

GOLD STANDARD MONITORING REPORT

Sustainability Monitoring report form

Project Information

Title of the project activity	Nanyang Danjiang River Solar Cooker Project Phase I
The Gold Standard Reference number of the project activity	GS1378
The Gold Standard Registration date of the project activity	13/08/2013
Version number of the monitoring report	03
Completion date of the monitoring report	22/08/2018
The CDM Reference number of the project activity	6125
The CDM Registration date of the project activity	02/05/2012
Monitoring period number and duration of this monitoring period	Monitoring period 03 01/04/2016 - 31/12/2017 (both the first day and last day included)
Project participant(s)	Sirreon Technology & Development (Beijing) Co., Ltd China Carbon N.V
Host Party(ies)	People's Republic of China
Sectoral scope(s) and applied methodology(ies)	Sectoral Scope: Energy industries (renewable/ non-renewable sources) Methodology: AMS-I.C "Thermal energy production with or without electricity" (Version 19, EB61)

Actual GHG emission reductions or net anthropogenic GHG removals by sinks achieved in this monitoring period	156,461 tCO₂e in this monitoring period Vintage Break: 01 Apr 2016 - 31 Dec 2016: 70,245 tCO₂e 01 Jan 2017 - 31 Dec 2017: 86,216 tCO₂e
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SECTION A. Description of project activity

A.1. General description of project activity

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Nanyang Danjiang River Solar Cooker Project Phase I is located in the southwest of Henan Province, which is invested and implemented by Sirreon Technology and Development (Beijing) Co., Ltd. This region is an ideal area for solar energy utilization. The project involves the distribution and installation of 48,000 sets of solar cookers for rural households. The daylighting area of each solar cooker will be no less than 1.7 m² and the rated output is 773.5W_{th}. The rated and maximum total installed capacity of the project is 37.128MW_{th} and 42.073MW_{th} respectively.

The proposed project has been enabled the rural households to efficiently substitute solar energy for the fossil fuel (coal) used in daily cooking and water boiling, avoiding CO₂ emission that would be generated by fossil fuel consumption.

The Project was started on 12/13/2010 and put into full operation on 01/08/2011. Also the project was registered as the CDM project on 2012.05.02 and registered as the Gold Standard project on 2013.08.13 respectively.

The continued operation period for the project is 01/04/2016 - 31/12/2017 which is the current monitoring period. The total emission reductions achieved in this monitoring period is 156,461 tCO₂e.

Implementation of continuous input /grievance mechanism:

In order to attract more active and continuous stakeholders and get more stakeholder feedback, the project owner proposed the three methods of continuous input & grievance expression:

- 1) Comment book. It's available outside the wall of the meeting room of Xichuan Agricultural Bureau. All stakeholders have access to provide feedback on comment books. The contact information of plant manager Mr. Su Fanglei is listed on the first page of the comment book.
- 2) Telephone access. Stakeholders can also provide comments via phone. The telephone number of Project owner office (Contact info: Mr. Su Fanglei, +86 10 60238895) and GS (+41 (0) 22 788 7080) is provided to contact.
- 3) Internet/email access. Email address of Mr. Su Fanglei and GS is provided as well for stakeholders to provide comments in the internet. Contact info: sufangleigs@163.com, info@goldstandard.org.

During this monitoring period, no comments were received via comment book, telephone and email

access.

A.2. Location of project activity

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The Project is located in 7 townships (Jingziguan, Siwan, Xihuang, Maotang, Dashiqiao, Shangji and Jinhe) of Xichuan County, Henan Province, P. R. China.

The location of the project site is presented in the following table:

No.	Township	Number of solar cookers	Geographic coordinate		
				Longitude	Latitude
1	Jingziguan	6,000	Scope	110.9790°E ~ 111.0316°E	33.2323°N ~ 33.2513°N
			Center	111.0174°E	33.2467°N
2	Siwan	6,000	Scope	111.1273°E ~ 111.1651°E	33.1588°N ~ 33.1651°N
			Center	111.1486°E	33.1578°N
3	Xihuang	8,000	Scope	111.1390°E ~ 111.1713°E	33.2393°N ~ 33.2461°N
			Center	111.1615°E	33.2409°N
4	Maotang	8,000	Scope	111.2805°E ~ 111.4480°E	33.1502°N ~ 33.2697°N
			Center	111.3773°E	33.2184°N
5	Dashiqiao	7,000	Scope	111.2509°E ~ 111.2592°E	33.0524°N ~ 33.0575°N
			Center	111.2534°E	33.0567°N
6	Shangji	7,000	Scope	111.4803°E ~ 111.4878°E	33.1289°N ~ 33.1352°N
			Center	111.4825°E	33.1331°N
7	Jinhe	6,000	Scope	111.3979°E ~ 111.4020°E	33.1024°N ~ 33.1030°N
			Center	111.3986°E	33.1016°N
Total		48,000			

A.3. Parties and project participant(s)

Party involved ((host) indicates a host Party)	Private and/or public entity(ies) project participants (as applicable)	Indicate if the Party involved wishes to be considered as project participant (Yes/No)
China (host country)	Sirreon Technology & Development (Beijing) Co., Ltd	No
The Netherlands	China Carbon N.V	No

A.4. Reference of applied methodology

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The methodology AMS-I.C Thermal energy production with or without electricity” (Version 19, EB61) was applied.

The project also refers to:

“Tool for the demonstration and assessment of additionality (version 07.0.0)”

<http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v7.0.0.pdf>

A.5. Monitoring period of project activity

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A fixed crediting period of 10 years is adopted for the proposed project.

The third monitoring period of the project is: 01/04/2016 – 31/12/2017

SECTION B. Description of the Gold Standard sustainable indicators monitoring plan

The purpose of this section is to describe the implementation of the Gold Standard Sustainable Indicators Monitoring Plan, a specific request for the Gold Standard. The sustainable indicators monitoring plan consists of:

- B.1. Quality of employment
- B.2. Livelihood of the Poor
- B.3. Access to affordable and clean energy services
- B.4. Quantitative employment and income generation

See below the complete list of each parameter and a description of the implementation of the

monitoring plan for those parameters that applied for this specific period of time.

Data in GS passport

B.1. Quality of Employment

No		1
Indicator		Quality of employment
Mitigation measure		N/A
Chosen parameter		Type of job generated by the project monitoring activity
Current situation of parameter		The project region is an underdeveloped poor region and the majority of employment is agricultural labour or other heavy manual labour with very poor working conditions.
Estimation of baseline situation of parameter		0
Future target for parameter		The implementation of this project can stimulate the development of solar energy and create more technology- and knowledge-based employment with good working conditions, which is a significant improvement on local employment quality.
Way of monitoring	How	Working duties and hours of the people employed for monitoring
	When	Yearly
	By who	Project owner

The quality of employment was estimated as positive with basis on the analysis of the information of the type of job generated by the project monitoring activity.

The implementation of this project have stimulated the development of solar energy and create more technology- and knowledge-based employment with good working conditions, which is a significant improvement on local employment quality.

There were 3 types of monitoring position created by the project monitoring activity:

a) Data Survey; b) Data Recording; c) Data Verification

The working duties and hours of the people employed for monitoring shows as follows:

NO.	Type of Job	Working Duty	Working Hours
1	Data Survey	1. Conduct on-site investigation on home population, age, income, occupation and energy usage of the solar cooker users; 2. Responsible for investigating the use of solar cookers by termly visit the users and inspection, supervision, guiding users to record the using time, correcting errors in time to ensure the quality of the user record; 3. Collect the original records and periodic summary to	≤40hr/week

		Data Recording Group.	
2	Data Recording	1. Responsible for file, coding, storage and archiving the original recording; 2. Responsible for file, coding, storage and archiving the data verified or processed by Data Verification Group and feedback to the project owner regularly; 3. Responsible for statistic and calculate the solar cooker number and using time to help the project owner carrying out the monitoring works.	≤40hr/week
3	Data Verification	1. Responsible for check the using record of solar cooler users carefully; Processing and correcting the invalid or erroneous data on the basis of conservative principles determined by project owners. Feedback the processing result to the Data Recording Group and the important issue to project owner. 2. Propose recommendations for improvement to the Data Recording Group and arrange appropriate training as required. 3, Analysis of user data in question, and arrange the Data Survey Group to carry out targeted user surveys, provide the appropriate treatment measures.	≤40hr/week

B.2. Livelihood of the Poor

No		2
Indicator		Livelihood of the Poor
Mitigation measure		N/A
Chosen parameter		Reduced expenditures from purchasing coal
Current situation of parameter		0
Estimation of baseline situation of parameter		The baseline is that the project is not taking place. Therefore the baseline parameter value is 0.
Future target for parameter		The expenditures on coal purchasing have been saved for the solar cooker users
Way of monitoring	How	Questionnaires survey or justification from the publicly accessible sources.
	When	Yearly
	By who	Monitoring team employed by project owner

The impact on Livelihood of the poor was found positive as the reduction of expenditures from purchasing coal.

30 questionnaires were distributed to the local users. According to the questionnaires survey carried out by the project owner, 100% of the users said that the solar cooker has reduced their expenditures from purchasing coal for 1500 CNY¹ each year.

So we can consider that project situation is positive in comparison with the baseline situation for this indicator.

B.3. Access to affordable and clean energy services

No		3
Indicator		Access to affordable and clean energy services
Mitigation measure		N/A
Chosen parameter		The number of solar cookers installed. This parameter represents the scale of households that have access to clean energy.
Current situation of parameter		0
Estimation of baseline situation of parameter		The parameter is related to the number of solar cooker stoves installed by the project activity. The baseline is that the project is not taking place. Therefore the baseline parameter value is 0.
Future target for parameter		47,947 (2016) 47,928 (2017)
Way of monitoring	How	Record the number of operating solar cookers
	When	Yearly
	By who	Monitoring team employed by project owner

Impact on the indicator about access to affordable and clean energy services was estimated through the number of solar cookers installed.

According to the solar cooker purchase agreement, the total amount of solar cookers engaged in the proposed project is 48,000. During the visit to the cooker users by the monitoring team, there were 53 (2016) and 72 (2017) households with nobody at home. Therefore, the monitoring team could not enter the houses to check the solar cookers. Following conservative principle, the monitoring team did not include these cookers into the total number of solar cookers. Although conservative numbers were used here, it still can represents the scale of households that have access to clean energy. So, we can consider that project situation is positive in comparison with the baseline situation for this indicator.

B.4. Quantitative employment and income generation

No	4
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¹ The questionnaires were distributed in 2016, 2017 and 2018, 30 copies for each year. 1,500 CNY is an average level in each year.

Indicator		Quantitative employment and income generation
Mitigation measure		N/A
Chosen parameter		The number of jobs created by project owner for project monitoring, and the average salary of these jobs.
Current situation of parameter		0
Estimation of baseline situation of parameter		The baseline is that the project is not taking place. Therefore the baseline parameter value is 0.
Future target for parameter		30- 40 (Current estimation, subject to change)
Way of monitoring	How	The number of people employed for project monitoring and their salaries
	When	Yearly
	By who	Project owner

Payroll of the employees is used to monitor this parameter. According to payroll information, 30 workers are employed for project monitoring by the project activity and responsible for the operation.

The average salaries of the employees are ¥3,200.00 CNY/Month².

So we can consider that project situation is positive in comparison with the baseline situation for this indicator.

As mentioned above, the monitor activity for this project has been fulfilled and proved to be a positive one for the sustainable development.

² The average salaries of the employees are ¥3,200.00 CNY/Month for year 2016, 2017