
VERIFICATION AND CERTIFICATION REPORT

Gaisi Peony Carbon Capital S.a.r.l.

**Nanjing Jinling Grid Connected Natural Gas
Combined Cycle Power Plant Project**

(UNFCCC Ref. No.: 3008)

MP4: From 01/01/2011 to 31/03/2011 (Both days inclusive)

SGS Climate Change Programme

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Date of Issue:	Project Number:	
21/01/2013	CDM.VER1127 MP4	
Project Title:		
Nanjing Jinling Grid Connected Natural Gas Combined Cycle Power Plant Project		
Organisation:	Client:	
SGS United Kingdom Limited	Gaisi Peony Carbon Capital S.a.r.l.	
Publication of Monitoring Report:		
Monitoring Period:	From 01/01/2011 to 31/03/2011	
First Monitoring Version and Date:	Version 1.0 dated 25/10/2011	
Final Monitoring Version and Date:	Version 2.0 dated 26/11/2012	
Summary:		
SGS United Kingdom Ltd has performed the fourth periodic verification of the CDM project Nanjing Jinling Grid Connected Natural Gas Combined Cycle Power Plant Project with UNFCCC Ref. 3008, registration date of 05/08/2010 and crediting period from 05/08/2010 to 04/08/2017. The verification includes confirming the implementation of the monitoring plan of the registered PDD version 06.4 dated 21/04/2010, the revised PDD version 06.5 dated 26/11/2012, and the application of the monitoring methodology as per AM0029, version 03 dated 16/05/2008. A site visit was conducted to verify the data submitted in the Monitoring Report. SGS confirms the following has been reviewed: (a) The registered PDD and revised PDD, including the monitoring plan and the corresponding validation report; (b) Monitoring Report, ER calculation spreadsheet , and previous verification reports; (c) The applied monitoring methodology; (d) Relevant decisions, clarifications and guidance from the CMP and the CDM Executive Board; (e) All information and references relevant to the project activity's resulting in emission reductions. The project is a natural gas fired grid-connected electricity generation project, serving as a peak-load regulating power plant of the grid. The total installed capacity is 780MW, and involves the installation of two sets of 390MW gas-steam combined cycle generation system. The electricity generated by the project is supplied to the Jiangsu Power Grid, a sub-grid of the East China Power Grid (ECPG). SGS confirms that the project is implemented in accordance with the validated and registered Project Design Document. The monitoring system is in place and the emission reductions are calculated without material misstatements. Our opinion relates to the projects GHG emissions and the resulting GHG emission reductions reported and related to the valid and registered project baseline and monitoring and its associated documents. Based on the information seen and evaluated we confirm that the implementation of the project has resulted in 106,575 tCO₂e emission reductions during period 01/01/2011 up to 31/03/2011.		
Subject:		
CDM Verification		
Verification Team:		
Karen Tong – Lead Assessor/Team Leader Yi Liao – Sectoral Scope Expert(TA 1.1) Shute Li – Local Assessor		☒ No Distribution (without permission from the Client or responsible organisational unit)
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Name: Siddharth Yadav Date: 24/01/2013		
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Abbreviations

CAR	Corrective Action Request
CERs	Certified Emission Reductions
CL	Clarification Request
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
EB	Executive Board
ECPG	East China Power Grid
EF	Emission Factor
FAR	Forward Action Request
GHG	Greenhouse Gas(es)
LNG	Liquefied Natural Gas
MR	Monitoring Report
MP	Monitoring Plan
NCV	Net Calorific Value
NG	Natural Gas
PDD	Project Design Document
PP	Project Participant
PS	Project Standard
SGS	SGS United Kingdom Ltd
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation and Verification Standard

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1. Introduction

1.1 Objective

SGS United Kingdom Ltd has been contracted by Gaisi Peony Carbon Capital S.a.r.l. (one of the Project Participants of the project) to perform an independent verification of its CDM project Nanjing Jinling Grid Connected Natural Gas Combined Cycle Power Plant Project. CDM projects must undergo periodic audits and verification of emission reductions as the basis for issuance of Certified Emission Reductions (CERs).

The objectives of this verification exercise are, by review of objective evidence, to establish that:

- The emissions report conforms with the requirements of the monitoring plan in the revised PDD and the approved methodology; and
- The data reported are complete and transparent.

1.2 Scope

The scope of the verification is the independent and objective review and ex post determination of the monitored reductions in GHG emission by the project activity. The verification is based on the validated and registered project design document and the Monitoring Report. The project is assessed against the requirements of the Kyoto Protocol, the CDM Modalities and Procedures and related rules and guidance.

SGS has, based on the recommendations in the Validation and Verification Standard, employed a risk-based approach in the verification, focusing on the identification of significant reporting risks and the reliability of project monitoring.

Due professional care has been exercised and ethical conduct has been followed by the assessment team during the verification process. The verification report is a fair presentation of the verification activity.

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.

1.3 Project Activity and Period Covered

This engagement covers emissions and emission reductions from anthropogenic sources of greenhouse gases included within the project boundary of the following project and period.

Title of Project Activity:	Nanjing Jinling Grid Connected Natural Gas Combined Cycle Power Plant Project
UNFCCC Registration Number:	3008
Monitoring Period Covered in this Report:	01/01/2011 to 31/03/2011
Project Participants:	Host Country: Huaneng Nanjing Jinling Power Generation Co., Ltd Annex I Country: Gaisi Peony Carbon Capital s.a.r.l
Location of the Project Activity:	Longtan County, Qixia District, Nanjing City, Jiangsu Province, China

The project is a natural gas fired grid-connected electricity generation project, serving as a peak-load regulating power plant of the grid. The total installed capacity is 780MW, and involves the installation of two sets of 390MW gas-steam combined cycle generation system. The electricity generated by the project is supplied to the Jiangsu Power Grid, a sub-grid of the East China Power Grid (ECPG).

2. Methodology

2.1 General Approach

SGS performs the verification work using a Periodic Verification Checklist prepared following the VVS. The Periodic Verification Checklist describes the verification approach and the sampling plan.

The checklist gives the assessment team a full understanding of:

- Activities associated with all the sources contributing to the project emissions and emission reductions, including leakage if relevant;
- Protocols used to estimate or measure GHG emissions from these sources;
- Collection and handling of data;
- Controls on the collection and handling of data;
- Means of verifying reported data; and
- Compilation of the Monitoring Report.

Using the Periodic Verification Checklist, SGS verified the implementation of the monitoring plan and the data presented in the Monitoring Report for the period in question. This involved a site visit and a desk review of the Monitoring Report. This verification report describes the findings of this assessment.

Only verification activities undertaken after the publication of the Monitoring Report on the UNFCCC CDM website were used as a basis for SGS to conclude our verification and submit a request for issuance of CERs to the Board.

2.2 Verification Team for this Assessment

A team of competency has been selected to perform the verification of the project.

Name	Role
Karen Tong	Lead Assessor/Team Leader
Yi Liao	Sectoral Scope Expert(TA 1.1)
Shute Li	Local Assessor

2.3 Means of Verification

2.3.1 Review of Documentation

The validated PDD, the Monitoring Report submitted by the client and additional background documents related to the project performance were reviewed. A complete list of all documents reviewed is attached in Section 8 of this report.

2.3.2 Site Visits

As part of the verification, the following on-site inspections have been performed by the assessment team.

Location: Longtan County, Qixia District, Nanjing City, Jiangsu Province, China	
Date: 15/12/2011	
Coverage:	Source of Information / Persons Interviewed
1. Assessment of the implementation and operation of the project activity as per the revised PDD;	Ms. Zhang Li, Gaisi Peony Carbon Capital S.a.r.l.
2. Review of information flows for generating, aggregating and reporting the monitoring parameters;	Mr. Frank Li, Gaisi Peony Carbon Capital S.a.r.l.
3. Interviews with relevant personnel to confirm that the operational and data collection procedures are implemented in accordance with the monitoring plan.	Mr. Jiang Hongjun, Huaneng Nanjing Jinling Power Generation Co., Ltd.
4. A cross-check between information provided in the Monitoring Report and data from other sources such as plant log books and sales receipts;	Ms. Zhao Shuxian, Huaneng Nanjing Jinling Power Generation Co., Ltd.
5. A check of the monitoring equipments including calibration performance and observations of monitoring practices against the requirements of the PDD and the selected methodology;	Mr. You Xiaojun, Huaneng Nanjing Jinling Power Generation Co., Ltd.
6. Review of calculations and assumptions made in determining the GHG data and emission reductions;	Mr. Xiaodong Li, Huaneng Nanjing Jinling Power Generation Co., Ltd.
7. Identification of quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters.	

2.4 Reporting of Findings

As an outcome of the verification process, the team can raise different types of findings.

In general, where insufficient or inaccurate information is available and clarification or new information is required the team shall raise a Clarification Request (CL) specifying what additional information is required.

Where a non-conformance arises the team shall raise a Corrective Action Request (CAR). A CAR is issued, where:

- I. Non-compliance 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;
- II. Modifications to the implementation, operation and monitoring of the registered project activity has not been sufficiently documented by the Project Participants;
- III. Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impact the quantity of emission reductions;

- IV. Issues identified in a FAR during validation to be verified during verification or previous verification(s) have not been resolved by the Project Participants

The verification process may be halted until this information has been made available to comply with the requirements of the CDM Executive Board. Failure to address a CL may result in a CAR. Information or clarifications provided as a result of a CL may also lead to a CAR.

A clarification request (CL) will be raised if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met. All CARs and CLs raised during verification shall be resolved prior to submitting a request for issuance.

Corrective Action Requests and Clarification Requests are raised in the Periodic Verification Checklist. The Project Developer is given the opportunity to “close” outstanding CARs and respond to CLs.

Forward Action Requests (FARs) may be raised during verification for actions where the monitoring and reporting require attention and/or adjustment for the next verification period, which are for the benefit of future projects and future verification activities. These have no impact upon the completion of the verification activity.

All CARs, CLs and FARs for this verification period are included in this report.

2.5 Internal Quality Control

Following the completion of the assessment process and a recommendation by the Assessment Team, all documentation will be forwarded to a Technical Review Team. The task of the Technical Review Team is to check that all procedures have been followed and all conclusions are justified. The Technical Reviewer will either accept or reject the recommendation made by the assessment team.

Technical Review Team

Technical Review Team	Role
Joe Sun	Technical Reviewer
Jumson Fu	Sectoral Scope Expert(TA 1.1)

3. Verification Findings

3.1 Project Implementation

The project was registered as CDM project on 05/08/2010. Project information is on the UNFCCC Website: [http://cdm.unfccc.int/Projects/DB/TUEV-RHEIN1254272878.14/view/\(1/\)](http://cdm.unfccc.int/Projects/DB/TUEV-RHEIN1254272878.14/view/(1/)). This is the fourth periodic verification of the project covering the period from 01/01/2011 to 31/03/2011 within the first crediting period (05/08/2010 to 04/08/2017). The start date of this monitoring period is next to the end date of last monitoring period (01/12/2010 to 31/12/2010).

The project is a natural gas fired grid-connected electricity generation project, serving as a peak-load regulating power plant of the grid. The total installed capacity is 780MW, and involves the installation of two sets of 390MW gas-steam combined cycle generation system. The electricity generated by the project is supplied to the Jiangsu Power Grid, a sub-grid of the East China Power Grid (ECPG).

The project activity is construction and operation of a new natural gas fired grid connected electricity generation plant with the geographical/physical boundaries of the baseline grid clearly identified and information pertaining to the grid and estimating baseline emissions publicly available. With 20 year fuel supply agreement with the gas supplier, it was also confirmed that natural gas is sufficient for the project. By rechecking the applied methodology, it was confirmed that the applicability criteria of the methodology is applicable to the project activity.

As per the technology description in the registered Project Design Document (PDD, /2/), the project involves the installation of two sets of 390MW gas-steam combined cycle generation system (GE-109FA), with the total installed capacity 780MW and this is not changed compared with previous monitoring periods. Through the onsite visit, it has been confirmed that all the required physical components of the project activity have been installed and operated as per the description in the registered PDD. Two sets of 390MW gas-steam combined cycle generation system were in place. The first unit was put into operation on 31/12/2006 and the second unit was on 05/03/2007. The specifications of the gas turbine, heat recovery steam generator, and steam turbine and electricity generator on the nameplates (/4/) have been checked and confirmed to be consistent with those mentioned in section A.4.3 of the PDD. Thus, it was confirmed that till the end of this monitoring period, the project has been implemented and operated as per the PDD.

As per the project boundary description in the registered PDD, the project generates electricity using natural gas and the electricity generated is supplied to the Jiangsu Power Grid, a sub-grid of the East China Power Grid (ECPG). As verified the electricity generated is supplied to the ECPG through the Longwangshan Substation. The use of the name "Longtan Substation" in the registered PDD was a typing mistake, which was verified by the SGS assessment team during the first periodic verification of the project and noted by the client in the MR (foot note 1, page 4,/3/).

According to the section A.4 and the foot note 1 of the MR Version 1.0, the project supplies electricity via two 220kv transmission lines to the 500kv Longwangshan substation linking to the Jiangsu Grid. As verified during site visit, the connected substation of the project was changed to be 220kv Xidu Substation. **CL #1 was raised for clarification of this.**

In response to this finding, clarification together with corresponding supporting documents was provided. As interviewed with the project owner, the change was according to the arrangement of the Jiangsu Grid Company. This was confirmed by reviewing provided Jiangsu Power Dispatching Communication Centre Document (No.Diandiao[2010]294,/34/), dated 21/12/2010). Further, certification was issued by Jiangsu Power Dispatching Communication Centre on 27/04/2011 (Jiangsu Power Dispatching Control Centre Document,/35/), in which it was stated that the electricity generated by the project shall be supplied to the ECPG through 220kv Xidu Substation from 27/01/2011 onwards. Post Changes to the project design of the registered project activity was proposed by the client during this monitoring period. It was validated that the aforementioned substation change is according to the arrangement of the Jiangsu Grid Company and has no impact on (a) The applicability and application of the applied methodology under which the project activity has been registered(AM0029,version 03); (b) The additionality of the project activity; and (c) The scale of the project activity.

Validation opinion to (a):

The project applies AM0029 version 03, the applicability criteria is as follows:

- The project activity is the construction and operation of a new natural gas fired grid-connected electricity generation plant;

Validation opinion: The project is construction and operation of a new natural gas fired grid-connected electricity generation plant, the change to the connected substation has no impact on this criteria.

- The geographical/physical boundaries of the baseline grid can be clearly identified and information pertaining to the grid and estimating baseline emissions is publicly available;

Validation opinion: The connected substation, 220kv Xidu Substation, is also linked to the Jiangsu Grid, a sub-grid of the ECPG. The geographical/physical boundary of the baseline grid of the project can be clearly identified to be ECPG. Beside, information pertaining to ECPG and estimating baseline emissions is publicly available for calculation the baseline emission factor. Thus, the change to the connected substation has no impact on this criteria.

- Natural gas is sufficiently available in the region or country, e.g. future natural gas based power capacity additions, comparable in size to the project activity, are not constrained by the use of natural gas in the project activity.

Validation opinion: With 20 year fuel supply agreement with gas supplier, it was also confirmed that Natural gas is sufficient for the project. The clarification in the registered PDD on the Natural gas is sufficiently available to the project was not impacted by the change to the connected substation.

In conclusion, the change to the connected substation has no impact on the applicability and application of the applied methodology under which the project activity has been registered (AM0029,version 03)

Validation opinion to (b):

The additionality of the project activity was demonstrated applying “Tool for the demonstration and assessment of additionality” (Version 05.2) and Benchmark Investment Analysis was selected to demonstrate that without additional revenue from the sale of CERs the project is less economically or financially attractive than other alternatives. As interviewed, the project owner didn't make any investment to the connected substation change to 220kv Xidu. Thus, the change to the connected substation has no impact on additionality of the project activity.

Validation opinion to (c):

As verified during the onsite visit, the total installed capacity of the project is 780MW with installation of two sets of 390MW gas-steam combined cycle generation system, which is in compliance with the registered PDD. The change to the connected substation has no impact on the scale of the project activity.

Thus, the actual changes to the project design of a registered CDM project activity do not require prior approval by the Board, as per Clean development mechanism project standard version 02.1 date 03/12/2012 (/36/). The name of the substation has been corrected together with the impact resulting from the change in the revised PDD (version 06.5 dated 26/11/2012,/2/) and revised Monitoring Report (version 2.0, dated 26/11/2012). Based on the assessment work carried above, **CL #1 was closed out.**

In conclusion, except for change to the connected substation, the project was implemented and equipment installed as described in the registered PDD.

As per the tool to calculate emission factor for an electricity system, latest year for which information is available shall be applied. Due to the latest information available for the year 2010, the $EF_{grid,BM,y}$ and $EF_{BL,upstream,CH4}$ of the project in the MR version 2.0 and ER spreadsheet (/25/) were recalculated and the values of $EF_{grid,BM,y}$ and $EF_{BL,upstream,CH4}$ were updated to be 0.6889 t CO₂e/MWh and 0.004876 t CH₄/MWh respectively. The updates are in compliance with the requirement of the EB and were accepted by the assessment team.

In the revised PDD and MR, the header has the logos missing. As required, the formats shall not be altered. CAR #2 was raised for correction of this. In response to this finding, the PDD and MR were revised by adding the header.

In the revised PDD, page 7 footnote 1, it was found that the link does not work. CAR #3 was raised for correction of this. CAR #3 was closed after the link was revised.

As verified by interviewing with the project owner and the operational log, the project had a smooth operation and the monitoring system worked properly during this monitoring period and no abnormal situation occurred. The emission reduction is 257,506 tCO₂e emission reductions for the period 01/01/2011 to 31/03/2011 as per the estimation made in the revised PDD while the actual emission reduction has been verified as 106,575 tCO₂e emission reduction for the same period. The emission reduction in this monitoring period was lower than the estimation in the revised PDD, which was mainly caused by the decrease of the baseline emission factor compared with that in the revised PDD.

3.2 Post registration changes

As verified during the site visit, the connected substation of the project was changed from 500kv Longwangshan Substation to 220kv Xidu Substation since 27/01/2011. Post Changes to project design of registered project activity was proposed by the client during this monitoring period and was detailed in section 3.2.4. It was validated that the actual changes to the project design of a registered CDM project activity do not require prior approval by the Board, as per Clean development mechanism project standard version 02.1 date 03/12/2012 Appendix 1. Changes that do not require prior approval by the board, para 6.

3.2.1 Temporary deviations from registered monitoring plan or applied methodology

There are no temporary deviations from the monitoring plan or applied methodology which have been approved during this monitoring period or submitted with this Verification Report.

3.2.2 Corrections

There are no corrections which have been applied during this monitoring period.

3.2.3 Permanent changes from registered monitoring plan or applied methodology

There are no permanent changes from monitoring plan or applied methodology which have been applied during this monitoring period.

3.2.4 Changes to project design of registered project activity

Actual change to the project design:

Since 27/01/2011, the connected substation of the project was changed from 500kv Longwangshan Substation to 220kv Xidu Substation. Post Changes to the project design of the registered project activity was proposed by the client during this monitoring period. The PDD section A.4.3, B.3, and B.7.2 were revised by addressing this change and corresponding impact. The revised PDD, version 06.5 dated 26/11/2012, was provided for validation.

Validation opinion to the changed to the project design of the registered project activity:

As validated by reviewing provided Jiangsu Power Dispatching Communication Centre Document (No.Diandiao[2010]294), dated 21/12/2010 and certification issued by Jiangsu Power Dispatching Communication Centre on 27/04/2011 (Jiangsu Power Dispatching Control Centre Document), it was confirmed that the electricity generated by the project shall be supplied to the ECPG through 220kv Xidu Substation from 27/01/2011 onwards. The aforementioned substation change is according to the arrangement of the Jiangsu Grid Company. 220kv Xidu Substation is also in Jiangsu Grid which is a sub-grid of the East China Power Grid (ECPG). It was validated above when closing the CL #1 that this change has no impact on (a) The applicability and application of the applied methodology under which the project activity has been registered (AM0029, version 03); (b) The additionality of the project activity; and (c) The scale of the project activity.

As per Clean development mechanism project standard version 02.1 dated 03/12/2012, Appendix 1. Changes that do not require prior approval by the board, para 6, this change to the project design of a

registered CDM project activity is accepted by the assessment team and do not require prior approval by the Board. The only change is to the connected substation, without impact on the compliance of the monitoring plan with the applied methodology, the level of accuracy and completeness in the monitoring of the project activity and has no impact on CERs issued during previous verifications.

3.2.5 Changes to start date of crediting period

There are no changes to the start date of the crediting period which have been approved during this monitoring period or submitted with this Verification Report.

3.3 Remaining Issues, CAR's, FAR's from Previous Validation or Verification

This is the fourth periodic verification of the project. The validation report of the project (/7/) and the verification reports of previous monitoring periods (/6/) have been reviewed and no open issue was found.

3.4 Compliance of the monitoring plan with the monitoring methodology.

The project was registered against the approved monitoring methodology AM0029, Baseline Methodology for "Grid Connected Electricity Generation Plants using Natural Gas" and "Monitoring methodology for grid connected generation plants using non-renewable and less GHG intensive fuel" (Version 03, 16/05/2008, /8/). It is verified that the monitoring plan in the revised PDD is in compliance with the methodology AM0029 version 03. All required parameters have been included in the monitoring plan of the PDD. Therefore, it is confirmed that the monitoring plan in the revised PDD is in compliance with the monitoring methodology and detailed as follows for baseline emission, project emission, and leakage.

3.4.1 Monitoring requirement on Baseline emission

Baseline emission related parameters for this project are Build margin emission factor of ECPG ($EF_{grid,BM,y}$) and Electricity supplied to the grid by the project activity ($EG_{PJ,y}$). As per the applied methodology, baseline emissions will be monitored per "Tool to calculate emission factor for an electricity system (hereafter, the EF Tool)". It was confirmed by the assessment team that the requirement in the referred EF Tool for determining the $EF_{grid,BM,y}$ is followed by the project in the revised PDD, i.e. as per the referred EF Tool, the lowest value of the three options given in AM0029 Version03 is Option1-Build Margin of ECPG. Then, baseline CO₂ emission factor ($EF_{BL,CO_2,y}$) of the project is build margin emission factor of ECPG ($EF_{grid,BM,y}$) and is monitored ex post as per the "Tool to calculate emission factor for an electricity system" in compliance with AM0029 Version 03.

For Electricity supplied to the grid by the project activity ($EG_{PJ,y}$), AM0029 Version 03 does not have specific monitoring requirement on this parameter. As a grid connected power generation project, the electricity supplied to the grid by the project activity ($EG_{PJ,y}$) is derived from the directly measured data of the electricity sold to the grid by the project ($EG_{out,y}$) and the electricity imported from the grid by the project ($EG_{in,y}$). The monitoring plan of this parameter in PDD has sufficient information i.e the source of data to be used, description of measurement, methods and procedures to be applied, QA/QC procedures to be applied, monitoring equipment etc. Thus, it was confirmed by the assessment team that the monitoring plan can deliver high quality data and was accepted by the assessment team.

3.4.2 Monitoring requirement on project emission

Project emission involves following parameters:

$FC_{t,y}$: The net amount of NG consumed by the project;

$EF_{CO_2,f,y}$: CO₂ emission factor per unit of energy of natural gas ;

$NCV_{f,y}$: Net calorific value (energy content) per volume unit of natural gas ;

$OXID_f$: Oxidation factor of natural gas;

$COEF_y$: CO₂ emission coefficient.

In the tables below, each parameter included in the monitoring plan is checked comparing to the counterparts listed in methodology. A Clear conclusion on whether the requirements in the monitoring plan is in compliance with the applicable methodology and relevant EB documents.

Revised PDD Approved Methodology	Requirement in the applicable methodology and relevant EB documents	Requirement in the registered monitoring plan	Conclusion on the compliance of the monitoring plan in the PDD with the methodology
Data/Parameter	FC _{f,y}	FC _{f,y}	Compliance
Description	Annual quantity of fuel "f" consumed in project activity	The net amount of NG consumed by the project	Compliance
Measured/Calculated /Default	Measured.	Measured by Fuel flow meters	Compliance
Source of data	Fuel flow meter reading at project boundary.	Fuel flow meter readings	Compliance
Monitoring equipment	Fuel flow meter	Fuel flow meter	Compliance
Measuring/Reading/ Recording frequency	Daily	The natural gas flow rate will be monitored continuously both by the supplier and the Project Owner. The natural gas consumption will be aggregated automatically and recorded daily.	Compliance
Calculation method (if applicable)	NA	NA	Compliance
QA/QC procedures	The total fuel consumption will be monitored both at supplier and project end for cross-verification Natural gas supply metering to the project will be subject to regular (in accordance with stipulation of the meter supplier) maintenance and testing to ensure accuracy. The readings will be double checked by the gas supply company	The total net amount of natural gas consumed by the Proposed Project will be monitored by both supplier and Project Owner for cross-verification. All meters used for the reading of the gas supplied will be retained for regular maintenance and testing services for an ensured accuracy.	Compliance

Revised PDD Approved Methodology	Requirement in the applicable methodology and relevant EB documents	Requirement in the registered monitoring plan	Conclusion on the compliance of the monitoring plan in the PDD with the methodology
Data/Parameter	EF _{CO2,f,y}	EF _{CO2, f, y}	Compliance
Description	Emission factor for fuel "f"	the emission factor of natural gas;	Compliance
Measured/Calculated /Default	Estimated	Use supplier-provided data, local data, country-specific values, in this order of preference.	Compliance
Source of data	Local/ Regional/ Global (IPCC)	Fuel supplier, local data, country-specific values	Compliance
Monitoring equipment	NA	NA	Compliance
Measuring/Reading/ Recording frequency	Annual	Annual	Compliance

Calculation method (if applicable)	Use supplier-provided data, local data, country-specific values, that order of preference. IPCC values can be used for start-up fuel	Use supplier-provided data, local data, country-specific values, in this order of preference.	Compliance
QA/QC procedures	No additional QA/QC procedures may need to be planned	No additional QA/QC procedures	Compliance

Revised PDD Approved Methodology	Requirement in the applicable methodology and relevant EB documents	Requirement in the registered monitoring plan	Conclusion on the compliance of the monitoring plan in the PDD with the methodology
Data/Parameter	NCV _{t,y}	NCV _{t,y}	Compliance
Description	Net Calorific Value of fuel f	The net calorific value per volume unit of natural gas	Compliance
Measured/Calculated /Default	Estimated	Fuel supplier, Local Authority, Country specific, that order of preference	Compliance
Source of data	Fuel Supplier, Local Authority, Country specific, IPCC	Fuel supplier, Local Authority, Country specific, that order of preference	Compliance
Monitoring equipment	NA	NA	Compliance
Measuring/Reading/Recording frequency	Fortnightly Use supplier-provided data, local data, country-specific values, that order of preference. IPCC values can be used for start-up fuel	From NG test report issued by the NG supplier if applicable, the test will be performed fortnightly. Local or country specific data would be used in case data from NG supplier is not accessible	Compliance
Calculation method (if applicable)	NA	NA	Compliance
QA/QC procedures	No additional QA/QC procedures may need to be planned	No additional QA/QC procedures	Compliance

Revised PDD Approved Methodology	Requirement in the applicable methodology and relevant EB documents	Requirement in the registered monitoring plan	Conclusion on the compliance of the monitoring plan in the PDD with the methodology
Data/Parameter	OXID _f	OXID _f	Compliance
Description	Oxidation factor	Oxidation factor	Compliance
Measured/Calculated /Default	Estimated	Estimated	Compliance
Source of data	Use IPCC current default	IPCC	Compliance
Monitoring equipment	NA	NA	Compliance
Measuring/Reading/Recording frequency	Annual	Annual	Compliance

Calculation method (if applicable)	NA	NA	Compliance
QA/QC procedures	No additional QA/QC procedures may need to be planned	No additional QA/QC procedures	Compliance

Revised PDD Approved Methodology	Requirement in the applicable methodology and relevant EB documents	Requirement in the registered monitoring plan	Conclusion on the compliance of the monitoring plan in the PDD with the methodology
Data/Parameter	COEF _y	COEF _y	Compliance
Description	CO2 emission coefficient	CO2 emission coefficient	Compliance
Measured/Calculated /Default	Calculated	Calculated	Compliance
Source of data	Calculated Under project activity	Calculated under project activity	Compliance
Monitoring equipment	NA	NA	Compliance
Measuring/Reading/Recording frequency	Annual	Annual	Compliance
Calculation method (if applicable)	$COEF_{f,y} = \sum NCV_{f,y} * EF_{CO2,f,y} * OXID_f$	$COEF_{f,y} = \sum NCV_{f,y} * EF_{CO2,f,y} * OXID_f$	Compliance
QA/QC procedures	No additional QA/QC procedures may need to be planned	No additional QA/QC procedures	Compliance

3.4.3 Monitoring requirement on leakage

There is no specific monitoring requirement information in the applied monitoring methodology on the monitoring leakage. The project is a natural gas fired grid-connected electricity generation project and do not use Liquefied Natural Gas (LNG). As per the applied methodology, the leakage only includes Leakage emissions due to fugitive upstream CH₄ emissions in the year y in t CO₂e (LE_{CH₄,y}) and was determined using following formula:

$$LE_{CH_4,y} = (FC_{f,y} * NCV_{f,y} * EF_{NG,upstream,CH_4,y} - EG_{PJ,y} * EF_{BL,upstream,CH_4,y}) * GWP_{CH_4}$$

EF_{NG,upstream,CH₄,y} is ex-ante determined as per the applied methodology to be 0.000296t CH₄/GJ. According to AM0029, the emission factor for upstream fugitive CH₄ emissions occurring in the absence of the project activity (EF_{BL,upstream,CH₄}) should be calculated consistent with the baseline emission factor (EF_{BL, CO₂}). As validated before, EF_{BL,upstream,CH₄} shall be calculated as per the method for calculating Build margin emission factor of ECPG (EF_{grid,BM,y}). The procedure used to determine leakage is clearly stated in the revised PDD and was accepted by the assessment team.

It was verified that the monitoring plan contains all necessary parameters that need to be monitored, and the monitoring procedures and QA/QC procedures in the monitoring plan comply with the monitoring methodology.

3.5 Completeness and accuracy of Monitoring

3.5.1 Verification of monitoring of parameters

Monitoring of reductions in GHG emissions resulting from the registered project have been implemented in accordance with the monitoring plan contained in the revised PDD. The monitoring mechanism, including the data collection system, is effective and reliable. A line diagram of the project detailing boundary, location of

meters and other main equipments was included in the Monitoring Report and verified by the assessment team with the actual situation and description in the revised PDD.

In the tables below, the monitoring of parameters is checked comparing with the monitoring plan. A Clear conclusion on whether the monitoring of parameter in compliance with the monitoring plan is indicated below.

3.5.1.1 $EG_{PJ,y}$: Electricity supplied to the grid by the project activity

Monitoring Report, onsite checks	Requirement in the registered monitoring plan	Implementation of the project	Conclusion on the compliance of the implementation with the monitoring plan
Registered Monitoring Plan & Approved Methodology			
Data/Parameter	$EG_{PJ,y}$	$EG_{PJ,y}$	Compliance
Description	Electricity supplied to the grid by the project activity	Electricity supplied to the grid by the project activity	Compliance
Measured/Calculated /Default	Measured and calculated	Measured and calculated	Compliance
Source of data	Reading of the Meter at the identified Metering Point	Reading of the electricity meters and cross checked by the commercial invoices	Compliance
Monitoring equipment	Meter at the identified Metering Point	The electricity sold to the grid ($EG_{out,y}$) was measured by two main meters (SN: 96347828 and SN: 96348243) and two backup meters (SN: 96348248 and 96348247). The electricity imported from the grid by the project ($EG_{in,y}$) was monitored by the same meters as $EG_{out,y}$ and the meters (SN:96348211 and SN:96347836) installed at the 110kV line	Compliance
Measuring/Reading/ Recording frequency	The meter readings will be measured hourly and recorded monthly. Data will be archived for 2 years following the end of the crediting period by means of electronic and paper backup.	The meter readings were continuously measured hourly and recorded monthly.	Compliance
Calculation method (if applicable)	The calculation for the net amount of electricity supplied to the Grid is equal to ($EG_{out,y} - EG_{in,y}$)	The amount of electricity supplied to the Grid was calculated as the difference between electricity sold to ECPG ($EG_{out,y}$) and electricity imported from the grid ($EG_{in,y}$) .	Compliance
QA/QC procedures	Electricity supplied by the project activity to the grid will be monitored and recorded at the control centre using a computer system. Commercial receipts for electricity will also be kept for cross checking.	Electricity supplied by the project activity to the grid was monitored and recorded at the control center using a computer system. Commercial receipts for electricity were also kept for cross checking. All meters were calibrated every three month by a qualified third party. Data record and relevant documents will be archived for a period of 2 years after the crediting	Compliance

		period	
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As per the monitoring plan in the revised PDD, the electricity supplied to the grid by the project activity ($EG_{PJ,y}$) is derived from the directly measured data of the electricity sold to the grid by the project ($EG_{out,y}$) and the electricity imported from the grid by the project ($EG_{in,y}$). The electricity sold to ECPG ($EG_{out,y}$) is monitored by two sets of meters installed at the two 220kV transmission lines connected to the grid; each set consists of one main meter and one backup meter. The readings of the main meters are taken for billing purpose between the project owner and Grid Company as well as for CDM purposes, while the readings of the backup meters only serve for emergency situations. The two sets of meters are bi-directional meters and can measure both the electricity sold to the grid by the project and the electricity imported from the grid by the project through the 220KV line. There is another set of metres installed at the 110kV line linked to the substation of Jiangsu Grid in the project side. This set of meter is one directional meters measuring only electricity imported from the grid. One main metre and one backup meter were installed. The readings of the main meters are taken for billing purpose between the project owner and Grid Company as well as for CDM purposes, while the readings of the backup meters only serve for emergency situations

In conclusion, the electricity sold to the grid ($EG_{out,y}$) is measured by two main meters (SN: 96347828 and SN: 96348243) and two backup meters (SN: 96348248 and 96348247) installed at the project site of the two 220kV transmission lines connected to the 220kV Xidu substation of Jiangsu Grid. The electricity imported from the grid by the project ($EG_{in,y}$) is monitored by the same meters as $EG_{out,y}$ and the meters (SN:96348211 and SN:96347836) installed at the 110kV line. The line diagram of the project has been provided to confirm the above description (/9/). This is also verified to be in line with the requirements of PPA signed between the project company and the Jiangsu Grid (/5/).

The readings of the main meters are daily recorded and the data are monthly aggregated into monthly report (/11/). Based on the readings of the main meters on the agreed transaction date of each month, the Grid Company issued electricity transaction note (ETNs, /12/) indicating the amount of monthly electricity sold to and imported from the grid by the project. After confirming the data in the ETNs, sale invoices for the electricity sold and imported are issued by the Project Company and Grid Company respectively.

The monitoring plan of the project has been strictly followed. The cut-off time of $EG_{out,y}$ and $EG_{in,y}$ in this monitoring period is at 24:00 of the last day of each month. Data of electricity sold to and imported from the grid in the monthly report recorded by the Project Company were provided for verification. The data in the commercial receipts including ETNs and sale invoices of corresponding period were used for cross check. More conservative data after cross checking was adopted for the calculation of emission reductions. Data in the daily report was also checked for assurance (/10/). The amount of electricity supplied to the grid by the project activity ($EG_{PJ,y}$) from 01/01/2011 to 31/03/2011 reported in the Monitoring Report version 2.0 and ER calculation spreadsheet version 2.0 was found to be calculated correctly.

3.5.1.2 $EF_{grid,BM,y}$: Build margin emission factor of ECPG

Monitoring Report, onsite checks	Requirement in the registered monitoring plan	Implementation of the project	Conclusion on the compliance of the implementation with the monitoring plan
Registered Monitoring Plan & Approved Methodology			
Data/Parameter	$EF_{Grid\ BM\ y}$	$EF_{Grid\ BM\ y}$	Compliance
Description	Build margin emission factor of ECPG	Build margin emission factor of ECPG	Compliance
Measured/Calculated /Default	Calculated	Calculated	Compliance
Source of data	Calculated based on public available data as per provisions given in the "Tool to calculate emission factor for an electricity system"	Calculated based on public available data as per provisions given in the "Tool to calculate emission factor for an electricity system" Version01.1	Compliance
Monitoring equipment	NA	NA	Compliance

Measuring/Reading/ Recording frequency	NA	NA	Compliance
Calculation method (if applicable)	Calculated based on public available data as per provisions given in the "Tool to calculate emission factor for an electricity system"	Calculated based on public available data as per provisions given in the "Tool to calculate emission factor for an electricity system" Version 01.1	Compliance
QA/QC procedures	NA	As per QA/QC procedures for relevant monitored parameters in the "Tool to calculate emission factor for an electricity system"	Compliance

As per page 76 of the revised PDD, Option 1 (the build margin, calculated according to "Tool to calculate the emission factor for an electricity system") was selected as the $EF_{BL, CO_2, y}$ for the project.

As per the monitoring plan of the revised PDD, the building margin emission factor of ECPG needs to be updated annually based on public available data following the steps defined in the "Tool to calculate emission factor for an electricity system" version 01.1 for the first crediting period (/28/).

Version 1.0 of the MR is dated on 25/10/2011, latest publicly available data at that time (25/10/2011) were applied for calculating the Build margin emission factor of ECPG ($EF_{grid, BM, y}$). The calculated $EF_{grid, BM, y}$ is 0.6622tCO₂e/MWh.

In version 2.0 of the MR the latest publicly available data, such as China Electric Power Yearbook 2008 – 2011 (/30/) and China Energy Statistic Yearbook 2008-2011 (/29/) etc. were available and were applied for calculating the Build margin emission factor of ECPG ($EF_{grid, BM, y}$) by the client in compliance with the requirement of the "Tool to calculate the emission factor for an electricity system". The calculated $EF_{grid, BM, y}$ is 0.6889tCO₂e/MWh. The calculation process has been checked by the verification team and confirmed to be consistent with the "Tool to calculate emission factor for an electricity system" version 01.1.

The Build margin emission factor of ECPG calculated by the DNA of China (National Development and Reform Committee) (/31/) which is publicly available on the website has been obtained and used for cross checking. The reported building margin emission factor in the MR Version 2.0 is consistent with the value published by the DNA of China.

3.5.1.3 $FC_{t,y}$: The net amount of NG consumed by the project;

Monitoring Report, onsite checks Registered Monitoring Plan & Approved Methodology	Requirement in the registered monitoring plan	Implementation of the project	Conclusion on the compliance of the implementation with the monitoring plan
Data/Parameter	$FC_{t,y}$	$FC_{t,y}$	Compliance
Description	The net amount of NG consumed by the project	Net amount of NG consumed by the project	Compliance
Measured/Calculated /Default	Measured by Fuel flow meters	Measured by Fuel flow meters	Compliance
Source of data	Fuel flow meter readings	Fuel flow meter readings	Compliance
Monitoring equipment	Fuel flow meter	Two ultrasonic flow meters installed at the supplier side (SN: 03-110136 and 03-110137) and two orifice plate flow meters (SN: 0139940 and 0139943) at the project side.	Compliance
Measuring/Reading/ Recording	The natural gas flow rate will be monitored continuously both by the supplier and the	The natural gas flow rate was monitored continuously by the supplier and the project owner.	Compliance

frequency	Project Owner. The natural gas consumption will be aggregated automatically and recorded daily.	The natural gas consumption was aggregated automatically and recorded daily.	
Calculation method (if applicable)	NA	NA	Compliance
QA/QC procedures	The total net amount of natural gas consumed by the Proposed Project will be monitored by both supplier and Project Owner for cross-verification. All meters used for the reading of the gas supplied will be retained for regular maintenance and testing services for an ensured accuracy.	The total amount of natural gas consumed by the Project was monitored both by supplier and the project owner for internal cross-checking. To be conservative, the larger of these two values was used to calculate the gas consumed by the Project. All meters used for the reading of the gas supplied have been retained for regular maintenance and testing services for an ensured accuracy. All electronic and paper documents will be archived during the crediting period and for two years after the end of the crediting period.	Compliance

As per page 84 of the revised PDD, the total net amount of natural gas (NG) consumed by the project will be monitored by both supplier and project owner for cross-verification. The natural gas consumption will be aggregated automatically and recorded daily.

Through onsite visit, it is confirmed that the net amount of NG consumed by the project is continuously monitored by two ultrasonic flow meters installed at the supplier side (SN: 03-110136 and 03-110137) and two orifice plate flow meters (SN: 0139940 and 0139943) at the project side. The output of the flow meters is automatically converted to be the data under standard condition and then automatically aggregated by computer system. Designated person in the project site and the gas supplier read and record the gas consumption daily. Every day the supplier sends the reading record of the gas consummated the day before to the project owner (/14/). The project owner verifies the provided data against the reading value of their own (/13/). The confirmed meter reading at the supplier side is taken for billing purpose between supplier and the project owner. Monitoring records of this monitoring period have been provided to the assessment team for verification.

The monitoring plan was strictly followed by the project. The daily record period at the supplier side is from 08:00 on Day N to 08:00 on Day N+1 with the hourly recording intervals of the net amount of NG consumed by the project, it was confirmed that the data vintage of the daily record period at the supplier side for this monitoring period is from 00:00 01/01/2011 to 24:00 31/03/2011. The daily record period at the project side is from 00:00 on Day N to 00:00 on Day N+1. The data recorded in the daily reports by the project owner and the gas suppliers were used to calculate the net amount of NG consumed by the project in this monitoring period. The data at the project site was 0.51% lower than the data from the gas supplier. This is considered to be reasonable due to the line pack storage, non-synchronous reading and recording of different flow meters by different parties. Conservative values between the record of the supplier and the project owner (larger one) have been applied in calculating the project emission of the project. The daily reports of the meter reading of the project owner and of the gas supplier side in this monitoring period were checked by the assessment team and it was confirmed the calculated amount in this monitoring period both at project site and supplier side were correct. The sale receipts of the gas consumption were also checked for assurance. The calculation of total net amount of natural gas consumed by the project in the MR Version 2.0 and ER calculation spreadsheet was verified to be correct.

3.5.1.4 NCV_{f,y} :The net calorific value per volume unit of natural gas

Monitoring Report, onsite checks Registered Monitoring Plan & Approved Methodology	Requirement in the registered monitoring plan	Implementation of the project	Conclusion on the compliance of the implementation with the monitoring plan
Data/Parameter	NCV _{f,y}	NCV _{f,y}	Compliance
Description	The net calorific value per volume unit of natural gas	Net calorific value per volume unit of natural gas	Compliance
Measured/Calculated /Default	Fuel supplier, Local Authority, Country specific, that order of preference	Measured and calculated as weighted average value	Compliance
Source of data	Fuel supplier, Local Authority, Country specific, that order of preference	NG test reports issued by gas supplier	Compliance
Monitoring equipment	NA	NA	Compliance
Measuring/Reading/ Recording frequency	From NG test report issued by the NG supplier if applicable, the test will be performed fortnightly. Local or country specific data would be used in case data from NG supplier is not accessible	Measured and recorded fortnightly as per AM0029 Version 3 and the revised PDD.	Compliance
Calculation method (if applicable)	From NG test report issued by the NG supplier if applicable, the test will be performed fortnightly. Local or country specific data would be used in case data from NG supplier is not accessible	Weighted average value of fortnightly NCV values as per AM0029 Version 3 and the revised PDD	Compliance
QA/QC procedures	No additional QA/QC procedures	NA	Compliance

As per page 84 of the revised PDD the net calorific value per volume unit of natural gas from NG test reports issued by the NG supplier was applied. The NG test reports (/15/) are provided by the supplier fortnightly and the data are under normal conditions. The fortnightly NCV data from the gas supplier was used to calculate the weighted average value of this monitoring period. The values in the MR version 2.0 and spreadsheet were checked against the reports issued by the NG supplier and consistency was observed. The weighted average calculation process was also verified to be correct.

3.5.1.5 EF_{CO₂, f, y}: the emission factor of natural gas;

Monitoring Report, onsite checks Registered Monitoring Plan & Approved Methodology	Requirement in the registered monitoring plan	Implementation of the project	Conclusion on the compliance of the implementation with the monitoring plan
Data/Parameter	EF _{CO₂, f, y}	EF _{CO₂, f, y}	Compliance
Description	the emission factor of natural gas;	Emission factor of natural gas	Compliance
Measured/Calculated /Default	Use supplier-provided data, local data, country-specific values, in this order of preference.	Default	Compliance
Source of data	Fuel supplier, local data, country-specific values	Conservative value between National data (0.0543 t CO ₂ /GJ) issued by Chinese DNA and the data (0.0561 t CO ₂ /GJ) in the revised PDD	Compliance
Monitoring equipment	NA	NA	Compliance
Measuring/Reading/ Recording frequency	Annually	Annually	Compliance
Calculation method (if applicable)	Use supplier-provided data, local data, country-specific values, in this order of preference.	Conservative value between National data (0.0543 t CO ₂ /GJ) issued by Chinese DNA and the data (0.0561 t CO ₂ /GJ) in the revised PDD	Compliance
QA/QC procedures	No additional QA/QC procedures	NA	Compliance

As per the monitoring plan, EF_{CO₂, f, y} shall be determined applying supplier-provided data, local data, and country-specific values, in this order of preference. As verified and confirmed by interviewing with the project owner during site visit, the supplier-provided data and local data are unavailable for this monitoring period. After checking the value (0.0543 tCO₂/GJ) issued by Chinese DNA (/31/), it was found that it is lower than the value (0.0561 tCO₂/GJ) in the revised PDD. For the sake of conservativeness, the value in the revised PDD was used for the calculation of project emission of this monitoring period.

3.5.1.6 OXID_f: the oxidation factor of natural gas

Monitoring Report, onsite checks Registered Monitoring Plan & Approved Methodology	Requirement in the registered monitoring plan	Implementation of the project	Conclusion on the compliance of the implementation with the monitoring plan
Data/Parameter	OXID _f	OXID _f	Compliance
Description	Oxidation factor	Oxidation factor	Compliance
Measured/Calculated /Default	Estimated	Estimated	Compliance
Source of data	IPCC	IPCC	Compliance

Monitoring equipment	NA	NA	Compliance
Measuring/Reading/Recording frequency	Annual	Annual	Compliance
Calculation method (if applicable)	NA	NA	Compliance
QA/QC procedures	No additional QA/QC procedures	No additional QA/QC procedures	Compliance

As per the applied methodology and the revised PDD, IPCC current default (100%) is correctly applied in the MR Version 2.0 (/32/).

3.5.1.7 COEFy: CO2 emission coefficient

Monitoring Report, onsite checks Registered Monitoring Plan & Approved Methodology	Requirement in the registered monitoring plan	Implementation of the project	Conclusion on the compliance of the implementation with the monitoring plan
Data/Parameter	COEFy	COEFy	Compliance
Description	CO2 emission coefficient	CO2 emission coefficient	Compliance
Measured/Calculated /Default	Calculated	Calculated	Compliance
Source of data	Calculated under project activity	Calculated under project activity	Compliance
Monitoring equipment	NA	NA	Compliance
Measuring/Reading/Recording frequency	Annual	Annual	Compliance
Calculation method (if applicable)	$COEF_{f,y} = \sum NCV_{f,y} * EF_{CO2,f,y} * OXID_f$	$COEF_{f,y} = \sum NCV_{f,y} * EF_{CO2,f,y} * OXID_f$	Compliance
QA/QC procedures	No additional QA/QC procedures	No additional QA/QC procedures	Compliance

As per the applied methodology and the revised PDD, $COEF_{f,y} = \sum NCV_{f,y} * EF_{CO2,f,y} * OXID_f$ was applied to calculate the $COEF_{f,y}$.

3.5.1.8 Leakage parameters

As per the applied methodology, $EF_{NG,upstream,CH4,y}$ is ex-ante determined as per the applied methodology to be 0.000296t CH4/GJ.

As per the revised PDD, the emission factor for upstream fugitive methane emissions occurring in the absence of the project activity in t CH4 per MWh electricity generation in the project plant ($EF_{BL,upstream,CH4}$) should be calculated consistently with the baseline emission factor. The calculated $EF_{BL,upstream,CH4}$ in version 1.0 of the MR is 0.004789 t CH4/MWh. In version 2.0 of the MR, the latest data available were applied for calculating the Emission factor for upstream fugitive methane emissions ($EF_{BL,upstream,CH4}$) by the client. The calculation of the parameter in the ER calculation spreadsheet and MR version 2.0 has been checked and it has been confirmed that this emission factor for upstream fugitive methane emissions (0.004876t CH4/MWh) is calculated using the same process as that of the baseline emission factor and the data used in the calculation are consistent with the sources.

3.5.2 Verification of implementation of sampling plan

Not applicable.

3.6 Accuracy of Equipment

As per the monitoring plan in the revised PDD, the metering equipment will be properly calibrated for accuracy in compliance with relevant industrial standards in China. The calibration certificates of the meters were provided and reviewed by the verification team. It was confirmed that the meters have been calibrated as per relevant industrial standards in China and were valid during this monitoring period.

According to the national standard of JJG 1055-1997 Calibration of AC Watt-hour Meters at Place of Installation (/16/), the six electricity meters have been calibrated by the Jiangsu Electric Power Research Institute Corporation Limited (/19/) which was accredited by the China National Accreditation Service for Conformity Assessment to carry out calibration of electricity meters (/20/). Through reviewing this standard, it was ascertained that the calibration frequency of the electricity meters was in compliance with the applied standard.

According to National Standard JJG882-2004 Verification Regulation of the Pressure Transmitter (/17/), the flow meters at the project site were calibrated by the Metrology Central Laboratory of Jiangsu, SPC (/21/) which was accredited by Metrology Office of State Power Corporation to carry out calibration of flow meters (/22/).

As per the national standard JJG1030-2007 Verification Regulation of Ultrasonic Flow Meter (/18/), the flow meters at the gas station were calibrated by the Nanjing Branch of National Station of Petroleum & Natural Gas Flow Measurement (/23/) which was accredited by General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China to carry out calibration of flow meters (/24/). Through reviewing the two national standards, it was verified that the calibration frequency of the flow meters was in accordance with the applied national standards.

The accuracy of the monitoring equipment was confirmed to be consistent with those in the calibration certificates and was in consistency with related national standards. Details of the meters were summarized in table below.

Monitoring equipment	Electricity Meter	Flow meter installed in Project site	Flow meter installed Gas Supply Station
Monitoring parameter	$EG_{PJ,y}$	$FC_{f,y}$	$FC_{f,y}$
S/N	96347828	0139940	03-110136
	96348248		
	96348243		
	96348247	0139943	03-110137
	96348211		
	96347836		
Type	Electricity Meter	Flow meter	Flow meter
Level	0.2S	0.25	1.0
Calibration frequency requirement	Once every three month.	Annually	Biennially
Calibration date	27/10/2010 and 29/01/2011 (for all the 6 meters)	30/07/2010 for the both flow meters	03/02/2010 for 03-110136;
			03/08/2010 for 03-110137
Validity	26/01/2011 and 28/04/2011 (for all the 6 meters)	29/06/2011 for the both flow meters	02/02/2012 for 03-110136; 02/08/2012 for 03-110137

Are there delays in calibration?	NA	NA	NA
Calibration Entity	Jiangsu Electric Power Research Institute Corporation Limited	Metrology Central Laboratory of Jiangsu, SPC	Nanjing Branch of National Station of Petroleum & Natural Gas Flow Measurement
Accreditation Certificate for the calibration entity	China National Accreditation Service for Conformity Assessment([2008] Shouzhengzi NO.28)	Metrology Office of State Power Corporation (No.: 2007 Metro No.: 3200301)	General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China((State) Metro (2008) 00060)

3.7 Summary of compliance with the calibration frequency requirements for measuring instruments.

The calibration of the following measuring equipment has an impact on the claimed emission reductions:

- A. $FC_{f,y}$: The net amount of NG consumed by the project;
- B. $EG_{PJ,y}$: Electricity supplied to the grid by the project activity

In compliance with the monitoring plan in the revised PDD, all monitoring instruments have been properly calibrated in compliance with relevant industrial standards in China (/16//17//18/). Calibration reports and accreditation certificates for the calibrations for the calibration entity have been verified by the assessment team. It is confirmed that the calibration of all the monitoring instruments are in compliance with the monitoring plan.

3.8 Accuracy of Emission Reduction Calculations

The calculation of emission reductions is found to be correct. The calculation of emission reductions in the MR Version 2.0 and ER calculation spreadsheet (/25/) is found to be correct. The details of the reported and the verified values for all parameters are listed in section 4, 'Calculation of Emission Reductions'.

3.9 Quality of Evidence to Determine Emission Reductions

Critical parameters used for the determination of the Emission Reductions are discussed in section 3.4 above. All the data recorded is in compliance with the Monitoring Report.

3.10 Management and operational System and Quality Assurance

In order to verify data quality, the Company involved in the project works in accordance with a quality assurance procedure as defined in the CDM monitoring manual (/26/), which establishes the operational and management structure implemented. A dedicated CDM team was established with detailed responsibilities allocated. QA/QC procedures have been established and followed. The monitoring staffs were training and the training records was provided to the verification team (/27/). The staffs were interviewed and found capable of their job.

3.11 Data from External Sources

Following parameters were applied data from external Source which have been discussed in section 3.4 and 3.5.of the report.

- a) $EF_{grid,BM,y}$: Build margin emission factor of ECPG
- b) $EF_{CO_2, f, y}$: the emission factor of natural gas;
- c) $OXID_i$: the oxidation factor of natural gas
- d) $EF_{NG,upstream,y}$: Emission factor for upstream fugitive methane emissions of natural gas

e) $EF_{BL,upstream,CH_4}$: Emission factor for upstream fugitive methane emissions

Global warming potential of methane GWP_{CH_4} of 21 t CO₂e/t CH₄ was used in the MR Version 2.0 is consistent with the PDD and IPCC default value.

4. Calculation of Emission Reductions

Parameters	Reported Value in MR version 1.0	Verified Value in MR version 2.0
EG _{PJ,y}	350,237.8 MWh	350,237.8 MWh
EF _{BL,CO2,y}	0.6622tCO ₂ e/MWh	0.6889tCO ₂ e/MWh*
FC _{f,y}	70,341,720 m ³	70,341,720 m ³
NCV _y	0.034135 GJ/m ³	0.034135 GJ/m ³
EF _{CO2,f,y}	0.0561 t CO ₂ /GJ	0.0561 t CO ₂ /GJ
OXID _f	100%	100%
EF _{NG,upstram,CH4}	0.000296 tCH ₄ /GJ	0.000296 tCH ₄ /GJ
EF _{BL,upstream,CH4}	0.004789 t CH ₄ /MWh	0.004876 t CH ₄ /MWh*
GWP _{CH4}	21 t CO ₂ e/t CH ₄	21 t CO ₂ e/t CH ₄

*please refer to section 3.5.1.2 and 3.5.1.8 of the report for the reason of the difference.

The baseline emission of this monitoring period is calculated following the formula in the PDD.

$$BE_y = EG_{PJ,y} \times EF_{BL,CO2,y} = 350,237.8 \text{ MWh} \times 0.6889 \text{ tCO}_2\text{e/MWh} = 241,278 \text{ tCO}_2\text{e}$$

The project emission of this monitoring period is calculated following the formula in the PDD.

$$PE_y = FC_{f,y} \times COEF_{f,y} = FC_{f,y} \times NCV_y \times EF_{CO2,f,y} \times OXID_f = 70,341,720 \text{ Nm}^3 \times 0.034135 \text{ GJ/Nm}^3 \times 0.0561 \text{ t CO}_2\text{/GJ} \times 100\% = 134,703 \text{ tCO}_2\text{e}$$

The leakage of this monitoring period is calculated following the formula in the PDD.

$$LE_y = LE_{CH4,y} + LE_{LNG,CO2,y}$$

As verified the project only utilized the natural gas in this monitoring period. Therefore, the leakage from the leakage emissions due to fossil fuel combustion/electricity consumption associated with the liquefaction, transportation, re-gasification and compression of LNG into a natural gas transmission or distribution system was zero in this monitoring period. Thus, $LE_{LNG,CO2,y} = 0 \text{ tCO}_2\text{e}$.

$$\begin{aligned} LE_{CH4,y} &= (FC_{f,y} \times NCV_y \times EF_{NG,upstram,CH4} - EG_{PJ,y} \times EF_{BL,upstream,CH4}) \times GWP_{CH4} \\ &= (70,341,720 \text{ Nm}^3 \times 0.034135 \text{ GJ/Nm}^3 \times 0.000296 \text{ tCH}_4\text{/GJ} - 350,237.8 \text{ MWh} \times 0.004876 \text{ t CH}_4\text{/MWh}) \times 21 = -20,937 \text{ tCO}_2\text{e} \end{aligned}$$

$$LE_y = LE_{CH4,y} + LE_{LNG,CO2,y} = -20,937 \text{ tCO}_2\text{e} + 0 = -20,937 \text{ tCO}_2\text{e}$$

Therefore, as per the methodology, $LE_y = 0 \text{ tCO}_2\text{e}$ as the total net leakage effects are negative ($LE_y < 0$).

The ER calculation in this monitoring period covering the period from 01/01/2011 to 31/03/2011 is consistent with the revised PDD.

$$ER_y = BE_y - PE_y - LE_y$$

$$= 241,278 \text{ tCO}_2\text{e} - 134,703 \text{ tCO}_2\text{e} - 0 \text{ tCO}_2\text{e}$$

$$= 106,575 \text{ tCO}_2\text{e}.$$

5. Recommendations for Changes in the Monitoring Plan

No recommendation for the changes in the monitoring plan is made in this (4th) monitoring period.

6. Overview of Results

Assessment Against the Provisions of Decision 17/CP.7:

Is the project documentation in accordance with the requirements of the revised PDD and relevant provision of decision 17/CP.7, EB decisions and guidance and the COP/MOP?

Yes. The results of the compliance assessment are recorded in the verification checklist which is used as an internal report only.

Have on-site inspections been performed that may comprise, inter alia, a review of performance records, interviews with project participants and local stakeholders, collection of measurements, observations of established practices and testing of the accuracy of monitoring equipment?

Yes. The assessment team visited the site and undertook interviews, collected data, audited the implementation of procedures, checked calibration certificates and checked data, inter alia.

The results of the site visit are recorded in the verification checklist which is used as an internal report only.

The evidences have been checked and collected. The final Monitoring Report is attached with this verification report.

Has data from additional sources been used? If yes, please detail the source and significance.

$EF_{grid,BM,y}$: Build margin emission factor of ECPG is ex-post calculated using the Tool to calculate emission factor for an electricity system based on the publicly available data. The significance is high but the uncertainty is low.

$EF_{CO_2,f,y}$: the emission factor of natural gas is using the conservative data between the Chinese DNA and data in the revised PDD. The significance is high but the uncertainty is low.

$OXID_i$: the oxidation factor of natural gas applies the IPCC default value. The significance is high but the uncertainty is low.

$EF_{NG,upstream,y}$: Emission factor for upstream fugitive methane emissions of natural gas from production, transportation, distribution, in t CH₄ per GJ fuel supplied to final consumers applies the IPCC default value. The significance is low and the uncertainty is low.

$EF_{BL,upstream,CH_4}$: the emission factor for upstream fugitive methane emissions occurring in the absence of the project activity in t CH₄ per MWh electricity generation in the project plant ($EF_{BL,upstream,CH_4}$) is ex-post calculated using the same process as that of the baseline emission factor based on the publicly available data. The significance is low and the uncertainty is low.

GWP_{CH_4} : Global warming potential of methane applies IPCC default value. The significance is low and the uncertainty is low.

Please review the monitoring results and verify that the monitoring methodologies for the estimation of reductions in anthropogenic emissions by sources have been applied correctly and their documentation is complete and transparent.

Yes. The monitoring methodology has been correctly applied and the Monitoring Report and supporting references are complete and transparent.

Have any recommendations for changes to the monitoring methodology for any future crediting period been issued to the project participant?

No.

Determine the reductions in anthropogenic emissions by sources of greenhouse gases that would not have occurred in the absence of the CDM project activity, based on the data and information using calculation procedures consistent with those contained in the registered project design document and the monitoring plan.

The data used in anthropogenic emission reduction calculation is consistent with those contained in the revised PDD and monitoring plan. The emission reduction was 257,506 tCO₂ for the period 01/01/2011 to 31/03/2011 as per the estimation made in the revised PDD. The actual emission reduction has been verified as 106,575 tCO₂ for the same period.

Identify and inform the project participants of any concerns related to the conformity of the actual project activity and its operation with the registered project design document. Project participants shall address the concerns and supply relevant additional information.

The connected substation of the project was change during this monitoring period. as validated above in section 3.1 of the report, the change has no impact on (a) The applicability and application of the applied methodology under which the project activity has been registered (AM0029, version 03); (b) The additionality of the project activity; and (c) The scale of the project activity. And has no impact on the CERs issued during previous verifications

Post Monitoring Report on UNFCCC website

Yes, the Monitoring Report is available at ref. 3008 on the UNFCCC website

<http://cdm.unfccc.int/Projects/DB/TUEV-RHEIN1254272878.14/view>

7. Verification and Certification Statement

SGS United Kingdom Ltd has been contracted by Gaisi Peony Carbon Capital S.a.r.l. to perform the verification of the emission reductions reported for the CDM project Nanjing Jinling Grid Connected Natural Gas Combined Cycle Power Plant Project (UNFCCC Reference 3008) in the period from 01/01/2011 to 31/03/2011.

The verification is based on the validated and registered project design document and the Monitoring Report for this project. Verification is performed in accordance with section I of Decision 3/CMP.1, and relevant decisions of the CDM EB and CoP/MoP. The scope of this engagement covers the verification and certification of greenhouse gas emission reductions generated by the above project during the above mentioned period, as reported in Monitoring Report version 2.0 dated 26/11/2012.

The management of Gaisi Peony Carbon Capital S.a.r.l. is responsible for the preparation, calculation and determination of GHG emission reductions from the project. The development and maintenance of records and reporting procedures are in accordance with the Monitoring Report.

It is our responsibility to express an independent GHG verification opinion on the GHG emissions and on the calculation of GHG emission reductions from the project for the period 01/01/2011 to 31/03/2011 based on the reported emission reductions in the Monitoring Report version 2.0 dated 26/11/2012 for the same period.

Based on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these, SGS planned and performed our work to obtain the information and explanations that we considered necessary to provide sufficient evidence for us to give reasonable assurance that this reported amount of GHG emission reductions for the period is fairly stated.

SGS confirms that the project is implemented as described in the validated and registered project design documents. Based on the information we have seen and evaluated, we confirm the following:

Project Title:	Nanjing Jinling Grid Connected Natural Gas Combined Cycle Power Plant Project
UNFCCC Reference Number:	3008
Registered PDD and revised PDD accepted for Verification:	Registered PDD version 06.4 dated 21/04/2010 Revised PDD version 06.5 dated 26/11/2012
Methodology Used for Verification:	AM0029, version 03 dated 16/05/2008
Applicable Period:	From 01/01/2011 to 31/03/2011
Total GHG Emission Reductions Verified:	106,575tCO ₂ e

Signed on behalf of the Verification Body by Authorized Signatory

Signature:



Name: Siddharth Yadav

Date: 24/01/2013

8. Document References

- /1/ Project information on UNFCCC website
<http://cdm.unfccc.int/Projects/DB/TUEV-RHEIN1254272878.14/view>
- /2/ PDD Version 06.4 dated 21/04/2010 and revised PDD version 06.5 dated 26/11/2012
- /3/ Monitoring Report for “Nanjing Jinling Grid Connected Natural Gas Combined Cycle Power Plant Project” version 1.0 dated 25/10/2011 and version 2.0 dated 26/11/2012.

History of the MR

Version	Date	Remarks
1.0	25/10/2011	MR for GSP
2.0	26/11/2012	Revised according to DOE's comments in section B.1 and the latest build margin baseline emission factor in section E.1 and annex 1 The change and corresponding impact were included in the revised MR section B.2.4.

- /4/ Photos of the nameplates of the main equipments
- /5/ Grid connection agreement and power purchase agreement signed with the grid company.
- /6/ Verification reports for “Nanjing Jinling Grid Connected Natural Gas Combined Cycle Power Plant Project”

Monitoring period	Version	Dated
05/08/2010 to 31/08/2010	0	06/01/2011
01/09/2010 to 30/11/2010	0	16/02/2011
01/12/2012 to 31/12/2010	1	07/11/2012

- /7/ Validation report version 06.1 dated 22/04/2010
- /8/ AM0029 Version 03 dated 16/05/2008
- /9/ The line diagram of the project
- /10/ The daily report of electricity sold to and imported from the grid for this monitoring period
- /11/ The monthly report of electricity sold to and imported from the grid for this monitoring period
- /12/ The ETN and invoice of electricity sold to and imported from the grid for this monitoring period.
- /13/ The daily report of natural gas from the project owner for this monitoring period.
- /14/ The daily report of natural gas from the gas supplier for this monitoring period.
- /15/ NG test report from the gas supplier for this monitoring period.
- /16/ JJG 1055-1997 Calibration of AC Watt-hour Meters at Place of Installation
- /17/ JJG882-2004 Verification Regulation of the Pressure Transmitter,
- /18/ JJG1030-2007 Verification Regulation of Ultrasonic Flow Meter,
- /19/ Calibration certificates of electric meters issued by Jiangsu Electric Power Research Institute Corporation Limited dated 27/10/2010 and 29/01/2011.
- /20/ Accreditation certificate for Jiangsu Electric Power Research Institute Corporation Limited issued by China National Accreditation Service for Conformity Assessment dated 28/12/2006, valid to 27/12/2011.
- /21/ Calibration certificates of the two flow meters used by the project at the project side.
Certificate No.: JL-YL-2010-0980 and JL-YL-2010-0981
- /22/ Accreditation certificate of the calibrator

- Certificate No.: 2007 Metro No.: 3200301 valid from 02/11/2007 to 01/11/2012
- /23/ Calibration certificates of the two flow meters used by the gas station
Certificate No.: GM2010038 and GM2010269
- /24/ Accreditation certificate of the calibrator.
Certificate No.: (State) Metro (2008) 00060 valid from 01/04/2008 to 31/03/2013
- /25/ ER calculation spreadsheet version 1.0 dated 25/10/2011 and version 2.0 dated 16/11/2012
- /26/ CDM monitoring manual of the project
- /27/ Training record of the project
- /28/ "Tool to calculate emission factor for an electricity system" version 01.1 dated 29/07/2008
- /29/ China Energy Statistical Yearbook 2008- 2011
- /30/ China Electric Power Yearbook 2008- 2011
- /31/ 2012 Baseline Emission Factors for Regional Power Grids in China, published by China DNA, on
15/10/2012
(<http://cdm.ccchina.gov.cn/WebSite/CDM/UpFile/File2975.pdf>)
- /32/ 2006 IPCC for National Green House Gas Inventories
- /33/ Development Mechanism Validation and Verification Standard version 03.0, dated 23/11/2012)
- /34/ Jiangsu Power Dispatching Communication Centre Document (No.Diandiao[2010]294)
- /35/ Jiangsu Power Dispatching Control Centre Document dated 27/04/2011
- /36/ Clean development mechanism project standard version 02.1 date 03/12/2012

9. Findings Overview

	CARs	CLs	FARs
Total Number raised	2	1	0

Date:	27/12/2011	Raised by:	Karen Tong		
Type:	CL	Number:	CL #1	Reference:	Section 3.3
Lead Assessor Comment:			Date: 27/12/2011		
According to the section A.4 and the foot note 1 of the MR version 1.0, the project supplies electricity via two 220kv transmission lines to the 500kv Longwangshan substation linking to the Jiangsu Grid. As verified during site visit, the connected substation of the project was changed. Please clarify.					
Project Participant Response:			Date: 26/11/2012		
From 27/01/2011 onwards, the Project supplied electricity via two 220kv transmission lines to the 220kv Xidu Substation, instead of the 500kv Longwangshan Substation previously, according to arrangement of the Jiangsu Grid Company. The 220kv Xidu Substation is also linked to the Jiangsu Grid, a sub-grid of the ECPG.					
As the 220kv Xidu Substation is still within ECPG, and there is no change in the project boundary which would affect the baseline emission factor, there is no impact on the estimated emission reductions which may adversely impact additionality. The project capacity and applied technology are the same as the registered PDD.					
As per CLEAN DEVELOPMENT MECHANISM PROJECT STANDARD, the aforementioned substation change is the Changes to the project design of a registered CDM project activity that do not raise any concerns with regard to i) additionality, ii) the scale of the CDM project activity and/or iii) the applicability and application of AM0029 (version 3), and therefore do not require prior approval by the Board.					
The name of the substation has been corrected in the revised PDD (version 06.5 dated 26/11/2012) and revised Monitoring Report (version 2).					
Documentation Provided as Evidence by Project Participant:					
1. "Jiangsu Power Dispatching Communication Centre Document" (No.Diandiao[2010]294);					
2. "Jiangsu Power Dispatching Control Centre Document" dated 27/04/2011;					
3. 3008_Revised PDD_Version06.5_20121126_clean.pdf;					
4. Revised PDD_Version06.5_track change_20121126.pdf;					
5. Revised MR, version 2.0, dated 2611/2012.					
Information Verified by Lead Assessor:					

As interviewed with the project owner, the change was according to the arrangement of the Jiangsu Grid Company. This was confirmed by reviewing provided Jiangsu Power Dispatching Communication Centre Document (No.Diandiao[2010]294), dated 21/12/2010. Further, certification was issued by Jiangsu Power Dispatching Communication Centre on 27/04/2011 (Jiangsu Power Dispatching Control Centre Document), in which it was stated that the change was from 27/01/2011 onwards. Post Changes to project design of registered project activity was proposed by the client during this monitoring period. It was validated that the aforementioned substation change is according to the arrangement of the Jiangsu Grid Company and has no impact on the (a) The applicability and application of the applied methodology under which the project activity has been registered (AM0029, version 03); (b) The additionality of the project activity; and (c) The scale of the project activity.

Validation opinion to (a):

The project is applied AM0029 version 03, the applicability criteria is as follows:

- The project activity is the construction and operation of a new natural gas fired grid-connected electricity generation plant;

Validation opinion: The project is construction and operation of a new natural gas fired grid-connected electricity generation plant, the change to the connected substation has no impact on this criteria.

- The geographical/physical boundaries of the baseline grid can be clearly identified and information pertaining to the grid and estimating baseline emissions is publicly available;

Validation opinion: The connected substation, 220kv Xidu Substation, is also linked to the Jiangsu Grid, a sub-grid of the ECPG. The geographical/physical boundary of the baseline grid of the project can be clearly identified to be ECPG. Beside, information pertaining to ECPG and estimating baseline emissions is publicly available for calculation the baseline emission factor. Thus, the change to the connected substation has no impact on this criteria.

- Natural gas is sufficiently available in the region or country, e.g. future natural gas based power capacity additions, comparable in size to the project activity, are not constrained by the use of natural gas in the project activity.

Validation opinion: With 20 year fuel supply agreement with gas supplier, it was also confirmed that Natural gas is sufficient for the project. The clarification in the registered PDD on the Natural gas is sufficiently available to the project was not impacted by the change to the connected substation.

In conclusion, the change to the connected substation has no impact on the applicability and application of the applied methodology under which the project activity has been registered (AM0029, version 03)

Validation opinion to (b):

The additionality of the project activity was demonstrated applying "Tool for the demonstration and assessment of additionality" (Version 05.2) and Benchmark Investment Analysis was selected to demonstrate that without additional revenue from the sale of CERs the Project is less economically or financially attractive than other alternatives. As interviewed, the project owner didn't make any investment to the connected substation change to 220kv Xidu. Thus, the change to the connected substation has no impact on additionality of the project activity.

Validation opinion to (c):

As verified during onsite visit, the total installed capacity of the project is 780MW with installation of two sets of 390MW gas-steam combined cycle generation system, which is in compliance with the registered PDD. The change to the connected substation has no impact on the scale of the project activity.

Thus, the actual changes to the project design of a registered CDM project activity do not require prior approval by the Board, as per Clean development mechanism project standard version 02.1 dated 03/12/2012. The name of the substation has been corrected in the revised PDD (version 06.5 dated 26/11/2012) and revised Monitoring Report (version 2.0, dated 26/11/2012). Based on the assessment work carried above, **CL #1 was closed out.**

Reasoning for not Acceptance or Acceptance and Close Out:

As per Clean development mechanism project standard version 02.1 dated 03/12/2012, Appendix 1. Changes that do not require prior approval by the board, para 6. *Describe in this section on whether there are Changes to project design of registered project activity*, this change to the project design of a registered CDM project activity is accepted by the assessment team and do not require prior approval by the Board. The only change is to the connected substation and it was confirmed that the change has no impact on CERs issued during previous verifications. **CL #1 was closed out.**

Acceptance and Close out by Lead Assessor: Karen Tong

Date: 20/12/2012

Date:	10/01/2013	Raised by:	Karen Tong		
Type:	CAR	Number:	CAR #2	Reference:	Section 1.2
Lead Assessor Comment:				Date: 10/01/2013	
In the revised PDD and MR, the header has the logos missing. As required, the formats shall not be altered. Please take correction of this.					
Project Participant Response:				Date: 10/01/2013	
The format of the revised PDD and MR has been corrected as required. Given that this minor error occurred when converting documents from WORD to PDF format, the version number and completion date of the revised PDD and MR keep unchanged.					
Documentation Provided as Evidence by Project Participant:					
<i>The updated revised PDD and MR</i>					
Information Verified by Lead Assessor:					
By reviewing the updated revised PDD and MR version 2.0 provided in response to this finding, it was confirmed that the templates of PDD and MR are followed.					
Reasoning for not Acceptance or Acceptance and Close Out:					
The templates of PDD and MR are followed and CAR #2 was closed out.					
Acceptance and Close out by Lead Assessor: Karen Tong				Date: 14/01/2013	

Date:	21/01/2013	Raised by:	Karen Tong		
Type:	CAR	Number:	CAR #3	Reference:	Section 11.1
Lead Assessor Comment:			Date: 21/01/2013		
In the revised PDD, page 7 footnote 1, it was found that the link does not work. Please take correction.					
Project Participant Response:			Date: 21/01/2013		
The link has been corrected in the revised PDD. Given that this is a minor error, the version number and completion date of the revised PDD keep unchanged.					
Documentation Provided as Evidence by Project Participant:					
The updated revised PDD.					
Information Verified by Lead Assessor:					
The updated revised PDD.					
Reasoning for not Acceptance or Acceptance and Close Out:					
The link was corrected in the updated revised PDD.					
Acceptance and Close out by Lead Assessor: Karen Tong			Date: 21/01/2013		

10. Statement of Competence

Statement of Competence

Name: Karen
Tong

Status

- Lead Assessor	☒	- Expert	☒
- Assessor	☒	- Financial Expert	☐
- Local Assessor	China	- Technical Reviewer	☐

Scopes of Expertise

1. Energy Industries (renewable / non-renewable)

☒

Technical Area(s): TA 1.2 Energy generation from renewable energy sources

2. Energy Distribution

Technical Area(s):

3. Energy Demand

Technical Area(s):

4. Manufacturing

Technical Area(s):

5. Chemical Industry

Technical Area(s):

6. Construction

Technical Area(s):

7. Transport

Technical Area(s):

8. Mining/Mineral Production

Technical Area(s):

9. Metal Production

Technical Area(s):

10. Fugitive Emissions from Fuels (solid, oil and gas)

Technical Area(s):

11. Fugitive Emissions from Production and

☒

Consumption of Halocarbons and Sulphur Hexafluoride

Technical Area(s): TA 11.2 GHG capture and destruction

12. Solvent Use

Technical Area(s):

13. Waste Handling and Disposal

Technical Area(s):

14. Afforestation and Reforestation

Technical Area(s):

15. Agriculture

Technical Area(s):

Approved Member of Staff by:

Siddharth
Yadav

Date:

06/02/2012

Statement of Competence

Name: Shute
Li

Status

- Lead Assessor	x	- Expert	x
- Assessor	x	- Financial Expert	
- Local Assessor	China	- Technical Reviewer	x

Scopes of Expertise

1. Energy Industries (renewable / non-renewable)	x
Technical Area(s): TA 1.2 Energy generation from renewable energy sources	
2. Energy Distribution	
Technical Area(s):	
3. Energy Demand	
Technical Area(s):	
4. Manufacturing	
Technical Area(s):	
5. Chemical Industry	
Technical Area(s):	
6. Construction	
Technical Area(s):	
7. Transport	
Technical Area(s):	
8. Mining/Mineral Production	
Technical Area(s):	
9. Metal Production	
Technical Area(s):	
10. Fugitive Emissions from Fuels (solid, oil and gas)	
Technical Area(s):	
11. Fugitive Emissions from Production and Consumption of Halocarbons and Sulphur Hexafluoride	x
Technical Area(s): TA 11.2 GHG capture and destruction	
12. Solvent Use	
Technical Area(s):	
13. Waste Handling and Disposal	x
Technical Area(s): TA 13.1: Waste handling and disposal	
14. Afforestation and Reforestation	
Technical Area(s):	
15. Agriculture	
Technical Area(s):	

Approved Member of Staff by: Siddharth Yadav Date: 01/08/2012

Statement of Competence

Name: Yi Liao

Status

- Lead Assessor	x	- Expert	x
- Assessor	x	- Financial Expert	
- Local Assessor	China	- Technical Reviewer	

Scopes of Expertise

1. Energy Industries (renewable / non-renewable)	x
Technical Area(s): TA 1.1 Thermal energy generation from fossil fuels and biomass including thermal electricity from solar	
TA 1.2 Energy generation from renewable energy sources	
2. Energy Distribution	
Technical Area(s):	
3. Energy Demand	
Technical Area(s):	
4. Manufacturing	
Technical Area(s):	
5. Chemical Industry	
Technical Area(s):	
6. Construction	
Technical Area(s):	
7. Transport	
Technical Area(s):	
8. Mining/Mineral Production	
Technical Area(s):	
9. Metal Production	
Technical Area(s):	
10. Fugitive Emissions from Fuels (solid, oil and gas)	
Technical Area(s):	
11. Fugitive Emissions from Production and Consumption of Halocarbons and Sulphur Hexafluoride	
Technical Area(s):	
12. Solvent Use	
Technical Area(s):	
13. Waste Handling and Disposal	x
Technical Area(s): TA 13.1: Waste handling and disposal	
14. Afforestation and Reforestation	
Technical Area(s):	
15. Agriculture	
Technical Area(s):	

Approved Member of Staff by: Siddharth Yadav Date: 15/02/2012

Statement of Competence

Name: **Joe Sun**

Status

- Lead Assessor	☐	- Expert	☐
- Assessor	☐	- Financial Expert	☐
- Local Assessor	☐	- Technical Reviewer	☒

Scopes of Expertise

1. Energy Industries (renewable / non-renewable)	☐
Technical Area(s):	
2. Energy Distribution	☐
Technical Area(s):	
3. Energy Demand	☐
Technical Area(s):	
4. Manufacturing	☐
Technical Area(s):	
5. Chemical Industry	☐
Technical Area(s):	
6. Construction	☐
Technical Area(s):	
7. Transport	☐
Technical Area(s):	
8. Mining/Mineral Production	☐
Technical Area(s):	
9. Metal Production	☐
Technical Area(s):	
10. Fugitive Emissions from Fuels (solid, oil and gas)	☐
Technical Area(s):	
11. Fugitive Emissions from Production and Consumption of Halocarbons and Sulphur Hexafluoride	☐
Technical Area(s):	
12. Solvent Use	☐
Technical Area(s):	
13. Waste Handling and Disposal	☐
Technical Area(s):	
14. Afforestation and Reforestation	☐
Technical Area(s):	
15. Agriculture	☐
Technical Area(s):	

Approved Member of Staff by: **Siddharth Yadav** Date: **11/09/2012**

Statement of Competence

Name: **Jumson Fu**

Status

- Lead Assessor	☐	- Expert	☒
- Assessor	☐	- Financial Expert	☐
- Local Assessor	☐	- Technical Reviewer	☐

Scopes of Expertise

1. Energy Industries (renewable / non-renewable)	☒
Technical Area(s): TA 1.1 Thermal energy generation from fossil fuels and biomass including thermal electricity from solar	
2. Energy Distribution	☐
Technical Area(s):	
3. Energy Demand	☐
Technical Area(s):	
4. Manufacturing	☐
Technical Area(s):	
5. Chemical Industry	☐
Technical Area(s):	
6. Construction	☐
Technical Area(s):	
7. Transport	☐
Technical Area(s):	
8. Mining/Mineral Production	☐
Technical Area(s):	
9. Metal Production	☐
Technical Area(s):	
10. Fugitive Emissions from Fuels (solid, oil and gas)	☐
Technical Area(s):	
11. Fugitive Emissions from Production and Consumption of Halocarbons and Sulphur Hexafluoride	☐
Technical Area(s):	
12. Solvent Use	☐
Technical Area(s):	
13. Waste Handling and Disposal	☐
Technical Area(s):	
14. Afforestation and Reforestation	☐
Technical Area(s):	
15. Agriculture	☐
Technical Area(s):	

Approved Member of Staff by: **Siddharth Yadav** Date: **15/02/2012**

11. Photographic Evidence

Unique reference number: 96347828

Parameter: EG_{PJ,y}

Name of equipment: Electricity Meter

Date: 15/12/2011



Unique reference number: 96348248

Parameter: EG_{PJ,y}

Name of equipment: Electricity Meter

Date: 15/12/2011

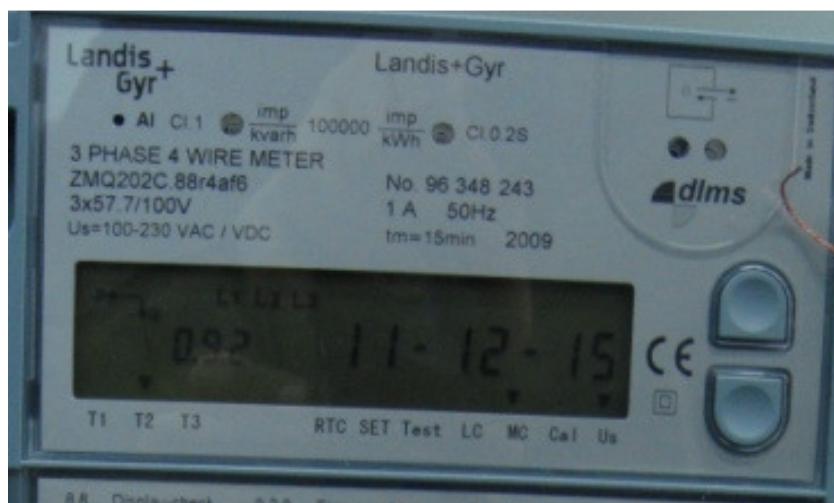


Unique reference number: 96348243

Parameter: EG_{PJ,y}

Name of equipment: Electricity Meter

Date: 15/12/2011



Unique reference number: 96348247

Parameter: EG_{PJ,y}

Name of equipment: Electricity Meter

Date: 15/12/2011



Unique reference number: 96348211

Parameter: EG_{PJ,y}

Name of equipment: Electricity Meter

Date: 15/12/2011



Unique reference number: 96347836

Parameter: EG_{PJ,y}

Name of equipment: Electricity Meter

Date: 15/12/2011



Unique reference number: 0139940

Parameter: FC_{f,y}

Name of equipment: Flow meter in the project site

Date: 15/12/2011

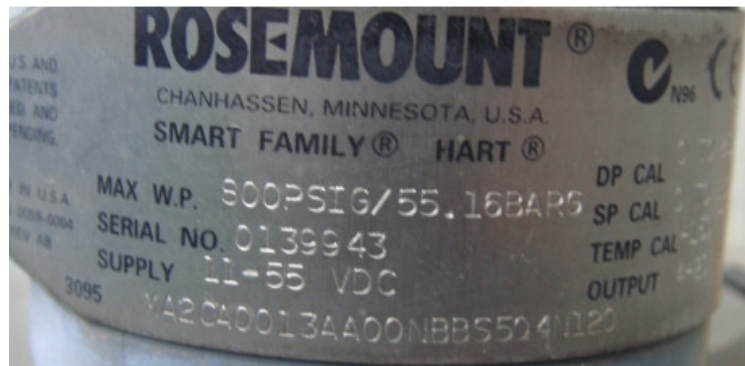


Unique reference number: 0139943

Parameter: $FC_{f,y}$

Name of equipment: Flow meter in the project site

Date: 15/12/2011



Unique reference number: 03-110136

Parameter: $FC_{f,y}$

Name of equipment: Flow meter in the gas station

Date: 17/01/2011*



Unique reference number: 03-110137

Parameter: $FC_{f,y}$

Name of equipment: Flow meter in the gas station

Date: 17/01/2011*



*The flow meters installed in the gas station are owned and operated by the gas supplier and photograph was not allowed during site visit. After checking the nameplates of the flow meters, it was confirmed that the meters same as previous. The pictures taken during the second period verification were attached here.

History

Version	EB Requirement	Nature of revision	Validity
Issue 6	VVs Version 02.0	Update to checklist to include VVS procedures	25 th May 2012
Issue 5.4	VVM Version 01.2	Update to checklist	24 th February 2011