



Monitoring report form
(Version 05.1)

MONITORING REPORT

Title of the project activity	The CDQ Project in Tranvic Group	
Reference number of the project activity	GS2460	
Version number of the monitoring report	02.0	
Completion date of the monitoring report	07/11/2020	
Monitoring period number and duration of this monitoring period	3 rd monitoring period (01/06/2016 - 29/02/2020, first and last days included)	
Project participant(s)	Neijiang Bowei Xinyu Chemical Industry Co., Ltd. (project owner) Carbon Invcap International Trading Co., Ltd. (buyer)	
Host Party	People's Republic of China	
Sectoral scope(s)	01Energy industries (renewable - / non-renewable sources); 04 Manufacturing industries	
Selected methodology(ies)	ACM0012 (version 04.0.0) – <i>Consolidated baseline methodology for GHG emission reductions from waste energy recovery projects</i>	
Selected standardized baseline(s)	N/A	
Estimated amount of GHG emission reductions or net GHG removals by sinks for this monitoring period in the registered PDD	575,460 tCO ₂ e	
Total amount of GHG emission reductions or net GHG removals by sinks achieved in this monitoring period	GHG emission reductions or net GHG removals by sinks reported up to 31 December 2012	GHG emission reductions or net GHG removals by sinks reported from 1 January 2013 onwards
	0	608,420 tCO ₂ e

SECTION A. Description of project activity

A.1. Purpose and general description of project activity

>>

The purpose of the report is to calculate the emission reductions generated by The CDQ Project in Tranvic Group (thereafter referred to as the Project) during the monitoring period (01/06/2016 - 29/02/2020, including both days), and to serve as basis for the verification and issuance of corresponding GS VERs. The Project has been registered as a GS VER project on 10/03/2014 (GS registration reference number: GS2460).

The Project, is sited within the production area of Tranvic Group, Lianjie town, Weiyuan county, Neijiang city, Sichuan province, P.R. of China, owned by Neijiang Bowei Xinyu Chemical Industry Co., Ltd., the daughter company of Tranvic Group. The Project installed one set of 170t/h CDQ system with a capacity of 30MW steam turbine/generator unit to recover the waste heat released into the atmosphere in the absence of the project activity to generate electricity for captive use, and estimated annual net electricity supply amounts to 209,088MWh. The electricity generated by the Project displace electricity which would have been supplied by the operation of grid-connected power plants and by the addition of new generation sources within the Central China Power Grid (CCPG), which is the same as the baseline scenario of the project. By recovering the waste heat generated in coke production for captive use to displace the equivalent electricity generation by the CCPG, the project leads to the reduction of CO₂ emissions into the atmosphere. The project activity achieves average greenhouse gas (GHG) emission reductions of 153,428 tCO₂e annually.

The project utilizes the waste heat released into the atmosphere in the absence of the project activity to generate electricity. The electricity generated displaces electricity which would have been supplied by the CCPG which is dominated by fossil fuel fired power plants. The project scenario existing prior to the implementation of the project activity is same as the baseline scenario of the project, that is, coke wet quenching (CWQ) system is used and waste heat is released to the atmosphere.

Relevant dates for the Project are as follows:

Construction start date: 01/06/2012

Commissioning start date: 13/05/2013

Continued operation periods: 20 years

During the monitoring period (01/06/2016-29/02/2020, including both days), the net electricity supplied to Tranvic Group is 829,856.65MWh. The monitoring activities were conducted in accordance with the monitoring plan in the registered GS-PDD and the registered GS passport. The total emission reductions in this monitoring period (01/06/2016-29/02/2020, including both days) are 608,420 tCO₂e, for year 2016 are 104,683 tCO₂e, for year 2017 are 150,947 tCO₂e, for year 2018 are 154,593 tCO₂e, for year 2019 are 167,108 tCO₂e, and for year 2020 are 31,089 tCO₂e.

No RECs are being issued for the project under consideration for GS VERs.

A.2. Location of project activity

>>

The project is sited in Lianjie town, Weiyuan county, Neijiang city, Sichuan province, P.R. of China, with central geographical coordinates of east longitude of 104°29'05" and north latitude of 29°43'11".

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 whether the Party involved wishes to be considered as project participant (yes/no)
People's Republic of China (Host)	Neijiang Bowei Xinyu Chemical Industry Co., Ltd. (Project owner)	No
United Kingdom of Great Britain and Northern Ireland	Carbon Invcap International Trading Co., Ltd. (Buyer)	No

A.4. Reference of applied methodology and standardized baseline

>>

The methodology applied for the Project is the approved consolidated baseline and monitoring methodology ACM0012 "*Consolidated baseline methodology for GHG emission reductions from waste energy recovery projects*" (version 04.0.0).

The approved "Tool to calculate the emission factor for an electricity system" (Version 03.0.0) is employed for the calculation of emission factor.

The approved "Tool to calculate baseline, project and/or leakage emissions from electricity consumption" (version 01) is applied to calculate the project emission.

For more information about the methodology and tools, please refer to:

<http://cdm.unfccc.int/methodologies/PAMethodologies/approved.html>

A.5. Crediting period of project activity

>>

10 years fixed crediting period is adopted by the project. The crediting period of the project activity is from 13/05/2013 to 12/05/2023.

A.6. Contact information of responsible persons/entities

>>

Dr. Zheng Zhaoning of Goldchina Consultancy International Co., Ltd. is responsible for completing the CDM-MR-FORM and the contact information is as follows:

Address: Room 2801, Unit 6, Building 1, Tangning One, No. 16 of Zhongguancun East Road, Haidian District, Beijing, 100083

Telephone: (8610) 6268 2508

Fax: (8610) 6268 2682

Email: zzn01@mails.tsinghua.edu.cn, zzn@gcci-carbon.com

Website: www.gcci-carbon.com

The person/entity is not project participant listed in Annex 1.

SECTION B. Implementation of project activity

B.1. Description of implemented registered project activity

>>

The project started operation on 13/05/2013. The implementation of the project is not phased. During the period of 01/06/2016-29/02/2020, the equipment of the project was in regular maintaining, No equipment was exchanged or overhauled. No other events occurred that affected the applicability of the methodology. The Project owner implements and operates the Project as per the registered GS-PDD and GS passport.

Major technical parameters of the key equipments employed by the project are illustrated in Table 1.

Table 1. Major technical parameters of the key equipments of the Project

Main Technical Data		The project
Waste Heat Boiler	Type	Q270/970-108.3-9.8/540
	Unit	1
	Capacity	108.3 t/h
	Operational Life	20
	Manufacture	Hangzhou Boiler Group Co., Ltd.
Steam Turbine	Model	Condensing
	Type	N30-8.83
	Unit	1
	Rated Capacity	30MW
	Rated Speed	3000r/min
	Manufacture	Qingdao Jieneng Steam Turbine Group Co., Ltd.
Generator	Type	QF ₂ W-30-2
	Unit	1
	Rated Capacity	30MW
	Rated voltage	10,500V
	Rated frequency	50HZ
	Rated Power factor	0.8
	Operational Life	20
	Manufacture	Dongfang Electric Consortium Dongfeng Electric Machinery Co., Ltd.

B.2. Post-registration changes

B.2.1. Temporary deviations from registered monitoring plan, applied methodology or applied standardized baseline

>>

There is no temporary deviation from registered monitoring plan or applied methodology.

B.2.2. Corrections

>>

The project is implemented as the registered PDD and no corrections applied to this monitoring period.

B.2.3. Changes to start date of crediting period

>>

There is no change to start date of crediting period.

B.2.4. Inclusion of a monitoring plan to the registered PDD that was not included at registration

>>

Not applicable.

B.2.5. Permanent changes from registered monitoring plan, applied methodology or applied standardized baseline

>>

The project is implemented as the registered PDD and no permanent changes.

B.2.6. Changes to project design of registered project activity

>>

The project is implemented as the registered PDD and no changes.

B.2.7. Types of changes specific to afforestation or reforestation project activity

>>

Not applicable.

SECTION C. Description of monitoring system

>>

Monitoring system arrangement

Three meters M1, M2 and M3 were installed, and M1 meter measures the power generation of the Project, M2 meter measures quantity of net electricity generation supplied by the project for captive use, and M3 meter measures the self-use electricity from the 10KV backup line.

The diagram of the technical process is shown in figure 1.

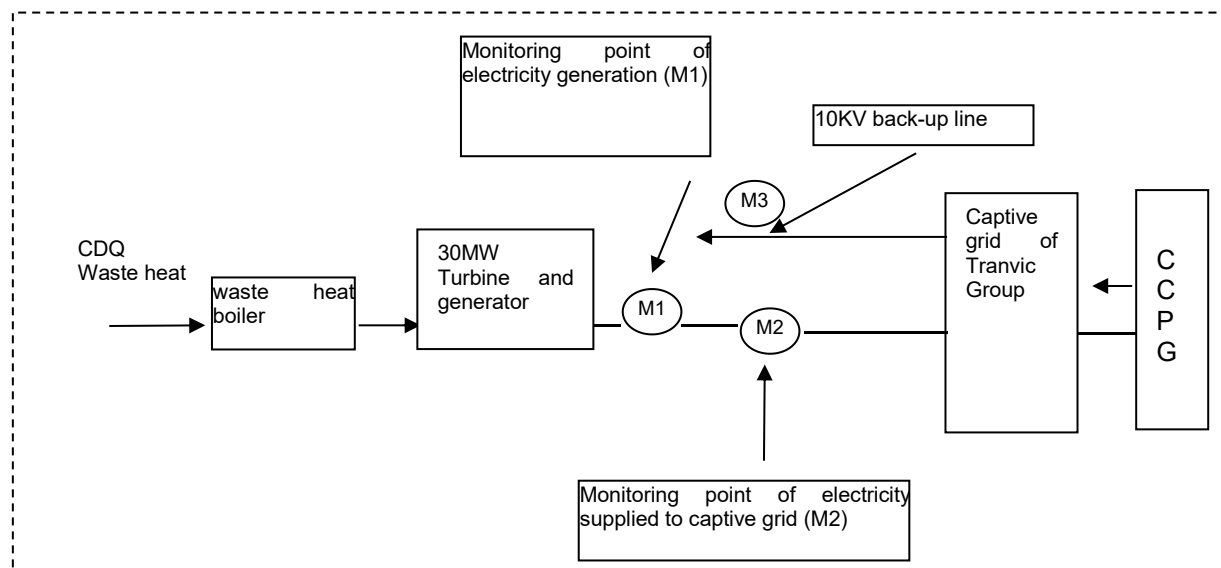


Figure1. The diagram of the monitoring system

* It is noted that the Project is sited within the production area of Tranvic Group, the Recipient facility. The electricity generated by the project was delivered to the captive grid of Tranvic Group, which covers the production area of Tranvic Group, including the Project. So, the electricity meters M1, M2 and M3 measure the electricity supplied to the recipient facility and from the project facility. So the electricity measurements satisfy the requirement of ACM0012.

Table 1. Major technical parameters of the key equipment of the project

meter	M1	M2	M3
Function	The meter of power generation	The meter of electricity supplied to the captive grid by the project	The meter of 10KV backup line
Parameter monitored	$Q_{OE,y}$	$EG_{PJ,y}$	$EC_{PJ,j,y}$
Accuracy	0.2S	0.5%	0.5%
Bi-direction	No	No	No
Location	outlet side of the generator	JH905 cabinet	JH906 cabinet

Management Structure

Detailed regarding the management structure of the monitoring plan please refers to Figure 2.

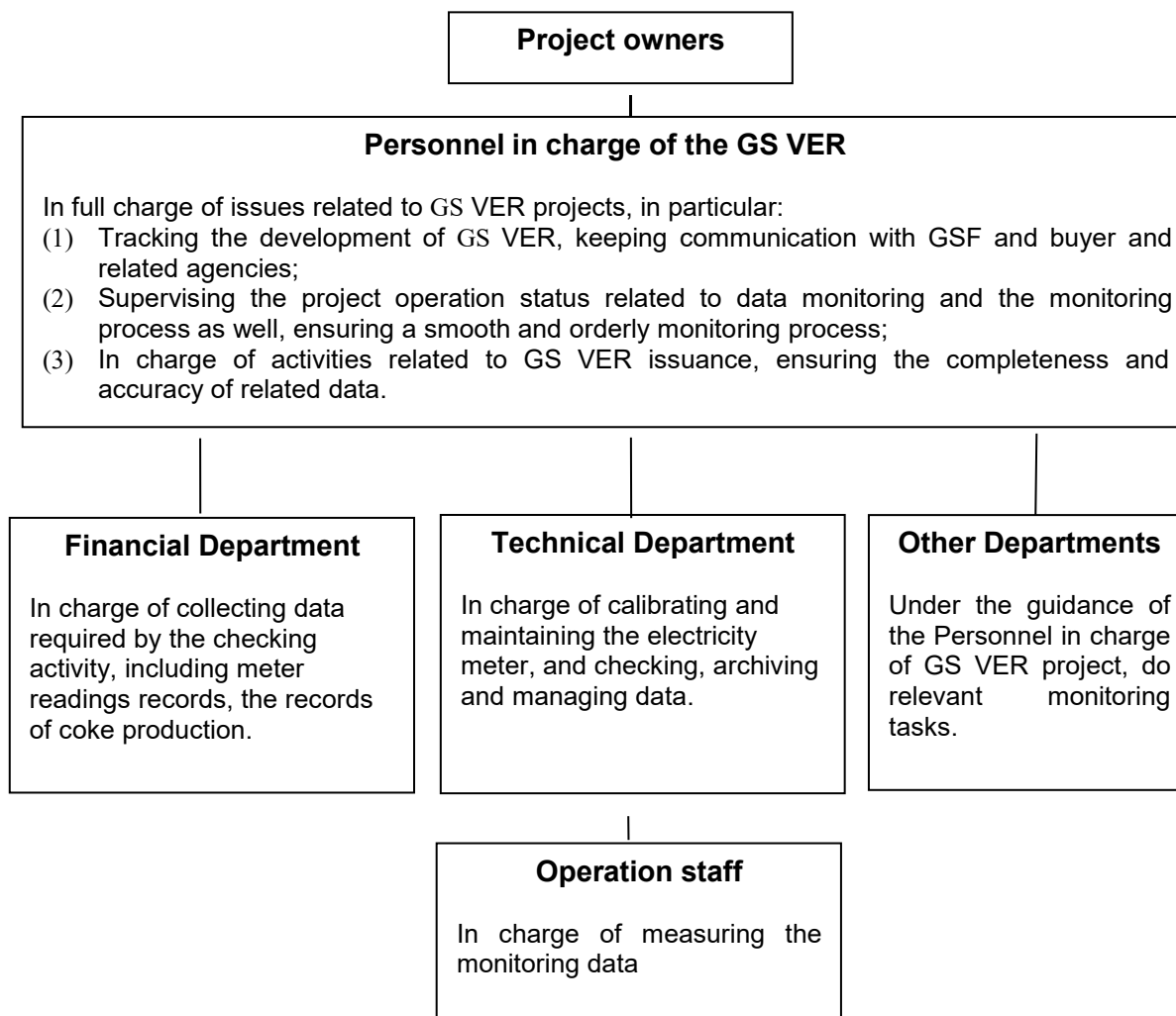


Figure 2. Management Structure of Monitoring Plan

Monitoring Measures

M1 meter measures the power generation of the Project, M2 meter measures quantity of net electricity generation supplied by the project for captive use, and M3 meter measures the self-use electricity from the 10KV backup line.

Data Collection

Particular staff assigned by the project owner is responsible to collect, record and document all the related monitoring records. All the electricity meters measure electric quantity continuously, and the data is recorded at 24:00 in someday every week.

Installation of monitoring devices

The electricity meters of the Project were installed according to the *Technical Administrative Code of Electric Energy Metering* (DL/T 448-2000). Before the operation of the Project, the project owner checked and accepted those electricity meters as per the Technical Norm.

Calibration of Meters & Metering

The regular calibration and on-site verification should be implemented as per the Technical administrative code of electric energy metering (DL/T 448-2000) to ensure the precision of electricity meters. Electricity meters should be calibrated every year. After calibration, the electricity meters must be sealed.

Quality Assurance and Quality Control

The quality assurance and quality control procedures consist of data recording; maintaining and archiving. The quality assurance and quality control procedures should be improved according to the related regulation and the real operating conditions during the project operation period.

Particular QC staff is appointed by the project owner to take the overall responsibility of calibrating monitoring equipments, managing and processing the monitored data. If something unusual occurs, the project manager should be immediately reported.

Data Management System

Specific staff will be appointed by the project owner to take on the overall responsibility for monitoring greenhouse gas emission reductions and keeping all the data collected as part of monitoring. Data shall be archived electronically and be kept at least for 2 years after the end of the last crediting period or the last issuance of VERs, whichever occurs later.

Emergency procedure

For electricity monitoring, if the meters are not within acceptable limits of accuracy or are performing improperly, then the electricity supplied and imported will not be calculated, the emission reductions in the period will not be claimed. And the broken meters will be fixed in time.

Monitoring system for sustainable development indicators

There are five monitored sustainable development indicators, that is, air quality, water quantity, quality of employment, quantitative employment and income generation, and other pollutants. The detailed description of monitoring system for sustainable development indicators can be seen in Section D.

SECTION D. Data and parameters

D.1. Data and parameters fixed ex ante or at renewal of crediting period

Data/parameter:	$EF_{grid,CM,y}$
Unit	tCO ₂ e/MWh
Description	Combined Margin CO ₂ emission factor of CCPG in year y
Source of data	Registered GS-PDD
Value(s) applied	For first fixed crediting period: 0.7338
Choice of data or measurement methods and procedures	-
Purpose of data	Calculation of baseline emissions
Additional comments	This parameter is ex ante determined in GS-PDD and fixed during the fixed crediting periods.

Data/parameter:	f_{wcm}
Unit	-
Description	Fraction of total energy generated by the project activity using waste gas.
Measured/calculated/default	-
Source of data	Registered GS-PDD
Value(s) of monitored parameter	1
Monitoring equipment	-
Measuring/reading/recording frequency:	-
Calculation method (if applicable):	-
QA/QC procedures:	-
Purpose of data:	Calculation of baseline emissions
Additional comments:	This parameter is ex ante determined in PDD and fixed during the fixed crediting period.

Data/parameter:	f_{cap}
Unit	Fraction
Description	Energy that would have been produced in project year y using waste energy generated in base year expressed as a fraction of total energy produced using waste source in year y.
Measured/calculated/default	-
Source of data	Registered GS-PDD
Value(s) of monitored parameter	1
Monitoring equipment	-
Measuring/reading/recording frequency:	-
Calculation method (if applicable):	-
QA/QC procedures:	-
Purpose of data:	Calculation of baseline emissions
Additional comments:	The project entity will monitor electrical output of the project activity in accordance with the methodology and f_{cap} will be updated ex-post in case the actual electrical output exceeds the electrical output which is theoretically available on the basis of current baseline conditions.

Data/parameter:	$Q_{OE,BL}$
Unit	MWh
Description	Output/intermediate energy that can be theoretically produced, to be determined on the basis of maximum recoverable energy from the WECM, which would have been wasted in the absence of the project.
Measured/calculated/default	-
Source of data	Registered GS-PDD
Value(s) of monitored parameter	254,368.7999

Monitoring equipment	-
Measuring/reading/recording frequency:	-
Calculation method (if applicable):	-
QA/QC procedures:	-
Purpose of data:	Calculation of baseline emissions
Additional comments:	If the annual power generation is larger than the value, the f_{cap} must be re-calculated.

D.2. Data and parameters monitored

Data/parameter:	$EG_{PJ,y}$
Unit	MWh
Description	Quantity of net electricity generation supplied by the project for captive use
Measured/calculated/default	Measured
Source of data	Directly measured by electricity meter (M2).
Value(s) of monitored parameter	829,856.65
Monitoring equipment	The monitoring meter M2: Type: PA6000-12 Accuracy class: 0.5% Serial number: 12040254 Calibration frequency: annually Previous calibration date: 04/01/2016, 29/12/2016, 25/12/2017, 21/12/2018, 19/12/2019 Validity: 04/01/2016– 18/12/2020
Measuring/reading/recording frequency:	The readings of electricity meter were continuously measured and at least monthly recorded. Data will be archived for 2 years following the end of the crediting period or the last issuance of ERs, whichever is later.
Calculation method (if applicable):	-
QA/QC procedures:	The electricity meters are calibrated regularly.
Purpose of data:	Calculation of baseline emissions
Additional comments:	-

Data/parameter:	$EC_{PJ,j,y}$
Unit	MWh
Description	The additional power consumed in year y as a result of the implementation of the project activity source j
Measured/calculated/default	Measured
Source of data	Directly measured by electricity meter (M3) in the 10kV backup line.
Value(s) of monitored parameter	677.334

Monitoring equipment	The monitoring meter M3: Type: PD 6000-12 Accuracy class: level 0.5% Serial number: 12070107 Calibration frequency: annually Previous calibration date: 04/01/2016, 29/12/2016, 25/12/2017, 21/12/2018, 19/12/2019 Validity:04/01/2016– 18/12/2020
Measuring/reading/recording frequency:	The readings of electricity meter were continuously measured and at least monthly recorded. Data will be archived for 2 years following the end of the crediting period or the last issuance of ERs, whichever is later.
Calculation method (if applicable):	-
QA/QC procedures:	The electricity meters will be calibrated regularly.
Purpose of data:	Calculation of baseline emissions
Additional comments:	-

Data/parameter:	$Q_{OE,y}$
Unit	MWh
Description	Quantity of actual output energy during year y, i.e. the total power generation of the power plant.
Measured/calculated/default	Measured
Source of data	Directly measured by electricity meter (M1) at the outlet of the generator
Value(s) of monitored parameter	870,773.5
Monitoring equipment	The monitoring meter M1: Type: DSSD25 Accuracy class: 0.2S Serial number: D1165647 Calibration frequency: annually Previous calibration date: 04/01/2016, 29/12/2016, 25/12/2017, 21/12/2018, 19/12/2019 Validity:04/01/2016– 18/12/2020
Measuring/reading/recording frequency:	The readings of electricity meter were continuously measured and at least monthly recorded. Data will be archived for 2 years following the end of the last crediting period or the last issuance of ERs, whichever is later.
Calculation method (if applicable):	-
QA/QC procedures:	Measuring equipment was calibrated annually.
Purpose of data:	Baseline emission calculations
Additional comments:	-

Data/parameter:	$TDL_{j,y}$
Unit	-
Description	Average technical transmission and distribution losses for providing electricity to source j in year y
Measured/calculated/default	measured
Source of data	http://www.nea.gov.cn/138530255_15729388881531n.pdf
Value(s) of monitored parameter	5.57%

Monitoring equipment	-
Measuring/reading/recording frequency:	Annually. In the absence of data from the relevant year, most recent figures should be used, but not older than 5 years.
Calculation method (if applicable):	-
QA/QC procedures:	-
Purpose of data:	Calculation of project emissions
Additional comments:	-

Data/parameter:	Abnormal operation of the project facility including emergencies and shut down
Unit	h
Description	The hours of abnormal operation of parts of project facility that can have an impact on waste energy generation and recovery
Measured/calculated/default	Operation of project facility
Source of data	-
Value(s) of monitored parameter	0
Monitoring equipment	Record the abnormal operation of project facility via plant accident log, including accident and machine halt.
Measuring/reading/recording frequency:	-
Calculation method (if applicable):	-
QA/QC procedures:	-
Purpose of data:	This parameter has to be monitored to demonstrate that no emission reduction is claimed for the hours during the abnormal operation of the part of project facility which have impact on waste energy generation and recovery. The abnormality can be in terms of violation of operational parameters, poor quality product, emergencies or shutdown.
Additional comments:	-

Data and parameters monitored for Gold Standard sustainable development indicators

No		1
Indicator		Air quality
Mitigation measure		Water sprinkling in the construction period Dust remove system in the operation period.
<i>Repeat for each parameter</i>		
Chosen parameter		The water sprinkling record, The local residential comments through interviewing, Dust remove system operation log.
Current situation of parameter		With the implementation of the Project, local air quality is significant improved.
Estimation of baseline situation of parameter		In the absence of the Project, the hot red coke would be quenched by CWQ system, which would result in much pollutants emission.
Future target for parameter		Meet the requirements of air pollution emission criteria.
Way of monitoring	How	Check the dust remove system operation log. Record local residential comments on the air quality.
	When	Regularly measured and aggregated for each monitoring period
	By who	Monitored by the project owner

Result	The dust remove system was effectively operated, 65,179.78t dust was collected in the monitoring period. Local residential give higher positive comments on the air quality improvement. The spray water record, the dust remove system operation log and the questionnaire of impact on environment and community were provided for verification.
conclusion	In absence of the project activity, much dust and chemical pollutants such as benzene, pyrene and phenol etc., were emitted with the fog from CWQ. After the implementation of the project, the dust was effectively collected by dust remove system, and those chemical pollutants were eliminated.

No		2
Indicator		Water quantity
Mitigation measure		N/A as indicator scored positive.
<i>Repeat for each parameter</i>		
Chosen parameter		Water consumption reduction against to the CWQ system
Current situation of parameter		1,714,084.311t industrial water was saved by the Project. Prior to the implementation of the project, the hot red coke was quenched by using water by CWQ system, the water consumption rate is 0.443t/t coke. With the implementation of the Project, the water consumption was effectively reduced.
Estimation of baseline situation of parameter		In the absence of the project, the hot red coke was quenched by using water by CWQ system, the water consumption rate is 0.443t/t coke
Future target for parameter		The quantity of water used for quenching coke will be significantly reduced.
Way of monitoring	How	the coke quenched by the project
	When	Continuously measured and aggregated for each monitoring period
	By who	Monitored by the project owner.
Result		3,869,267.81t coke were quenched by the CDQ system, the industrial water saving =3,869,267.81*0.443=1,714,085.64t
conclusion		With the implementation of the project, much industrial water was saved against the WDQ system.

No		3
Indicator		Quality of employment
Mitigation measure		N/A as indicator scored positive.
<i>Repeat for each parameter</i>		
Chosen parameter		Training of staff.
Current situation of parameter		The staff has accepted a series of training on the technology and the monitoring of the plant operation, and the emergency and safety procedures.
Estimation of baseline situation of parameter		In the baseline, local people have no such opportunities to be trained on the technology and the monitoring of the plant operation, and the emergency and safety procedures.
Future target for parameter		Together with the technology supplier, the Project organizes training for the staff on the technology and the monitoring of the plant operation, and the emergency and safety procedures.
Way of monitoring	How	The training records for all the employees

	When	Recorded monthly and aggregated for each monitoring period			
	By who	Monitored by the project owner			
Result	As per the training records of the Project, the staffs have accepted a series of training on the plant operation, Safety, emergency, and maintenance, which contributes to the quality of employment..				
	No	Time of the training	Training subject	Attendees	
	1	15/07/2016	Safe and emergency training	27 workers	
	2	12/10/2016	Operation Skill	25 workers	
	3	24/12/2016	Operation Skill	18workers	
	4	13/04/2017	Operation Skill	26 workers	
	5	15/09/2017	Safe and emergency training	28 workers	
	6	08/06/2018	CDQ basis Technology theory	34workers	
	7	20/11/2018	CDQ basis Technology theory	29 workers	
	8	27/05/2019	Safe and emergency training	33 workers	
	9	14/10/2019	Operation Skill	24 workers	
	10	08/01/2020	CDQ basis Technology theory	30 workers	
	The training records and relevant certificates for employees of the Project are available on-site. The training records and relevant certificates for employees were provided to DOE for verification.				
conclusion	The staffs of the project were trained on the technology and the monitoring of the plant operation, and the emergency and safety procedures. The training not only improves the operation level of the Project, and also enhances the technical skill of the staff.				

No	4
Indicator	Quantitative employment and income generation
Mitigation measure	N/A as indicator scored positive.
<i>Repeat for each parameter</i>	
Chosen parameter	Number of jobs created in the operations of the Project and their salary levels.
Current situation of parameter	57 persons have been employed. The average salary of the employee was CNY 56,152 in 2018 year.The average salary of the employee was CNY 46,673 in 2017 year.
Estimation of baseline situation of parameter	In the baseline, local people have no such job opportunities from the Project, and their income has no increase. The average salary level in Neijiang City, Sichuan Province in year 2018 is CNY 54,744 according to the 2019 Sichuan Statistical data

		(http://rsj.neijiang.gov.cn/2019/07/4585320.html), The average salary level in Neijiang City, Sichuan Province in year 2017 is CNY 44,697 according to the 2018 Sichuan Statistical data (http://img.neijiang.gov.cn/uploads/2018/08/08/20180808102806-460615.pdf), which is the most recent available data source. These are the most recent available data source.
Future target for parameter		Consistency in the number of jobs created during operational period, and the salary of employees will be above the local average.
Way of monitoring	How	HR records or report
	When	Recorded monthly and aggregated for each monitoring period
	By who	Monitored by the project owner.
Result		Parameter 1: creating 57 long term work positions for local people during operational period Parameter 2: The average salary of employees is 56,152CNY/y, above the local average salary level, 54,744CNY/y, according to the Sichuan Statistical data 2019, which is the most recent available data source. The payroll was provided for verification.
conclusion		With the operation of the Project, 57 long-term work positions are created for local people with higher salary level, which effectively improve the family income status of those employees.

No		5
Indicator		Other pollutants
Mitigation measure		(1) The construction period: The solid waste from the project during the construction period will be used as construction materials, and the remaining useless will be periodically cleaned by the sanitation department. (2)The operation period: Dust collected by the Project will be regularly transported out by trucks for comprehensive utilization. The household garbage will be regularly cleared out by sanitary department.
<i>Repeat for each parameter</i>		
Chosen parameter		Solid waste treatment
Current situation of parameter		65,179.78t dust collected by the Project regularly transported for comprehensive utilization.
Estimation of baseline situation of parameter		In the absence of the Project, the dust would be emitted into the air.
Future target for parameter		Dust collected by the Project will be regularly transported for comprehensive utilization
Way of monitoring	How	Interviewing with on-site staff about the solid waste treatment during the construction period in first verification. Measure the quantity of the dust collected and transported for comprehensive utilization by the project.
	When	Interviewing with on-site staff about the solid waste treatment in the construction period in first verification. The quantity of the dust collected and transported for comprehensive utilization by the project will be continuously measured and aggregated for each monitoring period
	By who	Monitored by the project owner
Result		(1) Solid waste was effectively reused and periodically cleaned by the sanitation department, no any impact on local environment and

	community, on-site staff and local residents give higher positive comment on solid waste treatment. (2) The quantity of the dust collected by the dust remove system of the Project is 65,179.78t during the monitoring period, those dust was transported to for comprehensive utilization.
conclusion	The solid waste in construction was effectively reused and periodically cleaned by the sanitation department, no any impact on local environment and community. The dust collected was sent for comprehensive utilization to avoid potential secondary pollution.

During the monitoring period, there is no comment received in the Continuous Input/Grievance Expression Process Book in the reception room of Neijiang Bowei Xinyu Chemical Industry Co., Ltd.. In the Book, contact method is informed to local stakeholders for comments. And there is no comment received yet.

D.3. Implementation of sampling plan

>>

Not applicable.

SECTION E. Calculation of emission reductions or GHG removals by sinks

E.1. Calculation of baseline emissions or baseline net GHG removals by sinks

>>

In accordance with the methodology ACM0012 (06.0), the baseline emissions are calculated with formulas below.

$$BE_y = BE_{En,y} + BE_{flst,y} \quad (1)$$

Where:

- BE_y = The total baseline emissions during the year y in tCO₂
- $BE_{En,y}$ = The baseline emissions from energy generated by the project activity during the year y in tCO₂
- $BE_{flst,y}$ = Baseline emissions from fossil fuel combustion, if any, either directly for flaring of waste gas or for steam generation that would have been used for flaring the waste gas in the absence of the project activity (tCO₂).

As the project only involves the utilization of waste heat, hence, $BE_{flst,y} = 0$.

Therefore, $BE_y = BE_{En,y}$. (2)

As methodology ACM0012 (version 06.0) "Baseline scenario-1" has been selected as the project's baseline scenario, $BE_{En,y}$ can be calculated by the following formula:

$$BE_{En,y} = BE_{Elec,y} + BE_{Ther,y} \quad (3)$$

Where:

- $BE_{Elec,y}$ = Baseline emissions from electricity, which is used for power generation as well as electric motors used to provide mechanical energy during the year y (tCO₂).
- $BE_{Ther,y}$ = Baseline emissions from thermal energy (due to heat generation by elemental processes), which is used for both useful heat as well as driving steam turbines to provide mechanical energy during the year y (tCO₂).

As the Project utilizes waste heat for electricity power generation only, no thermal supply involved in the project, $BE_{Ther,y} = 0$.

In ACM0012 (version 06.0), baseline emissions from electricity represent both the power generation and mechanical energy generation based on electric motors at the recipient facility and replaced by the project activity.

$$BE_{Elec,y} = f_{cap} \times f_{wcm} \times \left(\sum_j BE_{EL,j,y} + \sum_j BE_{ME,j,y} \right) \quad (4)$$

Where:

- $BE_{Elec,y}$ = Baseline emissions from electricity during the year y (tCO₂)
- f_{wcm} = Fraction of total electricity generated by the project activity using waste energy. This fraction is 1 if the electricity generation is purely from use of waste energy.
- f_{cap} = The ratio of waste energy generated at a historical level, expressed as a fraction of the total waste energy used in the project activity for producing useful in year y. The ratio is 1 if the waste energy generated in project year y is the same or less than that generated at a historical level.
- $BE_{EL,j,y}$ = Baseline emissions corresponding to the electricity supplied in year y by the project activity to the recipient facility j as case (1a) described below during the year y (tCO₂)

$BE_{ME,j,y}$ = Baseline emissions corresponding to the supply of mechanical energy by the project activity to the recipient facility j as per case (2a) and case (2b) described below during the year y (tCO₂)

As the Project utilizes waste heat for electricity power generation only, no mechanical energy involved in the project, $BE_{ME,j,y} = 0$

Case 1: recipients whose project level electricity consumption is less than or up to the maximum capacity of the existing pre-project equipment at the recipient facility

$$BE_{EL,j,y} = \sum_i (EG_{i,j,y} \times EF_{Elec,i,j,y}) \quad (5)$$

Where

$EG_{i,j,y}$ = The power supplied by the project activity to the recipient facility j, which in the absence of the project activity would have been sourced from baseline source i during the year y as per the identified baseline scenario for recipient facility j (MWh)

$EF_{Elec,i,j,y}$ = The CO₂ emission factor for the baseline electricity source i, corresponding to baseline scenario for the recipient facility j, during the year y (tCO₂/MWh)

formula (4) changes to:

$$BE_{Elec,y} = f_{cap} \times f_{wcm} \times \sum_j \sum_i (EG_{i,j,y} \times EF_{Elec,i,j,y}) \quad (6)$$

Since the electricity supply of identified baseline scenario come from CCPG, and the project only involves the utilization of waste heat, hence, formula (5) changes to:

$$BE_{Elec,y} = f_{cap} \times f_{wcm} \times EG_{PJ,y} \times EF_{grid,CM,y} \quad (7)$$

Where:

$EG_{PJ,y}$ = Quantity of net electricity generation supplied by the project for captive use in year y (MWh);

$EF_{grid,CM,y}$ = Combined Margin CO₂ emission factor of CCPG in year y (tCO₂/MWh);

$EF_{grid,CM,y}$ was calculated ex-ante and will not be changed during the monitoring period. As per the registered PDD of the Project, the value is 0.7338tCO₂/MWh.

The calculation for BE_y was listed in Table 2 as following:

Table 2 . BE_y Calculation

period	EG _{PJ,y} measured by M2	EF _{grid,CM,y}	BE _y
	(MWh)	(tCO ₂ /MWh)	(tCO ₂)
	1	2	3=(1)*(2)
01/06/2016-07/06/2016	5032.95	0.7338	3693.18
08/06/2016-14/06/2016	5296.15	0.7338	3886.31
15/06/2016-21/06/2016	5084.95	0.7338	3731.34
22/06/2016-28/06/2016	4759.05	0.7338	3492.19
29/06/2016-05/07/2016	4955.95	0.7338	3636.68
06/07/2016-12/07/2016	4606.05	0.7338	3379.92
13/07/2016-19/07/2016	4440.1	0.7338	3258.15
20/07/2016-26/07/2016	4474	0.7338	3283.02

27/07/2016-02/08/2016	4836.35	0.7338	3548.91
03/08/2016-09/08/2016	5083.2	0.7338	3730.05
10/08/2016-16/08/2016	4875.7	0.7338	3577.79
17/08/2016-23/08/2016	3716.25	0.7338	2726.98
24/08/2016-30/08/2016	4623.45	0.7338	3392.69
31/08/2016-06/09/2016	3880.7	0.7338	2847.66
07/09/2016-13/09/2016	5109.85	0.7338	3749.61
14/09/2016-20/09/2016	4761.95	0.7338	3494.32
21/09/2016-27/09/2016	4982.8	0.7338	3656.38
28/09/2016-04/10/2016	4751.65	0.7338	3486.76
05/10/2016-11/10/2016	5176.4	0.7338	3798.44
12/10/2016-18/10/2016	5131.75	0.7338	3765.68
19/10/2016-25/10/2016	4824.55	0.7338	3540.25
26/10/2016-01/11/2016	49.75	0.7338	36.51
02/11/2016-08/11/2016	4626.05	0.7338	3394.60
09/11/2016-15/11/2016	4269.55	0.7338	3133.00
16/11/2016-22/11/2016	5076.3	0.7338	3724.99
23/11/2016-29/11/2016	4975.5	0.7338	3651.02
30/11/2016-06/12/2016	5094.1	0.7338	3738.05
07/12/2016-13/12/2016	5074.35	0.7338	3723.56
14/12/2016-20/12/2016	4971.4	0.7338	3648.01
21/12/2016-27/12/2016	4896.55	0.7338	3593.09
28/12/2016-31/12/2016	3343.25	0.7338	2453.28
Total from 01/06/2016 to 07/06/2016	142780.6	0.7338	104772
01/01/2017-03/01/2017	1511.2	0.7338	1108.92
04/01/2017-10/01/2017	4805.65	0.7338	3526.39
11/01/2017-17/01/2017	4762.3	0.7338	3494.58
18/01/2017-24/01/2017	4435.45	0.7338	3254.73
25/01/2017-31/01/2017	4718.4	0.7338	3462.36
01/02/2017-07/02/2017	4211.15	0.7338	3090.14
08/02/2017-14/02/2017	4323.05	0.7338	3172.25
15/02/2017-21/02/2017	4522.85	0.7338	3318.87
22/02/2017-28/02/2017	4530.45	0.7338	3324.44
01/03/2017-07/03/2017	4562.35	0.7338	3347.85
08/03/2017-14/03/2017	3841	0.7338	2818.53
15/03/2017-21/03/2017	4829.4	0.7338	3543.81
22/03/2017-28/03/2017	4650.75	0.7338	3412.72
29/03/2017-04/04/2017	4514	0.7338	3312.37
05/04/2017-11/04/2017	3689.15	0.7338	2707.10
12/04/2017-18/04/2017	0	0.7338	0.00
19/04/2017-25/04/2017	0	0.7338	0.00
26/04/2017-02/05/2017	0	0.7338	0.00
03/05/2017-09/05/2017	1849.05	0.7338	1356.83
10/05/2017-16/05/2017	3763.7	0.7338	2761.80

17/05/2017-23/05/2017	3844.25	0.7338	2820.91
24/05/2017-30/05/2017	3383.1	0.7338	2482.52
31/05/2017-06/06/2017	4942.85	0.7338	3627.06
07/06/2017-13/06/2017	4944.65	0.7338	3628.38
14/06/2017-20/06/2017	5710.6	0.7338	4190.44
21/06/2017-27/06/2017	4824.3	0.7338	3540.07
28/06/2017-04/07/2017	4057.1	0.7338	2977.10
05/07/2017-11/07/2017	4339.8	0.7338	3184.55
12/07/2017-18/07/2017	4240.8	0.7338	3111.90
19/07/2017-25/07/2017	4472.9	0.7338	3282.21
26/07/2017-01/08/2017	4550.8	0.7338	3339.38
02/08/2017-08/08/2017	4108.55	0.7338	3014.85
09/08/2017-15/08/2017	3432.15	0.7338	2518.51
16/08/2017-22/08/2017	3593.7	0.7338	2637.06
23/08/2017-29/08/2017	3522.95	0.7338	2585.14
30/08/2017-05/09/2017	4098.25	0.7338	3007.30
06/09/2017-12/09/2017	4050.5	0.7338	2972.26
13/09/2017-19/09/2017	4203.45	0.7338	3084.49
20/09/2017-26/09/2017	4036.65	0.7338	2962.09
27/09/2017-03/10/2017	4262.8	0.7338	3128.04
04/10/2017-10/10/2017	4343.9	0.7338	3187.55
11/10/2017-17/10/2017	1337.05	0.7338	981.13
18/10/2017-24/10/2017	3810.3	0.7338	2796.00
25/10/2017-31/10/2017	4117.05	0.7338	3021.09
01/11/2017-07/11/2017	4254.95	0.7338	3122.28
08/11/2017-14/11/2017	4461.85	0.7338	3274.11
15/11/2017-21/11/2017	4452.2	0.7338	3267.02
22/11/2017-28/11/2017	4435.85	0.7338	3255.03
29/11/2017-05/12/2017	4439.5	0.7338	3257.71
06/12/2017-12/12/2017	4466.1	0.7338	3277.22
13/12/2017-19/12/2017	4736.55	0.7338	3475.68
20/12/2017-26/12/2017	3441	0.7338	2525.01
27/12/2017-31/12/2017	3451.55	0.7338	2532.75
Total in 2017	205887.9	0.7338	151080
01/01/2018-02/01/2018	1075.9	0.7338	789.50
03/01/2018-09/01/2018	4663.95	0.7338	3422.41
10/01/2018-16/01/2018	4391.05	0.7338	3222.15
17/01/2018-23/01/2018	4454.5	0.7338	3268.71
24/01/2018-30/01/2018	4278	0.7338	3139.20
31/01/2018-06/02/2018	4543.08	0.7338	3333.71
07/02/2018-13/02/2018	4288.02	0.7338	3146.55
14/02/2018-20/02/2018	4087.6	0.7338	2999.48
21/02/2018-27/02/2018	4356.95	0.7338	3197.13
28/02/2018-06/03/2018	4101.6	0.7338	3009.75

07/03/2018-13/03/2018	4510.65	0.7338	3309.91
14/03/2018-20/03/2018	4031.9	0.7338	2958.61
21/03/2018-27/03/2018	4197.45	0.7338	3080.09
28/03/2018-03/04/2018	3643.75	0.7338	2673.78
04/04/2018-10/04/2018	1656.45	0.7338	1215.50
11/04/2018-17/04/2018	4585.95	0.7338	3365.17
18/04/2018-24/04/2018	4644.9	0.7338	3408.43
25/04/2018-01/05/2018	4857.4	0.7338	3564.36
02/05/2018-08/05/2018	4703.3	0.7338	3451.28
09/05/2018-15/05/2018	2851.35	0.7338	2092.32
16/05/2018-22/05/2018	4247.4	0.7338	3116.74
23/05/2018-29/05/2018	4341.65	0.7338	3185.90
30/05/2018-05/06/2018	4143.6	0.7338	3040.57
06/06/2018-12/06/2018	4537.2	0.7338	3329.40
13/06/2018-19/06/2018	4435.55	0.7338	3254.81
20/06/2018-26/06/2018	4450.2	0.7338	3265.56
27/06/2018-03/07/2018	4175.3	0.7338	3063.84
04/07/2018-10/07/2018	4587.7	0.7338	3366.45
11/07/2018-17/07/2018	4306.15	0.7338	3159.85
18/07/2018-24/07/2018	4108	0.7338	3014.45
25/07/2018-31/07/2018	4112.65	0.7338	3017.86
01/08/2018-07/08/2018	3918.9	0.7338	2875.69
08/08/2018-14/08/2018	4676.2	0.7338	3431.40
15/08/2018-21/08/2018	4538.4	0.7338	3330.28
22/08/2018-28/08/2018	4422.6	0.7338	3245.30
29/08/2018-04/09/2018	4352.95	0.7338	3194.19
05/09/2018-11/09/2018	4645.2	0.7338	3408.65
12/09/2018-18/09/2018	4278.8	0.7338	3139.78
19/09/2018-25/09/2018	4139.65	0.7338	3037.68
26/09/2018-02/10/2018	4455.15	0.7338	3269.19
03/10/2018-09/10/2018	3501	0.7338	2569.03
10/10/2018-16/10/2018	0	0.7338	0.00
17/10/2018-23/10/2018	0	0.7338	0.00
24/10/2018-30/10/2018	108.35	0.7338	79.51
31/10/2018-06/11/2018	4713.55	0.7338	3458.80
07/11/2018-13/11/2018	4759.65	0.7338	3492.63
14/11/2018-20/11/2018	4672.45	0.7338	3428.64
21/11/2018-27/11/2018	4639.9	0.7338	3404.76
28/11/2018-04/12/2018	4088.85	0.7338	3000.40
05/12/2018-11/12/2018	4939.35	0.7338	3624.50
12/12/2018-18/12/2018	4590.35	0.7338	3368.40
19/12/2018-25/12/2018	4723.3	0.7338	3465.96
26/12/2018-31/12/2018	3322.05	0.7338	2437.72
Total in 2018	210855.8	0.7338	154725

01/01/2019-08/01/2019	5197.45	0.7338	3813.89
09/01/2019-15/01/2019	4809.4	0.7338	3529.14
16/01/2019-22/01/2019	4778.55	0.7338	3506.50
23/01/2019-29/01/2019	4875.3	0.7338	3577.50
30/01/2019-05/02/2019	5062.85	0.7338	3715.12
06/02/2019-12/02/2019	5014.7	0.7338	3679.79
13/02/2019-19/02/2019	5149.25	0.7338	3778.52
20/02/2019-26/02/2019	4656.65	0.7338	3417.05
27/02/2019-05/03/2019	4809.15	0.7338	3528.95
06/03/2019-12/03/2019	4770.45	0.7338	3500.56
13/03/2019-19/03/2019	2061.35	0.7338	1512.62
20/03/2019-26/03/2019	4827.55	0.7338	3542.46
27/03/2019-02/04/2019	4505	0.7338	3305.77
03/04/2019-09/04/2019	3174	0.7338	2329.08
10/04/2019-16/04/2019	2758.75	0.7338	2024.37
17/04/2019-23/04/2019	2778.4	0.7338	2038.79
24/04/2019-30/04/2019	0	0.7338	0.00
01/05/2019-07/05/2019	3976.05	0.7338	2917.63
08/05/2019-14/05/2019	4488.55	0.7338	3293.70
15/05/2019-21/05/2019	4320.4	0.7338	3170.31
22/05/2019-28/05/2019	4592.15	0.7338	3369.72
29/05/2019-04/06/2019	4445.6	0.7338	3262.18
05/06/2019-11/06/2019	4502.55	0.7338	3303.97
12/06/2019-18/06/2019	4731.65	0.7338	3472.08
19/06/2019-25/06/2019	4504.05	0.7338	3305.07
26/06/2019-02/07/2019	4514.25	0.7338	3312.56
03/07/2019-09/07/2019	4483	0.7338	3289.63
10/07/2019-16/07/2019	4489.05	0.7338	3294.06
17/07/2019-23/07/2019	4482.45	0.7338	3289.22
24/07/2019-30/07/2019	4343.75	0.7338	3187.44
31/07/2019-06/08/2019	4636.45	0.7338	3402.23
07/08/2019-13/08/2019	4201.8	0.7338	3083.28
14/08/2019-20/08/2019	4565.7	0.7338	3350.31
21/08/2019-27/08/2019	4421.1	0.7338	3244.20
28/08/2019-03/09/2019	4915.9	0.7338	3607.29
04/09/2019-10/09/2019	4564.6	0.7338	3349.50
11/09/2019-17/09/2019	4547.85	0.7338	3337.21
18/09/2019-24/09/2019	4366.65	0.7338	3204.25
25/09/2019-01/10/2019	4615	0.7338	3386.49
02/10/2019-08/10/2019	4673.55	0.7338	3429.45
09/10/2019-15/10/2019	4589.6	0.7338	3367.85
16/10/2019-22/10/2019	2780.4	0.7338	2040.26
23/10/2019-29/10/2019	4735.45	0.7338	3474.87
30/10/2019-05/11/2019	4902.8	0.7338	3597.67

06/11/2019-12/11/2019	4718.25	0.7338	3462.25
13/11/2019-19/11/2019	4962.95	0.7338	3641.81
20/11/2019-26/11/2019	4704.55	0.7338	3452.20
27/11/2019-03/12/2019	4626.55	0.7338	3394.96
04/12/2019-10/12/2019	4810.45	0.7338	3529.91
11/12/2019-17/12/2019	4679.65	0.7338	3433.93
18/12/2019-24/12/2019	4767.4	0.7338	3498.32
25/12/2019-31/12/2019	5045.4	0.7338	3702.31
Total in 2019	227934.35	0.7338	167258
01/01/2020-07/01/2020	4874.75	0.7338	3577.09
08/01/2020-14/01/2020	4838.1	0.7338	3550.20
15/01/2020-21/01/2020	4980.35	0.7338	3654.58
22/01/2020-28/01/2020	5067.9	0.7338	3718.83
29/01/2020-04/02/2020	5123.35	0.7338	3759.51
05/02/2020-11/02/2020	5002.75	0.7338	3671.02
12/02/2020-18/02/2020	4992.5	0.7338	3663.50
19/02/2019-25/02/2020	4795.2	0.7338	3518.72
26/02/2020-29/02/2020	2723.1	0.7338	1998.21
Total from 01/01/2020 to 07/01/2020	42398	0.7338	31111
Sum	829856.65		608946

* During the period of 12/04/2017 – 02/05/2017, 10/10/2018 – 23/10/2018 and 24/04/2019 – 30/04/2019, the equipment of the project was in regular maintaining, so there is no electricity.

From 01/06/2016 to 29/02/2020, the monitoring period covers 1369 days:

$$Q_{OE,y} = 870,773.5 \text{ MWh}$$

$$Q_{OE,BL} = 254,368.7999 \text{ MWh} \times 1369 \div 365 = 954057.2248 \text{ MWh}$$

So $Q_{OE,y}$ is smaller than the $Q_{OE,BL}$, and the fcap was 1 according to ACM0012.

E.2. Calculation of project emissions or actual net GHG removals by sinks

>>

Project Emissions include emissions due to (1) combustion of auxiliary fuel to supplement waste gas/heat and (2) electricity emissions due to consumption of electricity for cleaning of gas before being used for generation of energy or other supplementary electricity consumption.

$$PE_y = PE_{AF,y} + PE_{EL,y} \quad (8)$$

Where:

PE_y = Project emissions due to the project activity (tCO₂)

$PE_{AF,y}$ = Project activity emissions from on-site consumption of fossil fuels by the unit process(es) and/or co-generation plant(s) if they are used as supplementary fuels due to non-availability of waste energy to the project activity or due to any other reason (tCO₂). For the project, $PE_{AF,y} = 0$

$PE_{EL,y}$ = Project activity emissions from on-site consumption of electricity for gas cleaning equipment or other supplementary electricity consumption (tCO₂).

$$PE_y = PE_{EL,y}$$

According to Tool to calculate baseline, project and/or leakage emissions from power consumption Version 01, the project emission from power consumption is the following:

$$PE_{EL,y} = \sum_j EC_{PJ,j,y} \times EF_{EL,j,y} \times (1 + TDL_{j,y}) \quad (10)$$

- $PE_{EL,y}$ = The project emissions from consumption of power in gas cleaning equipment of project activity or other supplementary project power consumption (t CO₂/yr)
- $EC_{PJ,j,y}$ = The additional power consumed in year y as a result of the implementation of the project activity source j (MWh)
- $EF_{EL,j,y}$ = Emission factor for power generation for source j in year y (tCO₂/MWh), in this case it is grid emission factor of Central China Grid.
- $TDL_{j,y}$ = Average technical transmission and distribution losses for providing power to the project by the Sichuan Power Grid (the sub-power grid of the CCPG, where the project is sited in) in year y.

For $TDL_{j,y}$, 5.57% from 2019 Statistics data (http://www.nea.gov.cn/138530255_15729388881531n.pdf) has been adopted.

The calculation for PE_y was listed as following:

Table 3. PE_y Calculation

period	$EC_{PJ,j,y}$	TDL_y	EF	PE_y
/	measured by M3 (MWh)		(tCO ₂ /MWh)	(tCO ₂)
/	2	6	4	(7)=(2)*(1+(6))*(4)
01/06/2016-07/06/2016	3.512	5.57%	0.7338	2.72
08/06/2016-14/06/2016	4.389	5.57%	0.7338	3.40
15/06/2016-21/06/2016	3.449	5.57%	0.7338	2.67
22/06/2016-28/06/2016	3.312	5.57%	0.7338	2.57
29/06/2016-05/07/2016	3.624	5.57%	0.7338	2.81
06/07/2016-12/07/2016	4.244	5.57%	0.7338	3.29
13/07/2016-19/07/2016	2.772	5.57%	0.7338	2.15
20/07/2016-26/07/2016	4.029	5.57%	0.7338	3.12
27/07/2016-02/08/2016	3.366	5.57%	0.7338	2.61
03/08/2016-09/08/2016	4.523	5.57%	0.7338	3.50
10/08/2016-16/08/2016	3.403	5.57%	0.7338	2.64
17/08/2016-23/08/2016	3.626	5.57%	0.7338	2.81
24/08/2016-30/08/2016	4.269	5.57%	0.7338	3.31
31/08/2016-06/09/2016	3.001	5.57%	0.7338	2.32
07/09/2016-13/09/2016	4.59	5.57%	0.7338	3.56
14/09/2016-20/09/2016	3.198	5.57%	0.7338	2.48
21/09/2016-27/09/2016	4.493	5.57%	0.7338	3.48
28/09/2016-04/10/2016	3.146	5.57%	0.7338	2.44
05/10/2016-11/10/2016	4.653	5.57%	0.7338	3.60
12/10/2016-18/10/2016	3.264	5.57%	0.7338	2.53

19/10/2016-25/10/2016	4.447	5.57%	0.7338	3.44
26/10/2016-01/11/2016	0.902	5.57%	0.7338	0.70
02/11/2016-08/11/2016	4.356	5.57%	0.7338	3.37
09/11/2016-15/11/2016	3.066	5.57%	0.7338	2.38
16/11/2016-22/11/2016	4.488	5.57%	0.7338	3.48
23/11/2016-29/11/2016	3.445	5.57%	0.7338	2.67
30/11/2016-06/12/2016	3.479	5.57%	0.7338	2.70
07/12/2016-13/12/2016	4.482	5.57%	0.7338	3.47
14/12/2016-20/12/2016	3.548	5.57%	0.7338	2.75
21/12/2016-27/12/2016	3.647	5.57%	0.7338	2.83
28/12/2016-31/12/2016	3.661	5.57%	0.7338	2.84
Total from 01/06/2016 to 31/12/2016	114.384	5.57%	0.7338	89
01/01/2017-03/01/2017	0.62	5.57%	0.7338	0.48
04/01/2017-10/01/2017	3.392	5.57%	0.7338	2.63
11/01/2017-17/01/2017	3.543	5.57%	0.7338	2.74
18/01/2017-24/01/2017	3.466	5.57%	0.7338	2.69
25/01/2017-31/01/2017	3.378	5.57%	0.7338	2.62
01/02/2017-07/02/2017	3.273	5.57%	0.7338	2.54
08/02/2017-14/02/2017	3.307	5.57%	0.7338	2.56
15/02/2017-21/02/2017	3.204	5.57%	0.7338	2.48
22/02/2017-28/02/2017	3.955	5.57%	0.7338	3.06
01/03/2017-07/03/2017	4.341	5.57%	0.7338	3.36
08/03/2017-14/03/2017	3.537	5.57%	0.7338	2.74
15/03/2017-21/03/2017	4.576	5.57%	0.7338	3.54
22/03/2017-28/03/2017	4.235	5.57%	0.7338	3.28
29/03/2017-04/04/2017	3.296	5.57%	0.7338	2.55
05/04/2017-11/04/2017	3.911	5.57%	0.7338	3.03
12/04/2017-18/04/2017	0.438	5.57%	0.7338	0.34
19/04/2017-25/04/2017	0.02	5.57%	0.7338	0.02
26/04/2017-02/05/2017	0.377	5.57%	0.7338	0.29
03/05/2017-09/05/2017	2.173	5.57%	0.7338	1.68
10/05/2017-16/05/2017	3.497	5.57%	0.7338	2.71
17/05/2017-23/05/2017	3.571	5.57%	0.7338	2.77
24/05/2017-30/05/2017	2.83	5.57%	0.7338	2.19
31/05/2017-06/06/2017	3.59	5.57%	0.7338	2.78
07/06/2017-13/06/2017	3.215	5.57%	0.7338	2.49
14/06/2017-20/06/2017	5.044	5.57%	0.7338	3.91
21/06/2017-27/06/2017	3.738	5.57%	0.7338	2.90
28/06/2017-04/07/2017	3.747	5.57%	0.7338	2.90
05/07/2017-11/07/2017	4.022	5.57%	0.7338	3.12
12/07/2017-18/07/2017	2.6	5.57%	0.7338	2.01
19/07/2017-25/07/2017	4.241	5.57%	0.7338	3.29
26/07/2017-01/08/2017	3.41	5.57%	0.7338	2.64

02/08/2017-08/08/2017	3.948	5.57%	0.7338	3.06
09/08/2017-15/08/2017	2.587	5.57%	0.7338	2.00
16/08/2017-22/08/2017	3.531	5.57%	0.7338	2.74
23/08/2017-29/08/2017	2.597	5.57%	0.7338	2.01
30/08/2017-05/09/2017	3.715	5.57%	0.7338	2.88
06/09/2017-12/09/2017	1.495	5.57%	0.7338	1.16
13/09/2017-19/09/2017	4.021	5.57%	0.7338	3.11
20/09/2017-26/09/2017	3.056	5.57%	0.7338	2.37
27/09/2017-03/10/2017	4.089	5.57%	0.7338	3.17
04/10/2017-10/10/2017	3.28	5.57%	0.7338	2.54
11/10/2017-17/10/2017	1.371	5.57%	0.7338	1.06
18/10/2017-24/10/2017	3.567	5.57%	0.7338	2.76
25/10/2017-31/10/2017	3.024	5.57%	0.7338	2.34
01/11/2017-07/11/2017	4.034	5.57%	0.7338	3.13
08/11/2017-14/11/2017	3.412	5.57%	0.7338	2.64
15/11/2017-21/11/2017	4.198	5.57%	0.7338	3.25
22/11/2017-28/11/2017	3.323	5.57%	0.7338	2.57
29/11/2017-05/12/2017	4.317	5.57%	0.7338	3.34
06/12/2017-12/12/2017	3.358	5.57%	0.7338	2.60
13/12/2017-19/12/2017	4.543	5.57%	0.7338	3.52
20/12/2017-26/12/2017	2.543	5.57%	0.7338	1.97
27/12/2017-31/12/2017	2.533	5.57%	0.7338	1.96
Total in 2017	171.089	5.57%	0.7338	133
01/01/2018-02/01/2018	0.856	5.57%	0.7338	0.66
03/01/2018-09/01/2018	4.443	5.57%	0.7338	3.44
10/01/2018-16/01/2018	2.39	5.57%	0.7338	1.85
17/01/2018-23/01/2018	4.419	5.57%	0.7338	3.42
24/01/2018-30/01/2018	2.904	5.57%	0.7338	2.25
31/01/2018-06/02/2018	4.379	5.57%	0.7338	3.39
07/02/2018-13/02/2018	2.606	5.57%	0.7338	2.02
14/02/2018-20/02/2018	2.54	5.57%	0.7338	1.97
21/02/2018-27/02/2018	4.354	5.57%	0.7338	3.37
28/02/2018-06/03/2018	3.289	5.57%	0.7338	2.55
07/03/2018-13/03/2018	4.254	5.57%	0.7338	3.30
14/03/2018-20/03/2018	3.271	5.57%	0.7338	2.53
21/03/2018-27/03/2018	4.275	5.57%	0.7338	3.31
28/03/2018-03/04/2018	3.169	5.57%	0.7338	2.45
04/04/2018-10/04/2018	2.063	5.57%	0.7338	1.60
11/04/2018-17/04/2018	4.292	5.57%	0.7338	3.32
18/04/2018-24/04/2018	3.358	5.57%	0.7338	2.60
25/04/2018-01/05/2018	4.531	5.57%	0.7338	3.51
02/05/2018-08/05/2018	3.344	5.57%	0.7338	2.59
09/05/2018-15/05/2018	3.032	5.57%	0.7338	2.35
16/05/2018-22/05/2018	4.276	5.57%	0.7338	3.31

23/05/2018-29/05/2018	4.293	5.57%	0.7338	3.33
30/05/2018-05/06/2018	2.52	5.57%	0.7338	1.95
06/06/2018-12/06/2018	3.662	5.57%	0.7338	2.84
13/06/2018-19/06/2018	2.526	5.57%	0.7338	1.96
20/06/2018-26/06/2018	3.642	5.57%	0.7338	2.82
27/06/2018-03/07/2018	2.658	5.57%	0.7338	2.06
04/07/2018-10/07/2018	3.739	5.57%	0.7338	2.90
11/07/2018-17/07/2018	2.524	5.57%	0.7338	1.96
18/07/2018-24/07/2018	2.857	5.57%	0.7338	2.21
25/07/2018-31/07/2018	3.243	5.57%	0.7338	2.51
01/08/2018-07/08/2018	3.25	5.57%	0.7338	2.52
08/08/2018-14/08/2018	4.558	5.57%	0.7338	3.53
15/08/2018-21/08/2018	3.535	5.57%	0.7338	2.74
22/08/2018-28/08/2018	4.203	5.57%	0.7338	3.26
29/08/2018-04/09/2018	3.514	5.57%	0.7338	2.72
05/09/2018-11/09/2018	4.421	5.57%	0.7338	3.42
12/09/2018-18/09/2018	3.405	5.57%	0.7338	2.64
19/09/2018-25/09/2018	3.865	5.57%	0.7338	2.99
26/09/2018-02/10/2018	3.46	5.57%	0.7338	2.68
03/10/2018-09/10/2018	3.133	5.57%	0.7338	2.43
10/10/2018-16/10/2018	0	5.57%	0.7338	0.00
17/10/2018-23/10/2018	0	5.57%	0.7338	0.00
24/10/2018-30/10/2018	0.908	5.57%	0.7338	0.70
31/10/2018-06/11/2018	3.314	5.57%	0.7338	2.57
07/11/2018-13/11/2018	3.482	5.57%	0.7338	2.70
14/11/2018-20/11/2018	2.565	5.57%	0.7338	1.99
21/11/2018-27/11/2018	3.5	5.57%	0.7338	2.71
28/11/2018-04/12/2018	2.48	5.57%	0.7338	1.92
05/12/2018-11/12/2018	3.681	5.57%	0.7338	2.85
12/12/2018-18/12/2018	2.474	5.57%	0.7338	1.92
19/12/2018-25/12/2018	3.558	5.57%	0.7338	2.76
26/12/2018-31/12/2018	3.327	5.57%	0.7338	2.58
Total in 2018	170.342	5.57%	0.7338	132
01/01/2019-08/01/2019	3.406	5.57%	0.7338	2.64
09/01/2019-15/01/2019	2.658	5.57%	0.7338	2.06
16/01/2019-22/01/2019	3.668	5.57%	0.7338	2.84
23/01/2019-29/01/2019	2.671	5.57%	0.7338	2.07
30/01/2019-05/02/2019	3.79	5.57%	0.7338	2.94
06/02/2019-12/02/2019	2.734	5.57%	0.7338	2.12
13/02/2019-19/02/2019	4.607	5.57%	0.7338	3.57
20/02/2019-26/02/2019	2.794	5.57%	0.7338	2.16
27/02/2019-05/03/2019	4.372	5.57%	0.7338	3.39
06/03/2019-12/03/2019	3.692	5.57%	0.7338	2.86
13/03/2019-19/03/2019	2.82	5.57%	0.7338	2.18

20/03/2019-26/03/2019	4.531	5.57%	0.7338	3.51
27/03/2019-02/04/2019	3.552	5.57%	0.7338	2.75
03/04/2019-09/04/2019	4.103	5.57%	0.7338	3.18
10/04/2019-16/04/2019	4.58	5.57%	0.7338	3.55
17/04/2019-23/04/2019	4.086	5.57%	0.7338	3.17
24/04/2019-30/04/2019	0	5.57%	0.7338	0.00
01/05/2019-07/05/2019	4.397	5.57%	0.7338	3.41
08/05/2019-14/05/2019	4.328	5.57%	0.7338	3.35
15/05/2019-21/05/2019	4.847	5.57%	0.7338	3.75
22/05/2019-28/05/2019	4.383	5.57%	0.7338	3.40
29/05/2019-04/06/2019	3.343	5.57%	0.7338	2.59
05/06/2019-11/06/2019	3.642	5.57%	0.7338	2.82
12/06/2019-18/06/2019	4.569	5.57%	0.7338	3.54
19/06/2019-25/06/2019	3.486	5.57%	0.7338	2.70
26/06/2019-02/07/2019	4.39	5.57%	0.7338	3.40
03/07/2019-09/07/2019	4.356	5.57%	0.7338	3.37
10/07/2019-16/07/2019	3.487	5.57%	0.7338	2.70
17/07/2019-23/07/2019	4.378	5.57%	0.7338	3.39
24/07/2019-30/07/2019	3.378	5.57%	0.7338	2.62
31/07/2019-06/08/2019	4.506	5.57%	0.7338	3.49
07/08/2019-13/08/2019	3.521	5.57%	0.7338	2.73
14/08/2019-20/08/2019	4.437	5.57%	0.7338	3.44
21/08/2019-27/08/2019	3.464	5.57%	0.7338	2.68
28/08/2019-03/09/2019	4.646	5.57%	0.7338	3.60
04/09/2019-10/09/2019	3.539	5.57%	0.7338	2.74
11/09/2019-17/09/2019	4.438	5.57%	0.7338	3.44
18/09/2019-24/09/2019	4.05	5.57%	0.7338	3.14
25/09/2019-01/10/2019	3.455	5.57%	0.7338	2.68
02/10/2019-08/10/2019	3.55	5.57%	0.7338	2.75
09/10/2019-15/10/2019	3.897	5.57%	0.7338	3.02
16/10/2019-22/10/2019	2.26	5.57%	0.7338	1.75
23/10/2019-29/10/2019	3.272	5.57%	0.7338	2.53
30/10/2019-05/11/2019	4.174	5.57%	0.7338	3.23
06/11/2019-12/11/2019	2.95	5.57%	0.7338	2.29
13/11/2019-19/11/2019	3.695	5.57%	0.7338	2.86
20/11/2019-26/11/2019	2.578	5.57%	0.7338	2.00
27/11/2019-03/12/2019	3.966	5.57%	0.7338	3.07
04/12/2019-10/12/2019	4.078	5.57%	0.7338	3.16
11/12/2019-17/12/2019	3.591	5.57%	0.7338	2.78
18/12/2019-24/12/2019	4.153	5.57%	0.7338	3.22
25/12/2019-31/12/2019	3.929	5.57%	0.7338	3.04
Total in 2019	193.197	5.57%	0.7338	150
01/01/2020-07/01/2020	3.489	5.57%	0.7338	2.70
08/01/2020-14/01/2020	2.545	5.57%	0.7338	1.97

15/01/2020-21/01/2020	4.231	5.57%	0.7338	3.28
22/01/2020-28/01/2020	3.341	5.57%	0.7338	2.59
29/01/2020-04/02/2020	3.478	5.57%	0.7338	2.69
05/02/2020-11/02/2020	3.326	5.57%	0.7338	2.58
12/02/2020-18/02/2020	3.651	5.57%	0.7338	2.83
19/02/2019-25/02/2020	2.742	5.57%	0.7338	2.12
26/02/2020-29/02/2020	1.519	5.57%	0.7338	1.18
Total from 01/01/2020 to 29/02/2020	28.322	5.57%	0.7338	22
Sum	677.334			526

E.3. Calculation of leakage

>>

As per the methodology ACM0012 (version 06.0), no leakage needs to be considered in the project,
 $LE_y = 0$ tCO₂e.

E.4. Summary of calculation of emission reductions or netGHG removals by sinks

Item	Baseline emissions or baseline net GHG removals by sinks (t CO ₂ e)	Project emissions or actual net GHG removals by sinks (t CO ₂ e)	Leakage (t CO ₂ e)	GHG emission reductions or net GHG removals by sinks (t CO ₂ e) achieved in the monitoring period		
				Up to 31/12/2012	From 01/01/2013	Total amount
01/06/2016 - 31/12/2016	104,772	89	0		104,683	104,683
01/01/2017 - 31/12/2017	151,080	133	0		150,947	150,947
01/01/2018 - 31/12/2018	154,725	132	0		154,593	154,593
01/01/2019 - 31/12/2019	167,258	150	0		167,108	167,108
01/01/2020 – 29/02/2020	31,111	22	0		31,089	31,089
Total	608946	526	0		608,420	608,420

The emission reduction (ER_y) during a given year y is calculated according to the formula $ER_y = BE_y - PE_y$

The calculation for ER_y was listed as following:

period	BE _y	PE _y	ER _y
	(tCO ₂)	(tCO ₂)	(tCO ₂)
01/06/2016-07/06/2016	3693.18	2.72	3690.46
08/06/2016-14/06/2016	3886.31	3.40	3882.91
15/06/2016-21/06/2016	3731.34	2.67	3728.66

22/06/2016-28/06/2016	3492.19	2.57	3489.63
29/06/2016-05/07/2016	3636.68	2.81	3633.87
06/07/2016-12/07/2016	3379.92	3.29	3376.63
13/07/2016-19/07/2016	3258.15	2.15	3256.00
20/07/2016-26/07/2016	3283.02	3.12	3279.90
27/07/2016-02/08/2016	3548.91	2.61	3546.31
03/08/2016-09/08/2016	3730.05	3.50	3726.55
10/08/2016-16/08/2016	3577.79	2.64	3575.15
17/08/2016-23/08/2016	2726.98	2.81	2724.18
24/08/2016-30/08/2016	3392.69	3.31	3389.38
31/08/2016-06/09/2016	2847.66	2.32	2845.33
07/09/2016-13/09/2016	3749.61	3.56	3746.05
14/09/2016-20/09/2016	3494.32	2.48	3491.84
21/09/2016-27/09/2016	3656.38	3.48	3652.90
28/09/2016-04/10/2016	3486.76	2.44	3484.32
05/10/2016-11/10/2016	3798.44	3.60	3794.84
12/10/2016-18/10/2016	3765.68	2.53	3763.15
19/10/2016-25/10/2016	3540.25	3.44	3536.81
26/10/2016-01/11/2016	36.51	0.70	35.81
02/11/2016-08/11/2016	3394.60	3.37	3391.22
09/11/2016-15/11/2016	3133.00	2.38	3130.62
16/11/2016-22/11/2016	3724.99	3.48	3721.51
23/11/2016-29/11/2016	3651.02	2.67	3648.35
30/11/2016-06/12/2016	3738.05	2.70	3735.36
07/12/2016-13/12/2016	3723.56	3.47	3720.09
14/12/2016-20/12/2016	3648.01	2.75	3645.26
21/12/2016-27/12/2016	3593.09	2.83	3590.26
28/12/2016-31/12/2016	2453.28	2.84	2450.44
Total in 2016	104772	89	104683
01/01/2017-03/01/2017	1108.92	0.48	1108.44
04/01/2017-10/01/2017	3526.39	2.63	3523.76
11/01/2017-17/01/2017	3494.58	2.74	3491.83
18/01/2017-24/01/2017	3254.73	2.69	3252.05
25/01/2017-31/01/2017	3462.36	2.62	3459.75
01/02/2017-07/02/2017	3090.14	2.54	3087.61
08/02/2017-14/02/2017	3172.25	2.56	3169.69
15/02/2017-21/02/2017	3318.87	2.48	3316.39
22/02/2017-28/02/2017	3324.44	3.06	3321.38
01/03/2017-07/03/2017	3347.85	3.36	3344.49
08/03/2017-14/03/2017	2818.53	2.74	2815.79
15/03/2017-21/03/2017	3543.81	3.54	3540.27
22/03/2017-28/03/2017	3412.72	3.28	3409.44
29/03/2017-04/04/2017	3312.37	2.55	3309.82
05/04/2017-11/04/2017	2707.10	3.03	2704.07

12/04/2017-18/04/2017	0.00	0.34	0.34
19/04/2017-25/04/2017	0.00	0.02	0.02
26/04/2017-02/05/2017	0.00	0.29	0.29
03/05/2017-09/05/2017	1356.83	1.68	1355.15
10/05/2017-16/05/2017	2761.80	2.71	2759.09
17/05/2017-23/05/2017	2820.91	2.77	2818.14
24/05/2017-30/05/2017	2482.52	2.19	2480.33
31/05/2017-06/06/2017	3627.06	2.78	3624.28
07/06/2017-13/06/2017	3628.38	2.49	3625.89
14/06/2017-20/06/2017	4190.44	3.91	4186.53
21/06/2017-27/06/2017	3540.07	2.90	3537.18
28/06/2017-04/07/2017	2977.10	2.90	2974.20
05/07/2017-11/07/2017	3184.55	3.12	3181.43
12/07/2017-18/07/2017	3111.90	2.01	3109.88
19/07/2017-25/07/2017	3282.21	3.29	3278.93
26/07/2017-01/08/2017	3339.38	2.64	3336.74
02/08/2017-08/08/2017	3014.85	3.06	3011.80
09/08/2017-15/08/2017	2518.51	2.00	2516.51
16/08/2017-22/08/2017	2637.06	2.74	2634.32
23/08/2017-29/08/2017	2585.14	2.01	2583.13
30/08/2017-05/09/2017	3007.30	2.88	3004.42
06/09/2017-12/09/2017	2972.26	1.16	2971.10
13/09/2017-19/09/2017	3084.49	3.11	3081.38
20/09/2017-26/09/2017	2962.09	2.37	2959.73
27/09/2017-03/10/2017	3128.04	3.17	3124.88
04/10/2017-10/10/2017	3187.55	2.54	3185.01
11/10/2017-17/10/2017	981.13	1.06	980.07
18/10/2017-24/10/2017	2796.00	2.76	2793.23
25/10/2017-31/10/2017	3021.09	2.34	3018.75
01/11/2017-07/11/2017	3122.28	3.13	3119.16
08/11/2017-14/11/2017	3274.11	2.64	3271.46
15/11/2017-21/11/2017	3267.02	3.25	3263.77
22/11/2017-28/11/2017	3255.03	2.57	3252.45
29/11/2017-05/12/2017	3257.71	3.34	3254.36
06/12/2017-12/12/2017	3277.22	2.60	3274.62
13/12/2017-19/12/2017	3475.68	3.52	3472.16
20/12/2017-26/12/2017	2525.01	1.97	2523.04
27/12/2017-31/12/2017	2532.75	1.96	2530.79
Total in 2017	151080	133	150947
01/01/2018-02/01/2018	789.50	0.66	788.83
03/01/2018-09/01/2018	3422.41	3.44	3418.96
10/01/2018-16/01/2018	3222.15	1.85	3220.30
17/01/2018-23/01/2018	3268.71	3.42	3265.29
24/01/2018-30/01/2018	3139.20	2.25	3136.95

31/01/2018-06/02/2018	3333.71	3.39	3330.32
07/02/2018-13/02/2018	3146.55	2.02	3144.53
14/02/2018-20/02/2018	2999.48	1.97	2997.51
21/02/2018-27/02/2018	3197.13	3.37	3193.76
28/02/2018-06/03/2018	3009.75	2.55	3007.21
07/03/2018-13/03/2018	3309.91	3.30	3306.62
14/03/2018-20/03/2018	2958.61	2.53	2956.07
21/03/2018-27/03/2018	3080.09	3.31	3076.78
28/03/2018-03/04/2018	2673.78	2.45	2671.33
04/04/2018-10/04/2018	1215.50	1.60	1213.90
11/04/2018-17/04/2018	3365.17	3.32	3361.85
18/04/2018-24/04/2018	3408.43	2.60	3405.83
25/04/2018-01/05/2018	3564.36	3.51	3560.85
02/05/2018-08/05/2018	3451.28	2.59	3448.69
09/05/2018-15/05/2018	2092.32	2.35	2089.97
16/05/2018-22/05/2018	3116.74	3.31	3113.43
23/05/2018-29/05/2018	3185.90	3.33	3182.58
30/05/2018-05/06/2018	3040.57	1.95	3038.62
06/06/2018-12/06/2018	3329.40	2.84	3326.56
13/06/2018-19/06/2018	3254.81	1.96	3252.85
20/06/2018-26/06/2018	3265.56	2.82	3262.74
27/06/2018-03/07/2018	3063.84	2.06	3061.78
04/07/2018-10/07/2018	3366.45	2.90	3363.56
11/07/2018-17/07/2018	3159.85	1.96	3157.90
18/07/2018-24/07/2018	3014.45	2.21	3012.24
25/07/2018-31/07/2018	3017.86	2.51	3015.35
01/08/2018-07/08/2018	2875.69	2.52	2873.17
08/08/2018-14/08/2018	3431.40	3.53	3427.86
15/08/2018-21/08/2018	3330.28	2.74	3327.54
22/08/2018-28/08/2018	3245.30	3.26	3242.05
29/08/2018-04/09/2018	3194.19	2.72	3191.47
05/09/2018-11/09/2018	3408.65	3.42	3405.22
12/09/2018-18/09/2018	3139.78	2.64	3137.15
19/09/2018-25/09/2018	3037.68	2.99	3034.68
26/09/2018-02/10/2018	3269.19	2.68	3266.51
03/10/2018-09/10/2018	2569.03	2.43	2566.61
10/10/2018-16/10/2018	0.00	0.00	0.00
17/10/2018-23/10/2018	0.00	0.00	0.00
24/10/2018-30/10/2018	79.51	0.70	78.80
31/10/2018-06/11/2018	3458.80	2.57	3456.24
07/11/2018-13/11/2018	3492.63	2.70	3489.93
14/11/2018-20/11/2018	3428.64	1.99	3426.66
21/11/2018-27/11/2018	3404.76	2.71	3402.05
28/11/2018-04/12/2018	3000.40	1.92	2998.48

05/12/2018-11/12/2018	3624.50	2.85	3621.64
12/12/2018-18/12/2018	3368.40	1.92	3366.48
19/12/2018-25/12/2018	3465.96	2.76	3463.20
26/12/2018-31/12/2018	2437.72	2.58	2435.14
Total in 2018	154725	132	154593
01/01/2019-08/01/2019	3813.89	2.64	3811.25
09/01/2019-15/01/2019	3529.14	2.06	3527.08
16/01/2019-22/01/2019	3506.50	2.84	3503.66
23/01/2019-29/01/2019	3577.50	2.07	3575.43
30/01/2019-05/02/2019	3715.12	2.94	3712.18
06/02/2019-12/02/2019	3679.79	2.12	3677.67
13/02/2019-19/02/2019	3778.52	3.57	3774.95
20/02/2019-26/02/2019	3417.05	2.16	3414.89
27/02/2019-05/03/2019	3528.95	3.39	3525.57
06/03/2019-12/03/2019	3500.56	2.86	3497.70
13/03/2019-19/03/2019	1512.62	2.18	1510.43
20/03/2019-26/03/2019	3542.46	3.51	3538.95
27/03/2019-02/04/2019	3305.77	2.75	3303.02
03/04/2019-09/04/2019	2329.08	3.18	2325.90
10/04/2019-16/04/2019	2024.37	3.55	2020.82
17/04/2019-23/04/2019	2038.79	3.17	2035.62
24/04/2019-30/04/2019	0.00	0.00	0.00
01/05/2019-07/05/2019	2917.63	3.41	2914.22
08/05/2019-14/05/2019	3293.70	3.35	3290.35
15/05/2019-21/05/2019	3170.31	3.75	3166.55
22/05/2019-28/05/2019	3369.72	3.40	3366.32
29/05/2019-04/06/2019	3262.18	2.59	3259.59
05/06/2019-11/06/2019	3303.97	2.82	3301.15
12/06/2019-18/06/2019	3472.08	3.54	3468.55
19/06/2019-25/06/2019	3305.07	2.70	3302.37
26/06/2019-02/07/2019	3312.56	3.40	3309.16
03/07/2019-09/07/2019	3289.63	3.37	3286.25
10/07/2019-16/07/2019	3294.06	2.70	3291.36
17/07/2019-23/07/2019	3289.22	3.39	3285.83
24/07/2019-30/07/2019	3187.44	2.62	3184.83
31/07/2019-06/08/2019	3402.23	3.49	3398.74
07/08/2019-13/08/2019	3083.28	2.73	3080.55
14/08/2019-20/08/2019	3350.31	3.44	3346.87
21/08/2019-27/08/2019	3244.20	2.68	3241.52
28/08/2019-03/09/2019	3607.29	3.60	3603.69
04/09/2019-10/09/2019	3349.50	2.74	3346.76
11/09/2019-17/09/2019	3337.21	3.44	3333.77
18/09/2019-24/09/2019	3204.25	3.14	3201.11
25/09/2019-01/10/2019	3386.49	2.68	3383.81

02/10/2019-08/10/2019	3429.45	2.75	3426.70
09/10/2019-15/10/2019	3367.85	3.02	3364.83
16/10/2019-22/10/2019	2040.26	1.75	2038.51
23/10/2019-29/10/2019	3474.87	2.53	3472.34
30/10/2019-05/11/2019	3597.67	3.23	3594.44
06/11/2019-12/11/2019	3462.25	2.29	3459.97
13/11/2019-19/11/2019	3641.81	2.86	3638.95
20/11/2019-26/11/2019	3452.20	2.00	3450.20
27/11/2019-03/12/2019	3394.96	3.07	3391.89
04/12/2019-10/12/2019	3529.91	3.16	3526.75
11/12/2019-17/12/2019	3433.93	2.78	3431.15
18/12/2019-24/12/2019	3498.32	3.22	3495.10
25/12/2019-31/12/2019	3702.31	3.04	3699.27
Total in 2019	167258	150	167108
01/01/2020-07/01/2020	3577.09	2.70	3574.39
08/01/2020-14/01/2020	3550.20	1.97	3548.23
15/01/2020-21/01/2020	3654.58	3.28	3651.30
22/01/2020-28/01/2020	3718.83	2.59	3716.24
29/01/2020-04/02/2020	3759.51	2.69	3756.82
05/02/2020-11/02/2020	3671.02	2.58	3668.44
12/02/2020-18/02/2020	3663.50	2.83	3660.67
19/02/2020-25/02/2020	3518.72	2.12	3516.59
26/02/2020-29/02/2020	1998.21	1.18	1997.03
Total in 2020	31111	22	31089
total	608946	526	608420

* During the period of 12/04/2017 – 02/05/2017, 10/10/2018 – 23/10/2018 and 24/04/2019 – 30/04/2019, the equipment of the project was in regular maintaining, so there is no electricity.

E.5. Comparison of actual emission reductions or net GHG removals by sinks with estimates in registered PDD

Item	Values estimated in ex ante calculation of registered PDD	Actual values achieved during this monitoring period
Emission reductions or GHG removals by sinks (t CO ₂ e)	575,460*	608,420

*The estimated annual emission reductions are 153,428tCO₂e as per registered PDD. The monitoring period covers 1369 days, $153,428\text{tCO}_2\text{e} \times 1369\text{days} / 365\text{days} = 575,460\text{tCO}_2\text{e}$.

The details of the estimated emission reductions in the registered PDD and the actual emission reductions of year 2016, 2017, 2018, 2019 and 2020 in this monitoring period are listed here:

Emission reductions or GHG by year	Values estimated in ex ante calculation of registered PDD (t CO ₂ e)	Actual values achieved during this monitoring period (t CO ₂ e)
01/06/2016 – 31/12/2016	89,955	104,683

Year 2017	153,428	150,947
Year 2018	153,428	154,593
Year 2019	153,428	167,108
01/01/2020 – 29/02/2020	25,221	31,089
Total	575,460	608,420

E.6. Remarks on difference from estimated value in registered PDD

>>

The actual emission reductions generated in the monitoring period are 608,420 tCO₂e, which are 5.73% more than the estimated emission reductions in the registered PDD.

This is because the amount by recovering the waste heat generated in coke production is increasing, and the average greenhouse gas (GHG) emission reductions are increasing. It is reasonable that the actual emission reductions generated 5.73% more than the estimated emission reductions in the registered PDD.

The details of the estimated emission reductions in the registered PDD and the actual emission reductions in monitoring period are listed here:

Item	Emission reductions or GHG by year	Values estimated in ex ante calculation of registered PDD (t CO ₂ e)	Actual values achieved during this monitoring period (t CO ₂ e)
1 st monitoring period	13/05/2013 – 31/12/2013	97,942	76,338
	01/01/2014 – 09/03/2014	28,583	22,326
Total in 1st monitoring period		126,525	98,664
2 nd monitoring period	10/03/2014 – 31/12/2014	124,844	68,580
	01/01/2015 - 31/12/2015	153,428	115,368
	01/01/2016 – 31/05/2016	63,893	46,071
Total in 2nd monitoring period		342,165	230,019
3 rd monitoring period	01/06/2016 – 31/12/2016	89,955	104,683
	Year 2017	153,428	150,947
	Year 2018	153,428	154,593
	Year 2019	153,428	167,108
	01/01/2020 – 29/02/2020	25,221	31,089
Total in 3rd monitoring period		575,460	608,420
Sum	13/05/2013 — 29/02/2020	1,044,150	937,103

According to the data in the table, the estimated emission reductions in the registered PDD are 1,044,150t CO₂e and the actual emission reductions are 937,103 tCO₂e during the time 13/05/2013 — 29/02/2020. And, actual emission reductions are 10.25% less than the estimated emission reductions in the registered PDD. It can be concluded that the increase 5.73% of the emission reductions doesn't impact the additionality.

Appendix 1. Contact information of project participants and responsible persons/entities

Project participant and/or responsible person/ entity	☒ Project participant ☐ Responsible person/ entity for completing the CDM-MR-FORM
Organization name	Neijiang Bowei Xinyu Chemical Industry Co.,Ltd.
Street/P.O. Box	Jiefang Street, LianjieTown, WeiyuanCounty,
Building	-
City	NeijiangCity
State/Region	SichuanProvince
Postcode	642469
Country	P. R. of China
Telephone	+86-(0)28-65200123
Fax	+86-(0)28-88433256
E-mail	zhaobin2004128@163.com
Website	
Contact person	Zhao Bin
Title	
Salutation	Mr.
Last name	Zhao
Middle name	
First name	Bin
Department	
Mobile	
Direct Fax	+86-(0)10-58689504
Direct tel.	+86-(0)10-58689628
Personal e-mail	hollywang816@126.com

Project participant and/or responsible person/ entity	☒ Project participant ☐ Responsible person/ entity for completing the CDM-MR-FORM
Organization name	Carbon Invcap International Trading Co., ltd.
Street/P.O. Box	
Building	Kemp House 152-160 city Road
City	London
State/Region	
Postcode	EC1V2NX
Country	United Kingdom of Great Britain and Northern Ireland
Telephone	+86 10 62682682
Fax	+86 10 62682508
E-mail	gs@carbonincap.com
Website	
Contact person	Jessy Tang

Title	
Salutation	
Last name	Jessy
Middle name	
First name	Tang
Department	
Mobile	
Direct fax	+86 10 62682682
Direct tel.	+86 10 62682508
Personal e-mail	gs@carboninvcap.com

Project participant and/or responsible person/ entity	☐ Project participant ☒ Responsible person/ entity for completing the CDM-MR-FORM
Organization name	Goldchina Consultancy International Co., Ltd.
Street/P.O. Box	Zhongguancun East Road
Building	Tangning One Building
City	Beijing City
State/Region	
Postcode	100083
Country	P.R. China
Telephone	+86 10 62682508
Fax	+86 10 62682682
E-mail	zzn01@mails.tsinghua.edu.cn , zzn@gcci-carbon.com
Website	
Contact person	Zheng Zhaoning
Title	
Salutation	
Last name	Zhaoning
Middle name	
First name	Zheng
Department	
Mobile	
Direct fax	+86 10 62682682
Direct tel.	+86 10 62682508
Personal e-mail	zzn01@mails.tsinghua.edu.cn , zzn@gcci-carbon.com

- - - - -

Document information

<i>Version</i>	<i>Date</i>	<i>Description</i>
05.1	4 May 2015	Editorial revision to correct version numbering.
05.0	1 April 2015	Revisions to: • Include provisions related to delayed submission of a monitoring plan; • Provisions related to the Host Party; • Remove reference to programme of activities; • Overall editorial improvement.
04.0	25 June 2014	Revisions to: • Include the Attachment: Instructions for filling out the monitoring report form (these instructions supersede the "Guideline: Completing the monitoring report form" (Version 04.0)); • Include provisions related to standardized baselines; • Add contact information on a responsible person(s)/ entity(ies) for completing the CDM-MR-FORM in A.6 and Appendix 1; • Change the reference number from <i>F-CDM-MR</i> to <i>CDM-MR-FORM</i>; • Editorial improvement.
03.2	5 November 2013	Editorial revision to correct table in page 1.
03.1	2 January 2013	Editorial revision to correct table in section E.5.
03.0	3 December 2012	Revision required to introduce a provision on reporting actual emission reductions or net GHG removals by sinks for the period up to 31 December 2012 and the period from 1 January 2013 onwards (EB70, Annex 11).
02.0	13 March 2012	Revision required to ensure consistency with the "Guidelines for completing the monitoring report form" (EB 66, Annex 20).
01	28 May 2010	EB 54, Annex 34. Initial adoption.
Decision Class: Regulatory Document Type: Form Business Function: Issuance Keywords: monitoring report		