization	Topic
/i/	2013-09-24 to 2013-09-26	Mr. JIANG Wei	NXFI / General Manager	- Project design and implementation - Project related legal issues - Equipment installation and starting of operation - Crediting period for this verification - Monitoring plan and Procedures - QA and QC - Training history and records - Data collection and record keeping - Calibration schedule and records - Operation and maintenance records - Missing Data handling - Emission Reductions Calculation - Management system
		Mr. CAO Wei Bin	NXFI / Monitoring specialist	

/ii/	2013-09-24 to 2013-09-26	Ms. GUO Jia Jia	Clean Air Trade Inc. / CDM consultant	- Monitoring plan and procedures - QA and QC - Training history and records - Missing Data handling - Emission Reductions Calculation - Monitoring report
/iii/	2013-09-24 to 2013-09-26	Ms. WU Xiao Qin	HRES / Monitoring specialist	- Monitoring plan and procedures - QA and QC - Training history and records - Missing Data handling - Data collection and record keeping - Operation and maintenance records - Operation situation
		Mr. Qin Jian Sheng	HRES / Monitoring specialist	
		Mr. YANG Ji Sheng	HRES / Monitoring specialist	
/iv/	2013-09-24 to 2013-09-26	21 households who were interviewed onsite	Haicheng (1), Xi'an (3), Guanqiao (1), Zhengqi (1), Sanhe (2), Qiying (4), Liwang (1), Jiatang (1), Caowa (3), Jiucai (1), Hongyang (2) and Guanzhuang (1) Township solar cooker users *The number in the bracket is the number of households interviewed onsite*	- Monitoring plan and procedures - QA and QC - Training history and records - Missing Data handling - Data record and report - Operation situation
/v/	2013-09-26	Mr. LI Hua	Xiji County Dongfanghong Solar Energy Co., Ltd. / Manager	- Solar cooker supply to the project activity - Employment status - Influence to the company after cooperation with NXFI - Benefits to their employee

Verification Team along with onsite observation, objective evidence collections, data generation and recording analysis also considered the views obtained in these interviews while arriving at Verification Opinion.

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 and achieved emission reductions. 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 requirements, which CDM and/or GS project is expected to meet CDM 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 validation report.
- It ensures the determination of achieving credible emission reductions from the project activity.

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 CDM 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.

Requests for clarification (CLs) are raised, if information is insufficient or not clear enough to determine whether the applicable CDM 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 CDM requirements for issuance.

2.4 Internal quality control

The final verification report underwent a technical review by a qualified independent reviewer before requesting issuance of the project activity. The technical review was performed by a technical reviewer qualified in accordance with TÜV Rheinland's qualification scheme for CDM validation and verification that meets the criteria of EB guidelines for qualification.

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 CDM verificaiton activity. The qualification of the team is as per the criterias defined by the EB guidelines for qualification.

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	Technical Reviewer
Mr. Harold HAI	China	1.2, 6.1, 13.1	X	X	X		X	X	
Ms. Jia LIU		1.2		X	X	X	X		
Mr. Walter TANG		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 of the sustainability monitoring of the project activity for the CERs from the 2nd CDM periodic 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

Project Participants:	Ningxia Federal Intertrade Co., Ltd. Swiss Re Global Markets Limited Post 2012 Carbon Credit Fund CV
Project Parties:	P.R. China Netherlands Switzerland
Title of project activity:	Federal Intertrade Haiyuan Solar Cooker Project
UNFCCC registration No:	3520
Baseline and monitoring methodology:	AMS-I.C. (version 14)
Project Type:	Renewable energy
Project Scale:	Small scale
Location of the project activity:	16 townships (Shidian, Lijun, Jiucai, Shutai, Zhengqi, Jiatang, Caowa, Hongyang, Guanzhuang, Xi'an, Haicheng, Guanqiao, Liwang, Gancheng, Sanhe, Qiying) in Haiyuan County, Ningxia Hui Autonomous Region, China
Referenced corresponding CDM crediting period of the project activity:	2010-09-15 to 2020-09-14
The indicated sustainability monitoring period:	2012-09-01 to 2013-08-31 (i.e. 2nd monitoring period)
CER verified in this monitoring period:	35,078 tCO_2e

By reviewing the approved monitoring report /44/ and verification report /44/ for the 2nd CDM periodic verification period (2012-09-01 to 2013-08-31, both days included), it is confirmed that 35,078 tCO2e CERs were verified for the project activity. This verification will directly refer to the CERs and the project implementation which were verified by the CDM verification report /44/. Furthermore, 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 approved revised PDD /42/ and the sustainability monitoring plan in the registered GS Passport /38/.

The project activity is to disseminate 17,000 units of solar cooker in 16 townships of Haiyuan County. As per Section 3.1.1 of the CDM verification report, it is concluded that "the implementation of project activity including equipment installation (i.e. 17,000 solar cookers) is consistent with the approved revised PDD of 2012-12-08 and no inconsistency has been found from the original plan".

Through management interviews and document review, the verification team confirms that the implementation of project activity including equipment installation is consistent with the approved revised PDD.

3.1.2 The actual operation of the project activity

For the assessment of the actual operation of the project activity regarding to the GHG monitoring, the verification opinion refers to result verified by the approved verification report. The basic features of the actual operation of the project activity are summarized as below:

Project physical features (technology, project equipment, monitoring and metering equipment)	The total installed capacity is 13.1495 $MW_{thermal}$ which consists of 17,000 parabolic type solar cookers each with 775.3 W rated power per unit.	
Any Project Design Change been sought and approved by EB for the project?	☒ Yes ☐ No	The Project Design Change (PRC-3520-001) was approved by EB on 2013-03-19.
Any Revision in Monitoring plan is sought and approved by EB for the project?	☐ Yes ☒ No	No revision in the monitoring plan for the project activity for this monitoring period. [This monitoring period is from 2012-09-01 to 2013-08-31. There are two monitoring parameters n and t_i. For the parameter n, the monitoring is conducted during 2013-08-01 to 2013-08-26 /19/. For the parameter t_i, a new set of 79 samples were randomly selected by NXFI on 2012-08-02 /17/ which is before the beginning of this monitoring period. The revised monitoring plan in the latest PDD (version 14, dated 2013-08-08) was approved by EB on 2013-10-08. So when the PP performed monitoring for this monitoring period, the revised monitoring plan has not been approved by EB yet and the most recent monitoring plan in the approved revised PDD of 2012-12-08 was applied therefore.]
Does the monitoring report provide line diagram showing all relevant monitoring points?	☐ Yes ☐ No ☒ N/A	The project is the installation of 17,000 solar cookers for the poor rural residents in north-western China, all of which are the target population of the sampling during monitoring. Thus it is not applicable to present all relevant monitoring points in form of line diagram.

The timeline of the project's implementation is as follow:

Milestone of the project activity	Timeline	Assessment by the verification team
Starting date of operation:	2010-11-02	According to the approved revised PDD of 2012-12-08 /42/ and the validation report /43/, it states that the project can be implemented under the revenue from registered as a CDM project. The project was started to implement since project registration (i.e. 2010-09-15) by placing order, arrangement of distribution to 17,000 solar cookers to users and training to the monitoring team members etc. The project owner, NXFI distributed the solar cookers to 17,000 participant households by the manufacturers and the coordination from Haiyuan County Rural Energy Station (HRES) starting from 2010-11-02 /6/, which were after the registration as a CDM project on 2010-09-15. The actual operation could not be prior to the first day of distribution. Therefore, the

Milestone of the project activity	Timeline	Assessment by the verification team
		operation and monitoring of the project activity is started on 2010-11-02.
Registration of the project activity	2010-09-15	It has been checked against the UNFCCC webpage of the project activity.
Crediting period		
1st monitoring period	2010-09-15 to 2012-08-31	Issued
2nd monitoring period	2012-09-01 to 2013-08-31	It is confirmed within the crediting period that monitoring was conducted and currently under verification.

As concluded by Section 3.1.2 of the CDM verification report /44/, "with respect to the realized technology, the project equipment, as well as the monitoring, the project has been implemented and operated as described in the approved revised PDD". The actual implementation of the project activity is confirmed in line with the approved revised PDD.

Below is the summary of the actual implementation of the GS sustainability monitoring:

Milestone of the project activity	Timeline	Assessment by the verification team
Registration of the project activity under GSF	2011-01-26	It is confirmed from the GS technical Expert /41/.
Indicated sustainability monitoring period	2012-09-01 to 2013-08-31 (both days included)	It is after the registration of the project activity under GSF.
Referenced 2nd CDM monitoring period	2012-09-01 to 2013-08-31 (both days included)	It is confirmed from the CDM monitoring report /44/ and verification report /44/. It is consistent with the indicated sustainability monitoring period.
Survey for the 2nd sustainability monitoring	2013-08-01 to 2013-08-26	The 30 sets questionnaires filled by the users /1/ have been checked during OSV. The date of the survey is confirmed as 2013-08-01 to 2013-08-26. Through physical interviews with the users and the officers of Haiyuan County Rural Energy Station (HRES) who took part in the survey, the verification team confirms the same date of survey as reported by the final SMR. It is confirmed that the survey can cover the sustainability monitoring period.

In summary, the project implementation is consistent with the project design illustrated in the approved revised PDD of 2012-12-08 /42/ and GS Passport /38/. The sustainability monitoring period is reasonable and the actual implementation of the project activity is appropriate to its GS development.

3.2 Compliance of the GHG monitoring plan with the GHG monitoring methodology

According to the approved revised PDD of 2012-12-08 /42/, the project activity applies AMS-I.C. (version 14) for the GHG monitoring. It is confirmed by the validation opinion /44/ that the monitoring plan in the approved revised PDD complies with the applied monitoring methodology. Regarding the CERs under the 2nd CDM monitoring period, it is confirmed by the CDM verification report /44/ for the compliance with the monitoring requirement of the applied methodology. Please refer to Section 3.2 of the approved verification report for details.

3.3 Compliance of the actual sustainability monitoring with the sustainability monitoring plan and Gold Standard conservativeness principle

The verification team reviewed the sustainability monitoring results reported in the final sustainability monitoring report /34/ and conducted an on-site visit so as to (i) verify the compliance of the sustainability monitoring with the sustainability monitoring plan contained in the approved revised PDD of 2012-12-08 /42/ and also the registered GS Passport /38/; and (ii) confirm the project contributions to sustainable development during the indicated sustainability monitoring period.

3.3.1 Monitored parameters

Emission reductions calculation

Baseline emissions

According to the approved revised PDD of 2012-12-08, the baseline emissions are calculated as

$$BE_y = n * \Sigma [773.5 * (R_i / 700) * t_i * (3.6*10^{-9})] * EF_{CO2} / \eta_{th}$$

Where

n	The total number of solar cookers installed by the proposed project (i.e. monitoring parameter A)
R_i	The actual solar irradiance rate in month i in W/m2 (the fixed value since the ex-ante approach is selected)
t_i	The usage time of each solar cooker in month i in hour (i.e. monitoring parameter B)
EF_{CO2}	The CO2 emission factor per unit of coal (i.e. 94.6 tCO_2e/TJ; the fixed value since the ex-ante approach is selected)
η_{th}	The efficiency of the plant using fossil fuel (i.e. 15%) that would been used in the absence of the project activity

There are two monitoring parameters, i.e. n: number of solar cookers engaged in the proposed project; and t_i: the monthly operating time of each solar cooker. The data are referenced to the monitoring report /34/, approved revised PDD of 2012-12-08 /42/, the monitoring records /19/ /20/ and additional checking records once per month /21/ for cross-check.

Since as the monitoring parameter A and B are correctly determined, the calculations are correct and traceable from the emission reduction calculation spreadsheet, the baseline emissions are equal to 35,078 tCO_2e.

Project emissions

According to the methodology AMS-I.C. version 14 and the approved revised PDD of 2012-12-08, the project activity is a new installation of renewable solar cooker project, the project emissions are considered as zero, i.e. $PE_y = 0$, and thus no monitoring is required.

Leakage

According to the methodology AMS-I.C. version 14 and the approved revised PDD of 2012-12-08, the project activity is a new installation of renewable solar cooker project, no leakage is required to be considered, i.e. $L_y = 0$, and thus no monitoring is required.

Emission reductions
The total emission reductions (ER_y) during this monitoring period are,

$ER_y = BE_y – PE_y – L_y$ = 35,078 tCO_2e - 0 - 0 = **35,078** tCO_2e

Sustainable development

The sustainability monitoring is required by the GS and assessed according to the GS Toolkit Annex I /36/. According to GS Toolkit 2.4.3, all non-neutral indicators must be monitored, and any indicators that were neutralized (i.e. originally scored negative, but later score neutral due to a suitable mitigation measure) must also be included. Moreover, any sensitive issue brought up during the stakeholder consultation must also be included. The verification team has reviewed the LSC report /40/, there was neither negative comment nor sensitive issues raised to the project activity. As a result, the 5 sustainability monitoring parameters included in the sustainability monitoring plan of the registered GS Passport are the focus of this sustainability verification.

Indicator	Verification findings	
#1 Air Quality	Chosen Parameter	SO_x emission reduction
	Value	131.5 t
	Source	CDM monitoring report, monitoring records, and ER spreadsheet
	Verification opinion	According to the SMR, the SO_2 emission reductions is calculated based on coal saved by the solar cooker users during the sustainability monitoring period. The amount of saved coal consumption is derived based on the verified CERs for the 2nd CDM periodic monitoring period. The coal saving is calculated by: Coal savings (t) = CERs (tCO2)/2.66772 (tCO2/t) = 35,078/2.66772 = 13,149 t Then, the SO_2 emission reductions is calculated by: SO_2 emission reduction (t) = Coal savings (t)*S%*M_{SO2}/M_S = 13,149*0.5%*32/16 = 131.5 t The verification team confirms the calculation steps and the applied *ex-ante* parameters in the equations are consistent with the Passport. Since the reduction in SO_2 is based on the verified GHG emission reductions, it is confirmed to be traceable and reliable. The SO_2 emission reduction is therefore confirmed as 131.5 t. Therefore, the score of #1 Air Quality should be positive.
	Verified Score	+
#2 Access to affordable and clean energy services	Chosen Parameter	1. The number of solar cookers installed
	Value	16,996 units of operational solar cooker for the 2nd monitoring period.
	Source	Monitoring records
	Verification opinion	It is reported that the monitoring was done by monitoring team A through visiting each of the users physically. They had checked whether the logo of the project and user name are on the solar cookers and hence determine whether the cookers were operational. The verification team has reviewed the CDM verification report /44/. The number of operational solar cooker was monitored by a monitoring team which consisted of the staff from the PP and also officers from HRES. The verification report confirmed the monitoring procedures are in line with the

		approved revised PDD (refer to Section 3.3.1 of the CDM verification report) as well as the GS Passport.
	Chosen Parameter	2. solar cooker usage time
	Value	127.81 hrs per month / 4.26 hrs per day (average value)
	Source	Monitoring records
	Verification opinion	It is reported that the monitoring of solar cooker usage time is done by sampling survey method. 79 sampled users were selected randomly for the 2nd monitoring period. As per Section 3.3.1 of the approved CDM verification report, the same average monthly solar cooker usage time can be confirmed. Since the data has been verified, the reported data is reliable. Therefore, the average monthly usage time is confirmed as 127.81 hrs (4.26hrs per day[1]) By considering the operational solar cooker allows the users to get accessed to clean renewable energy, the score of #2 Access to affordable and clean energy services should be positive.
	Verified Score	+
#3 Human and institutional capacity	Chosen Parameter	1. The number of solar cookers installed
	Value	16,996 units
	Source	Monitoring report of the 2nd CDM monitoring period and monitoring records
	Verification opinion	By reviewing the approved CDM verification report, the verification team can confirmed the same verified figures of the 2nd CDM periodic monitoring period. According to the CDM verification report, the number of installed operational solar cooker was verified as 16,996 which were based on the monitoring records. The monitoring method is considered in compliance with the registered GS Passport.
	Chosen Parameter	2. The training records
	Value	3 training records
	Source	Training records
	Verification opinion	The trainings were conducted 3 times through local television broadcast to help users know more about the project and clean energy. It covered installation, operation, maintenance and safety precautions. The photos /5/ of watching households are confirmed by the verification team. From 2013-08-01 to 2013-08-26, the monitoring team visited the 30 sample users for survey and each user received a CD with videos about the project. As additional training, the 30 users were asked to show the videos to their neighbours, relatives, and friends. The monitoring team visited the 30 users again later to confirm the time and frequency the videos were played and the total number of audience that watched the videos. The result shows that the videos were played 54 times and 323 villagers watched them. The result /5/ is confirmed by the 30 users through their signatures. It is considered as an supplemental training besides the whole range broadcasting. The PP has also confirms the arranged training as above during onsite interview /i/. The verification team had confirmed from onsite interview with the users /iv/ that they are all capable of using the solar cookers. Based on the above findings, it is confirmed that households received additional training on solar cooker operations. The score of #3 Human and

[1] 127.08 hrs / 30 days = 4.26 hrs per day

		institutional capacity should be positive.
	Verified Score	+
#4 Livelihood of the poor	Chosen Parameter	Saved expenditure and health benefits
	Value	100% sampled users agreed the expenditure on coal was lesser 100% sampled users agreed they had less diseases caused by bad indoor air quality
	Source	Monitoring survey
	Verification opinion	According to the SMR, the monitoring was conducted by carrying out a survey from 2013-08-01 to 2013-08-26. A total of 30 users were sampled randomly by the monitoring team through on-site visiting the users. It is concluded that using solar cookers helped users save expenditures and brought health benefits to users during this monitoring period. The method of monitoring is considered in compliance with the registered GS Passport. The verification team has checked the 30 sets of filled questionnaires /1/ during OSV. It is confirmed that the results are consistent with the result recorded in GS710 Questionnaires to Users – Analysis and Conclusion /2/. The PP concludes from the results that "*using solar cookers helped users save expenditures and brought health benefits to users during this monitoring period*". Furthermore, the verification team has visited all 30 sampled households during OSV, of which 21 out of the 30 users were successfully interviewed, for the assessment of PP's conclusion on the survey results. Based on the observations on the living environment and the user's responses, the verification team confirms that all the interviewed users agreed 1) their expenditure on coal purchase has reduced; 2) they had less diseases induced by bad indoor air quality, when compared with the time before using the solar cookers. Therefore, as a matter of fact that the users enjoyed economic and health benefits since using the solar cooker, the score of #4 Livelihood of the poor should be positive.
	Verified Score	+
#5 Quantitative employment and income generation	Chosen Parameter	Employment and income increase
	Value	More employment opportunities were created for local people by the solar cooker project.
	Source	Manufacturer questionnaires and PP's statement
	Verification opinion	The monitoring was done by interviewing the solar cooker manufacturers on 2013-08-15. Their opinions on whether the two aspects: 1) the availability of position or jobs for employee; 2) the income of the employee, had been influenced by taking part in the project activity. The method of monitoring is considered in compliance with the registered GS Passport. As per the reported results, the verification team has checked the manufacturer interview records /3/ done by the PP for the interviews with the solar cooker manufacturers and hence found the same results. The records shows that all the 4 manufacturers agreed more employment opportunities and employee's income were created by supplying solar cookers to the project activity. The verification team had visited one of the manufacturers during OSV, the owners /v/ had confirmed that more workers were employed so as to produce

		the solar cookers for the project activity. At the meantime, the income of the workers had increased significantly. As a matter of fact that more job opportunity and income of the workers were induced by taking part in the manufacturing process of the solar cooker, the score of #5 Quantitative employment and income generation should be positive.
	Verified Score	+

According to Gold Standard Toolkit Section 2.4.3, "*all mitigation measures put in place to prevent violation or the risk of violating a safeguarding principle of the 'Do No Harm' Assessment*" shall be monitored. As per the registered GS Passport, there is no mitigation measure to be included in the monitoring.

In summary, the sustainability monitoring was implemented and reported in compliance with the registered Passport and related GS requirements.

3.3.2 Monitoring responsibility

In the CDM monitoring report, the monitoring responsibility of the project activity was described. It involves the project owner and Haiyuan County Rural Energy Station (HRES). The project owner is responsible for the overall management of the monitoring, while HRES join together with the monitoring team from the project owner to conduct on-site monitoring works or survey. It is confirmed from the PP /i/ that the management of sustainability monitoring was included under the same monitoring system as the GHG monitoring.

It is consistent with that described in the monitoring plan of the approved revised PDD of 2012-12-08 and also confirmed from on-site interview with the relevant personnel who took part in the monitoring /iii/. With reference to the CDM verification report, the monitoring responsibility of each monitoring personnel was handled according to the monitoring plan of approved revised PDD of 2012-12-08 and the responsible personnel were clearly aware of monitoring procedures and were capable to work on their responsibilities.

3.3.3 Deviation from and/or revision of the registered monitoring plan

As described above, no deviation from or revision of the approved GHG and sustainability monitoring plan in the approved revised PDD /42/ and GS Passport /38/ is observed in the project during this monitoring period. Thus the current estimation of GHG emission reductions and sustainability monitoring during the indicated sustainability monitoring period from 2012-09-01 to 2013-08-31 is confirmed to be correctly applied.

This monitoring period is from 2012-09-01 to 2013-08-31. There are two monitoring parameters n and t_i. For the parameter n, the monitoring is conducted during 2013-08-01 to 2013-08-26 /19/. For the parameter t_i, a new set of 79 samples were randomly selected by NXFI on 2012-08-02 /17/ which is before the beginning of this monitoring period.

The revised monitoring plan in the latest PDD (version 14, dated 2013-08-08) was approved by EB on 2013-10-08. So when the PP performed monitoring for this monitoring period, the revised monitoring plan has not been approved by EB yet and the most recent monitoring plan in the approved revised PDD of 2012-12-08 was applied therefore.

3.4 Assessment of data and calculation of GHG emission reductions

A total of 35,078 t CERs for the 2nd periodic CDM monitoring period (i.e. 2012-09-01 to 2013-08-31) was verified. The verification team has reviewed the CDM monitoring report /44/, the verification report /44/ and ER calculations spreadsheet /44/ for the corresponding 2nd CDM periodic monitoring period. It is confirmed that the GHG monitoring was implemented according to the monitoring plan in the approved revised PDD, the applied methodology, and all relevant CDM requirements. Since 2% of the verified CER was deducted for the

CDM Adaptation fund the verified GS CER is calculated by 35,078 * (1-2%) = 34,376 tCO_2e. Therefore, the amount of GS CER under this request for issuance is confirmed to be 34,376 tCO_2e.

Assessment of materiality in verification

According to the approved CDM verification report, the materiality in verification is assessed against "Guidelines on the Applicability of Materiality in Verifications". The verification opinion has concluded as "*the verification team can confirm that the claimed emission reductions are free from material errors, omissions or misstatements with a reasonable level of assurance.".*

Therefore, the verified CERs are confirmed free from material errors, omssions or misstatements with a reasonable level of assurance.

3.5 Assessment of contributions to sustainable development

In accordance with the requirement of the GS Toolkit (version 2.1, section 4.1), the monitored sustainability indicators are also scored in the monitoring report by comparing with the baseline sustainable indicator situations, which is also confirmed by the verification team in the discussion in section 3.3.1 above.

The project has applied the sustainable development assessment matrix as required by the Gold Standard. The total score obtained is +5 based on the verification results in the indicated sustainability monitoring period, while other indicators are neutral. The scoring in each section is summarized below:

- Environment scores a subtotal of +1 (positive impact to air quality);
- Social development scores a subtotal of +3 (positive impacts to access to affordable and clean energy services, human and institutional capacity, and livelihood of the poor);
- Economic and technological development scores a subtotal of +1 (positive impact to quantitative employment and income generation).

Thus the project is eligible under the Gold Standard as per GS Toolkit Section 2.4.2, in which the project activity contributes positively to all three categories of sustainable development indicators (i.e. Environment, Social development and Economic and technological development).

3.6 Issues remaining from the previous verification period

One FAR was remained from 1st GS sustainability verification report and closed during this verification period. Please refer to Table 2 for details.

Appendix A

Verification protocol

For Gold Standard CDM Project

Federal Intertrade Haiyuan Solar Cooker Project in P.R. China

to Report No. 01 997 91050 53901-2ND VE

Checklist question	Ref.	MoV[2]	Findings, comments, references, data sources	Draft conclusion	Final conclusion
1. Implementation					
1.1 Have all physical features proposed in the registered PDD been implemented at the project site? § 187 of CDM Project Standard	/7/ /8/ /9/ /15/ /42/ /43/	DR I OSV	Yes. The project activity involves installation of 17,000 solar cookers which are located in the northern rural areas of Haiyuan County, Ningxia Hui Autonomous Region. The project activity consists of 17,000 households from 16 townships of Haiyuan County. The total installed capacity is 13.1495 $MW_{thermal}$ which consists of 17,000 parabolic type solar cookers with 773.5 W rated power per unit. The verification team also checked the physical features of using equipment via signed contracts and on-site observation. Thus, the verification team can confirms the project activity has been implemented as described in approved revised PDD.	OK	OK
1.2 Has the project activity been operated in accordance with the project scenario described in the registered PDD and relevant guidance? Reference: <http://cdm.unfccc.int/EB/033/eb33rep.pdf>, §75 § 188 of CDM Project Standard	/6/ /16/ /22/ /44/ /42/ /43/	DR I OSV	Yes. The verification team has confirmed that the project activity has been operated in accordance with the project scenario described in the approved revised PDD and relevant guideline. By further review of 1st periodic verification report and monitoring report, it is confirmed that the operation and monitoring of the project activity is started on 2010-11-02. This is the second periodic verification. The start date of this monitoring period is right after the end of	OK	OK

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

Checklist question	Ref.	MoV[2]	Findings, comments, references, data sources	Draft conclusion	Final conclusion
			1st monitoring period. The end date of this monitoring period is also within the crediting period.		
1.3 If the project activity is implemented on a number of different locations, has the Monitoring report provided the verifiable starting dates for each site? § 191 of CDM Project Standard	/6/ /16/ /22/ /44/ /42/ /43/	DR	Idem. The project owner, NXFI distributed the solar cookers to 17,000 participant households evenly via the manufacturers and the coordination of Haiyuan County Rural Energy Station (HRES) which were after the registration as a CDM project. Therefore, the operation and monitoring of the project activity is started on 2010-11-02. The verification team confirmed the starting date of the project activity from the 1st periodic verification report and its monitoring report.	OK	OK
1.4 Is the start date of monitoring period consistent?	/33/	DR	Yes. The start date of this monitoring period is right after the end of 1st monitoring period.	OK	OK
1.5 Is the monitoring report consistently filled with respect to all sections as required by its guideline of filling the monitoring report?	/33/ /46/	DR	It is checked against the guideline to complete the MR.	OK	OK
1.6 Does the CER's obtained for the monitoring period within the limit of estimate in the registered PDD? Request for justification for higher estimated CER if not clarified.	/33/	DR	The CER claimed for this monitoring period is slightly higher than the estimation in the approved revised PDD. The increase has been appropriately justified in section E.6. of the MR.	OK	OK
1.7 Is the monitoring system provided in line diagrams showing all relevant monitoring points?	/33/	DR	Not applicable for this project activity.	OK	OK
2. Monitoring plan and methodology					
2.1 Is the monitoring plan established in accordance with the monitoring methodology?	/33/ /42/ /45/	DR	Yes. The monitoring plan complies with the requirement of applied monitoring methodology AMS-I.C. version 14. The applied	OK	OK

Checklist question	Ref.	MoV[2]	Findings, comments, references, data sources	Draft conclusion	Final conclusion
§ 189 of CDM Project Standard			AMS-I.C. version 14, clause 29 (c) states that, If the emissions reduction per system is less than 5 tonnes of CO2 a year, (a) Recording annually the number of systems operating (evidence of continuing operation, such as on-going rental/lease payments could be a substitute), if necessary using survey methods; (b) Estimating the annual hours of operation of an average system, if necessary using survey methods. Annual hours of operation can be estimated from total output (e.g. tonnes of grain dried) and output per hour if an accurate value of output per hour is available.		
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 to the CDM EB? Reference: § 209,210,211 of CDM Project Standard (for temporary deviation) § 212,213 of CDM Project Standard (for permanent change)	/33/ /42/ /45/	DR	Not applicable. No revision or deviation from the monitoring methodology is required.	OK	OK
2.2.1 Have the above changes to the monitoring plan been approved by the CDM EB?	/33/ /42/ /45/	DR	Idem.	OK	OK
3. Monitoring and the monitoring plan					
3.1 Is monitoring established in full compliance with the monitoring plan, contained in the registered	/33/ /42/	DR I	Yes. The verification team checked the actual monitoring via document check and on-site	OK	OK

Checklist question	Ref.	MoV[2]	Findings, comments, references, data sources	Draft conclusion	Final conclusion
PDD (or new monitoring plan approved by the CDM EB)? § 194 of CDM Project Standard			interviews with the project owner, NXFI, HRES monitoring personnel and participating users, and confirmed that the monitoring plan contained in the approved revised PDD has been strictly followed.		
3.2 Are all baseline emission parameters monitored and updated in accordance with monitoring plan, monitoring methodology and relevant CDM EB decisions?	/33/ /42/ /45/	DR	According to the approved revised PDD, the baseline emissions are calculated as $BE_y = n * \Sigma [773.5 * (R_i / 700) * t_i * (3.6*10^{-9})] * EF_{CO2} / \eta_{th}$ Where n The total number of solar cookers installed by the proposed project (i.e. monitoring parameter A) R_i The actual solar irradiance rate in month i in W/m2 (the fixed value since the ex-ante approach is selected) t_i The usage time of each solar cooker in month i in hour (i.e. monitoring parameter B) EF_{CO2} The CO2 emission factor per unit of coal (i.e. 94.6 tCO_2e/TJ; the fixed value since the ex-ante approach is selected) η_{th} The efficiency of the plant using fossil fuel (i.e. 15%) that would been used in the absence of the project activity There are two monitoring parameters, i.e. n: number of solar cookers engaged in the	OK	OK

Checklist question	Ref.	MoV[2]	Findings, comments, references, data sources	Draft conclusion	Final conclusion
			proposed project; and t_i: the monthly operating time of each solar cooker. Others are fixed value as the ex-ante approach. All of them are according to the applied baseline and monitoring methodology AMS-I.C. version 14.		
3.2.1 Was the monitoring equipment for baseline emission parameters controlled and monitoring results recorded as per approved frequency?	/33/ /42/ /45/	DR I	Yes. For monitoring parameter A, number of systems operating will be monitored at least once per year, no monitoring equipment is required. For monitoring parameter B, average operating hours per system will be continuously measured and recorded monthly. The monitoring equipment is the timer (e.g. clock, watch, phone-clock and etc.).	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?	/11/ /12/ /13/ /14/ /27/ /31/ /33/ /42/ /45/	DR	Owing to the project nature, there is no need for use of special monitoring equipment/device in the project monitoring. For monitoring parameter A, the number of operating solar cooker is countered and determined by on-site visual observation by the trained monitoring groups. For monitoring parameter B, the calibration is not required or specified in the approved revised PDD or the applied methodology.	OK	OK
3.3 Are all project emission parameters monitored and updated in accordance with monitoring plan, monitoring methodology and relevant CDM EB decisions?	/33/ /42/	DR	According to the methodology AMS-I.C. version 14 and the approved revised PDD, the project activity is a new installation of renewable solar cooker project, the project emissions are considered as zero, i.e. $PE_y = 0$, and thus no monitoring is required.	OK	OK

Checklist question	Ref.	MoV[2]	Findings, comments, references, data sources	Draft conclusion	Final conclusion
3.3.1 Was the monitoring equipment for project emission parameters controlled and monitoring results recorded as per approved frequency?	/33/ /42/	DR	Idem.	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?	/33/ /42/	DR	Idem.	OK	OK
3.4 Are all leakage emission parameters monitored and updated in accordance with monitoring plan, monitoring methodology and relevant CDM EB decisions?	/33/ /42/	DR	According to the methodology AMS-I.C. version 14 and the approved revised PDD, the project activity is a new installation of renewable solar cooker project, no leakage is required to be considered, i.e. L_y = 0, and thus no monitoring is required.	OK	OK
3.4.1 Was the monitoring equipment for leakage emission parameters controlled and monitoring results recorded as per approved frequency?	/33/ /42/	DR	Idem.	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?	/33/ /42/	DR	Idem.	OK	OK
3.5 Were all monitoring parameters available and verifiable through the whole monitoring period?	/19/ /20/ /33/ /42/ /45/	DR I	Yes. The verification team confirms that all monitoring parameters were available and verifiable through this monitoring period as below, - monitoring records for monitoring parameter A; - monitoring records for monitoring parameter B - the data/ parameters not being monitored which are available in the approved revised PDD.	OK	OK

Checklist question	Ref.	MoV[2]	Findings, comments, references, data sources	Draft conclusion	Final conclusion
3.5.1 In case, only partial monitoring data is available 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)	/33/ /19/ /20/ /42/ /45/	DR I	Not applicable. See 3.5.	OK	OK
3.6 Was management and operation system established and operated in accordance with the monitoring plan?	/33/ /18/ /42/ /45/	DR I	During OSV, the project owner demonstrated the CDM monitoring organization chart of the project which was the same as the approved revised PDD. It can be classified into 4 categories as following. 1. The director of CDM group, Mr. Jiang Wei, who is also the general manager of NXFI, in-charge of the CDM project monitoring and management. 2. CDM consultant, Clean Air Trade Inc., which is responsible for providing consultation services on CDM validation and verification of the project, including preparation of PDD, monitoring report etc; directly reports to the PP. 3. NXFI's CDM monitoring staff, including (i) data checker, (ii) data analyst and (iii) data recording for the management of all monitoring data & records; (iv) monitoring team for monitoring parameters. 4. Haiyuan County Rural Energy Station (HRES), the governmental organization in charge of the rural energy affairs, assisted the PP in the coordinatation of monitoing data collection of monitoring parameter A	OK	OK

Checklist question	Ref.	MoV[2]	Findings, comments, references, data sources	Draft conclusion	Final conclusion
			and B. All the original data were independently collected and obtained by HRES monitoring members. All the monitoring records of original data have been checked by HRES and confirmed valid by signatures of HRES monitoring members. Based on the interview results and the monitoring organization provided by NXFI /18/, the verification team confirms that the monitoring responsibility of each monitoring personnel was handled according to the monitoring plan of approved revised PDD and the responsible personnel are clearly aware of monitoring procedures and are capable to work on their responsibilities.		
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?	/33/ /18/ /23/ /24/ /25/	DR I	Yes. The verification team interviewed with the top management MR. Jiang, CDM consultant, NXFI's monitoring personnel; HRES monitoring personnel and solar cooker users and confirmed that they were able to demonstrate their responsibility in the project monitoring & operation.	OK	OK
3.8 Does the monitoring system provide organizational structure, role and responsibilities, emergency procedures?	/33/ /18/	DR	Yes, they are provided in section C of the MR.	OK	OK
3.9 Does any uncertainties identified and addressed?	/33/	DR	It is not addressed in the MR and the verification team considers the uncertainty level to be low.	OK	OK
4. Parameters					

Checklist question	Ref.	MoV[2]	Findings, comments, references, data sources	Draft conclusion	Final conclusion
4.1 **Monitored parameter** Title: Indication: Units: Estimated value (*ex-ante*): Measured value (*ex-post*):	/33/ /19/ /20/ /21/ /42/ /45/	DR I OSV	Monitoring parameter A: Title: The number of solar cookers operating annually; Indication: *n* Unit: N/A Estimated value (*ex-ante*): 17,000 Measured value (*ex-post*): 16,996. The monitoring parameter A was checked by the monitoring team A once per year to verify the number of systems in operation. The verification team checked the monitoring records of monitoring parameter A and confirmed that the total number of systems in operation is correct Monitoring parameter B: Title: The average operating hour of each system; Indication: t_i Unit: hour Estimated value (*ex-ante*): 120 hr / month Measured value (*ex-post*): 79.73 – 150.65 hr/ month The monitoring parameter B was monitored by the HRES monitoring personnel every day and reported to NXFI monthly. The verification	OK	OK

Checklist question	Ref.	MoV[2]	Findings, comments, references, data sources	Draft conclusion	Final conclusion
			team checked the monitoring records of monitoring parameter B; the daily reporting records from the users to the HRES monitoring personnel; and crosschecked by interviews with users to confirm their using habit, reporting means, average daily usage hours, and thus confirmed the data is real, conservative, and measureable.		
4.2 **Default parameter** Title: Indication: Units: Default/Used value:	/33/ /42/ /45/	DR	There are totally 6 ex-ante determined parameters not being monitored and act as the default parameters. All of them are used for baseline emission calculation. **Parameter1:** EF_{CO2}: The CO_2 emission factor per unit of coal (i.e. 94.6 tCO_2e/TJ; the fixed value since the ex-ante approach is selected); **Parameter 2:** R: the standard solar irradiance used for calculating rated power (i.e. 700W/m2); **Parameter 3:** R_i is the actual solar irradiance rate in month i in W/m^2 (Refer to the Annex 4 of the approved revised PDD, i.e. 1999-2008 average monthly solar irradiance value provided by Ningxia Hui Autonomous Region Meteorological Archives); **Parameter 4:** A: Light collection Area (i.e. $1.7m^2$); **Parameter 5:** η: The efficiency of the plant using fossil fuel (i.e. 15%) that would be used	OK	OK

Checklist question	Ref.	MoV[2]	Findings, comments, references, data sources	Draft conclusion	Final conclusion
			in the absence of the project activity; **Parameter 6:** η_{th}: thermal efficiency of solar cooker (i.e. 65%). The verification team confirms all of those default parameters which are consistent with those in approved revised PDD.		
4.3 **Sustainability monitored indicator #1** Indicator: Air quality Chosen parameter: SO_x emission reduction Units: tonne Estimated value (*ex-ante*): 200 t Measured value (*ex-post*): 131.5 t Monitoring frequency: Yearly	/33/	DR I	According to the SMR, the SO_2 emission reductions is calculated based on coal saved by the solar cooker users during the sustainability monitoring period. The amount of saved coal consumption is derived based on the verified CERs for the 2nd CDM periodic monitoring period. The coal saving is calculated by: Coal savings (t) = CERs (tCO2)/2.66772 (tCO2/t) = 35,078/2.66772 =13,149 t Then, the SO_2 emission reductions is calculated by: SO_2 emission reduction (t) = Coal savings (t)*S%*M_{SO2}/M_S = 13,149*0.5%*32/16 = 131.5 t The verification team confirms the calculation steps and the applied *ex-ante* parameters in the equations are consistent with the Passport.	OK	OK
4.4.1 **Sustainability monitored indicator #2** Indicator: Access to affordable and clean energy	/33/	DR I	The no. of operational solar cooker was monitored in accordance with the GHG	OK	OK

Checklist question	Ref.	MoV[2]	Findings, comments, references, data sources	Draft conclusion	Final conclusion
services Chosen parameter: 1. the number of solar cooker installed Units: units Estimated value (*ex-ante*): 17,000 Measured value (*ex-post*): 16,996 units for the 2nd monitoring period Monitoring frequency: Yearly			monitoring plan. The monitoring of the no. of operational solar cooker was done by a monitoring team which consisted of officers from HRES and NXFI. 16,996 units of operational solar cooker were verified during this monitoring period.		
4.4.2 **Sustainability monitored indicator #2** Indicator: Access to affordable and clean energy services Chosen parameter: 2. solar cooker usage time Units: hours Estimated value (*ex-ante*): 4 hrs daily Measured value (*ex-post*): 127.81 monthly Monitoring frequency: Yearly	/33/	DR I	By reviewing the CDM verification report, it is confirmed that the average monthly usage time of the solar cooker is verified as 127.81 monthly for the 2nd CDM periodic monitoring period.	OK	OK
4.5.1 **Sustainability monitored indicator #3** Indicator: Human and institutional capacity Chosen parameter: 1. the number of solar cookers installed Units: units Estimated value (*ex-ante*): 17,000 units Measured value (*ex-post*): 16,996 units Monitoring frequency: Yearly	/33/	DR I	By reviewing the CDM verification report, the verification team can confirmed the same verified figures of the 2nd CDM periodic monitoring period. According to the CDM verification report, the no. of operational solar cooker was verified as 16,996 units which was based on the monitoring records. The monitoring method is considered in compliance with the registered GS Passport.	OK	OK

Checklist question	Ref.	MoV[2]	Findings, comments, references, data sources	Draft conclusion	Final conclusion
4.5.2 **Sustainability monitored indicator #3** Indicator: Human and institutional capacity Chosen parameter: 2. The training records Units: (nil) Estimated value (*ex-ante*): 1 Measured value (*ex-post*): 3 Monitoring frequency: Yearly	/33/	DR I	For the indicator #3, it is stated that "the 30 sample users…were asked to spread the information…to their neighbours, relatives, and friends". Please further clarify the detailed process such as time, method and etc. and how it is related to the training monitoring.	~~CL 1~~	OK
4.6 **Sustainability monitored indicator #4** Indicator: Livelihood of the poor Chosen parameter: saved expenditure and health benefits Units: (nil) Estimated value (*ex-ante*): The project saves expenditures and brings health benefits for the poor. Measured value (*ex-post*): It is concluded that using solar cookers helped users save expenditures and brought health benefits to users during this monitoring period. Monitoring frequency: Yearly	/33/	DR I	The SMR has described the processes of carrying out the survey by visiting 30 households users randomly and asked them all the questions on the questionnaires. The survey was conducted by the monitoring team from 2013-08-01 to 2013-08-26 by means of physical interview. The verification team has checked the 30 sets filled questionnaires during OSV. It is confirmed that the results are consistent with the result recorded in GS710 Questionnaires to Users – Analysis and Conclusion. The PP concludes from the results that "*using solar cookers helped users save expenditures and brought health benefits to users during this monitoring period*". The verification team has visited 21 out of the 30 sampled households during OSV for the assessment of PP's conclusion on the survey	OK	OK

Checklist question	Ref.	MoV[2]	Findings, comments, references, data sources	Draft conclusion	Final conclusion
			result. Based on the observations on the living environment and the user's responses, the verification team confirms that all the interviewed users agreed 1) their expenditure on fuel consumption has reduced; 2) they feel healthier, when compared with time before using the solar cookers.		
4.7 **Sustainability monitored indicator #5** Indicator: Quantitative employment and income generation Chosen parameter: employment and income increase Units: (nil) Estimated value (*ex-ante*): Employment positions and employee's income are increased Measured value (*ex-post*): more employment opportunities were created for local people by the solar cooker project. Monitoring frequency: Yearly	/33/	DR I	The monitoring was done by interviewing the solar cooker manufacturers. Their opinions on whether the two aspects: 1) the availability of position or jobs for employee; 2) the income of the employee, had been influenced by taking part in the project activity. The method of monitoring is considered in compliance with the registered GS Passport. As per the reported results, the verification team has checked the manufacturer interview records done by the PP for the interviews with the solar cooker manufacturers and hence found the same results. The records shows that all the 4 manufacturers agreed more employment opportunities and employee's income were created by supplying solar cookers to the project activity. The verification team had visited one of the manufacturers during OSV, the owner /v/ had confirmed that more workers were employed so as to produce the solar cookers for the project activity. At the meantime, the income of the workers had increased significantly.	OK	OK
5. Calculations					

Checklist question	Ref.	MoV[2]	Findings, comments, references, data sources	Draft conclusion	Final conclusion
5.1 Have all the calculations related to the baseline emissions been carried according to the formulae and methods described in the registered PDD and applied methodology? § 197 of CDM Project Standard	/33/ /19/ /20/ /42/ /45/	DR	The verification team confirms that appropriate formulae and methods have been used.	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 PDD and applied methodology?	/33/ /42/ /45/	DR	N/A. No calculation is needed for the project emission according to the AMS-I.C. version 14.	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 PDD and applied methodology?	/33/ /42/ /45/	DR	N/A. No calculation is needed for the leakage emission according to the AMS-I.C. version 14.	OK	OK

Table 2: List of Requests for Corrective Action (CAR) and Clarification (CL)					
No.	Type of request	Observation	Reference (Table 1)	Summary of project owner response	Verification team conclusion
1.	CL 1	For the indicator #3, it is stated that "the 30 sample users…were asked to spread the information…to their neighbours, relatives, and friends". Please further clarify the detailed process such as time, method and etc. and how it is related to the training monitoring.	4.5.2	From 01/08/2013 to 26/08/2013, the monitoring team visited the 30 sample users for survey and each user received a CD with videos about the project. As additional training, the 30 users were asked to show the videos to their neighbours, relatives, and friends. The monitoring team visited the 30 users again later to confirm the time and frequency the videos were played and the total number of audience that watched the videos. It turns out that the videos were played 54 times and 323 villagers watched them. Since the videos were broadcasted lots of times on local televisions before, this arrangement is not a substitution of regular publicity and training, but a supplemental training, which is meaningful for the project owner searching for new training method.	The training via video was confirmed by the 30 households in document /5/ and onsite interview /i/ /iv/. It is considered as a useful supplemental training method for this project activity. The CL is thus closed.

Table 3: List of forward action requests (FARs)				
FAR number	Observation	Reference	Summary of project participants' response	Verification team conclusion
FAR 1	Given the nature of later registration under GS, the deviation of monitoring frequency of SD parameters for this particular monitoring period was allowed. The PP shall implement SD monitoring according to SD Monitoring Plan in the future.		In this monitoring period, the monitoring of SD parameters was implemented in accordance with SD Monitoring Plan in the registered Passport.	By reviewing the monitoring records /1/ /2/ /3/ /4/ /5/ /19/ /20/, it is confirmed that the SD monitoring is strictly implemented accoridng to the SD monitoring plan in the registered Passport. The FAR is thus closed.

Appendix B

Certification statement

to the Verification Report 01 997 91050 53901-2ND VE

Certification statement

TUV Rheinland (China) Ltd., the DOE, has performed the verification of the registered CDM project activity "UNFCCC Registration No. 3520 (GS Ref. No. 710)", "Federal Intertrade Haiyuan Solar Cooker Project" in P.R. China. The project activity is designed to generate emission reductions by utilizing the solar thermal energy from the designated solar cookers.

The project participants are responsible for the collection of data in accordance with the GHG and sustainability monitoring plan and the reporting of GHG emissions reductions and contribution of sustainable development from the project. A total of 35,078 tCO_2e CERs were verified under the 2nd CDM periodic verification. Since 2% of the CER was deucted for the CDM Adaptation Fund, it is confirmed that 34,376 tCO_2e of GS CER is resulted. It is DOE's responsibility to express an independent verification statement on the reported GS CERs from the project. The DOE does not express any opinion on the selected baseline scenario or on the validated and approved revised PDD.

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 GS CERs, 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, 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:

- Revised PDD version 12 of 2012-12-08, approved by the CDM Executive Board on 2013-03-19 and its monitoring plan;
- Registered GS Passport, version 8, dated 2013-05-10
- Registered sustainability validation report, version 01.5, dated 2013-05-10
- Registered local stakeholder consultation report, dated 2009-08-25
- Approved monitoring methodology AMS-I.C. "Thermal energy for the user with or without electricity", version 14;
- Approved validation report, version 01.2 dated 2010-03-11;
- Previous verification reports, monitoring reports and emissions calculation spreadsheet /44/;
- Final sustainability monitoring report, version 2.0, dated 2013-11-12.

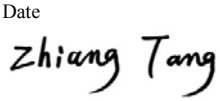
This statement covers verification period of 12 months / 365 days between 2012-09-01 and 2013-08-31.

The DOE has raised 1 clarification, which has been successfully resolved by PPs. One FAR was raised in the previous verification and closed in this verification.

The DOE considers necessary to give reasonable assurance that reported GS CERs were calculated correctly on the basis of the approved baseline and monitoring methodology and the monitoring plan contained in the approved revised PDD are fairly stated.

The DOE , hereby certifies that the project activity, achieved emission reductions by sources of GHG equal to 34,376 tCO_2 equivalent and all monitoring requirements have been fulfilled.

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

2013-11-29 Date	2013-11-29 Date	2013-11-28 Date
		
Mr. Henri Phan DOE Manager TUV Rheinland (China) Ltd.	Mr. Walter TANG Technical Reviewer TUV Rheinland (China) Ltd.	Mr. Harold HAI Team Leader TUV Rheinland Hong Kong Ltd.

Appendix C

CERTIFICATES OF COMPETENCE

Qualification

Hai, Harold /

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 13 - Waste handling and disposal CDM 01 - Energy industries (renewable - / non-renewable sources) CDM 06 - Construction		
Add. qualification: (zus. Qualifikation)			
First Appointment: (Erstberufung)	12/19/2007	Valid to: (Gültig bis)	09/24/2015

Remarks:	TA1.2 - Renewable Energies TA 13.1- Waste handling & disposal TA 6.1 - Construction
Languages:	Chinese English Mandarin Chinese simplified Chinese traditional

Experience Exchange

Date	Location	Remarks	Accreditation(s)
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: 2012-06-29
Change: EAC CDM added
By: Praveen Urs
Reason:

Date: 2011-01-04
Change: EAC CDM added; Non-EAC CDM 01 Energy Industries removed
By: Manfred Brinkmann
Reason:

Date: 2010-04-15
Change: CDM 01 Energy Industries added
By: Manfred Brinkmann
Reason: Scope 1: limited to renewable energies except biomass power generation / geothermal

Date: 2007-12-20
Change: EAC CDM added
By: Manfred Brinkmann
Reason:

History

Created:	12/19/2007 02:32:34 PM	Harold Hai/Hk/Chn/TUV
Modified:	11/09/2012 04:11:16 PM	Praveen Urs/Chn/TUV
	09/26/2012 06:21:49 PM	Harold Hai/Hk/Chn/TUV
	09/24/2012 11:49:37 AM	Harold Hai/Hk/Chn/TUV
	06/29/2012 03:42:54 PM	
	03/19/2012 07:31:44 PM	
	01/31/2011 09:25:37 AM	
	01/04/2011 03:16:31 PM	
	ZE9	
	01/04/2011 03:16:11 PM	
	ZE9	
	01/04/2011 03:15:12 PM	
	ZE9	
	09/13/2010 02:53:26 PM	
	ZE9	

Export to ICMS

Last Export:

Qualification

LIU, Jia /

Emission Trading
United Nations Framework Convention on Climate Change

Auditor No.:
(AuditorenRegNr)

Appointed: (Zugelassen)	☒ ja	Qualification Level: (Qualifikationsstufe)	Auditor
External: (Externer)	☐ ja	Add. reviewer: (Zusätzlicher Prüfer)	☐ yes
EAC Scopes: (EAC Branchen)	CDM 01 - Energy industries (renewable - / non-renewable sources)		
Add. qualification: (zus. Qualifikation)			
First Appointment: (Erstberufung)	09/10/2012	Valid to: (Gültig bis)	09/09/2015

Remarks:	T.A 1.2
Languages:	Chinese simplified English Cantonese

Experience Exchange

Date	Location	Remarks	Accreditation(s)

Monitoring

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

Remarks:

View / Edit Monitoring

History of scope allocation

Date:	2012-09-28
Change:	EAC CDM added
By:	Praveen Urs
Reason:	

History

Created:	09/10/2012 03:25:09 PM	Jasmine Liu/Hk/Chn/TUV
Modified:	09/28/2012 04:33:30 PM	Praveen Urs/Chn/TUV
	09/10/2012 03:26:18 PM	Jasmine Liu/Hk/Chn/TUV

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

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	Accreditation(s)

Monitoring

Latest Monitoring:	Next

(letzte Beurteilung)

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:	12/06/2011 05:00:51 PM	Walter Tang/Chn/TUV
Modified:	07/06/2012 04:47:48 PM	Praveen Urs/Chn/TUV
	07/02/2012 03:08:57 PM	Praveen Urs/Chn/TUV
	07/02/2012 03:08:48 PM	Praveen Urs/Chn/TUV
	05/15/2012 03:30:46 PM	
	02/13/2012 08:00:10 PM	
	12/06/2011 05:01:30 PM	

Export to ICMS

Last Export: