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Validation Report

Climate Change Capital Ltd.

VALIDATION OF THE CDM-PROJECT:
TANGSHAN XINFENG THERMAL & POWER CO., LTD.
WASTE GAS POWER GENERATION PROJECT

REPORT NO. 1057996

2008, February 17

TÜV SÜD Industrie Service GmbH
Carbon Management Service
Westendstr. 199 - 80686 Munich – GERMANY

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Subject: Validation of a CDM Project			
Accredited TÜV SÜD Unit: TÜV SÜD Industrie Service GmbH Certification Body "climate and energy" Westendstr. 199 - 80686 Munich FEDERAL REPUBLIC OF GERMANY		TÜV SÜD Contract Partner: TÜV SÜD Industrie Service GmbH Carbon Management Service Westendstr. 199 - 80686 Munich FEDERAL REPUBLIC OF GERMANY	
Client: Climate Change Capital Carbon Managed Account Ltd. 3 More London Riverside LONDON SE1 2AQ		Project Site(s): Tangshan City, Hebei Province, P.R. China	
Project Title: Tangshan Xinfeng Thermal & Power Co., Ltd. Waste Gas Power Generation Project			
Applied Methodology / Version:		Scope(s):	
ACM0004 / Version 02 ACM0002 / Version 06		1	
First PDD Version: Date of issuance: 2007-06-19 Version No.: 01 Starting Date of GSP 2007-06-20		Final PDD version: Date of issuance: 2008-02-14 Version No.: 03	
Estimated Annual Emission Reduction:		344,777 tons CO _{2e}	
Assessment Team Leader: Dr. Sven Kolmetz		Further Assessment Team Members: Wan Feng Xiaoyan Liu Paula Auer	
Summary of the Validation Opinion:			
<input checked="" type="checkbox"/> The review of the project design documentation and the subsequent follow-up interviews have provided TÜV SÜD with sufficient evidence to determine the fulfilment of all stated criteria. In our opinion, the project meets all relevant UNFCCC requirements for the CDM. Hence TÜV SÜD will recommend the project for registration by the CDM Executive Board in case letters of approval of all Parties involved will be available before the expiring date of the applied methodology(ies) or the applied methodology version respectively.			
<input type="checkbox"/> The review of the project design documentation and the subsequent follow-up interviews have not provided TÜV SÜD with sufficient evidence to determine the fulfilment of all stated criteria. Hence TÜV SÜD will not recommend the project for registration by the CDM Executive Board and will inform the project participants and the CDM Executive Board on this decision.			

Abbreviations

ACM	Approved Consolidated Methodology
AM	Approved Methodology
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CR	Clarification Request
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	Executive Board
EIA / EA	Environmental Impact Assessment / Environmental Assessment
ER	Emission reduction
GHG	Greenhouse gas(es)
KP	Kyoto Protocol
MP	Monitoring Plan
NDRC	National Development and Reform Commission
NGO	Non Governmental Organisation
PDD	Project Design Document
PP	Project Participant
TÜV SÜD	TÜV SÜD Industrie Service GmbH
UNFCCC	United Nations Framework Convention on Climate Change
VVM	Validation and Verification Manual
WHR	Waste Heat Recovery

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1 INTRODUCTION

1.1 Objective

The validation objective is an independent assessment by a Third Party (Designated Operational Entity = DOE) of a proposed project activity against all defined criteria set for the registration under the Clean Development Mechanism (CDM). Validation is part of the CDM project cycle and will finally result in a conclusion by the executing DOE whether a project activity is valid and should be submitted for registration to the CDM-EB. The ultimate decision on the registration of a proposed project activity rests at the CDM Executive Board and the Parties involved.

The project activity discussed by this validation report has been submitted under the project title:

Tangshan Xinfeng Thermal & Power Co., Ltd. Waste Gas Power Generation Project

1.2 Scope

The scope of any assessment is defined by the underlying legislation, regulation and guidance given by relevant entities or authorities. In the case of CDM project activities the scope is set by:

- Ø The Kyoto Protocol, in particular § 12
- Ø Decision 2/CMP1 and Decision 3/CMP.1 (Marrakech Accords)
- Ø Further COP/MOP decisions with reference to the CDM (e.g. decisions 4 – 8/CMP.1)
- Ø Decisions by the EB published under <http://cdm.unfccc.int>
- Ø Specific guidance by the EB published under <http://cdm.unfccc.int>
- Ø Guidelines for Completing the Project Design Document (CDM-PDD), and the Proposed New Baseline and Monitoring Methodology (CDM-NM)
- Ø The applied approved methodology
- Ø The technical environment of the project (technical scope)
- Ø Internal and national standards on monitoring and QA/QC
- Ø Technical guideline and information on best practice

The validation 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.

Once TÜV SÜD receives a first PDD version, it is made publicly available on the internet at TÜV SÜD's webpage as well as on the UNFCCC CDM-webpages for starting a 30 day global stakeholder consultation process (GSP). In case of any request a PDD might be revised (under certain conditions the GSP will be repeated) and the final PDD will form the basis for the final evaluation as presented by this report. Information on the first and on the final PDD version is presented at page 1.

The only purpose of a validation is its use during the registration process as part of the CDM project cycle. Hence, TÜV SÜD can not be held liable by any party for decisions made or not made based on the validation opinion, which will go beyond that purpose.

2 METHODOLOGY

The project assessment aims at being a risk based approach and is based on the methodology developed in the Validation and Verification Manual, an initiative of Designated and Applicant Entities, which aims to harmonize the approach and quality of all such assessments.

In order to ensure transparency, a validation protocol was customised for the project. TÜV SÜD developed a “cook-book” for methodology-specific checklists and protocol based on the templates presented by the Validation and Verification Manual. The protocol shows, in a transparent manner, criteria (requirements), the discussion of each criterion by the assessment team and the results from validating the identified criteria. The validation protocol serves the following purposes:

- It organises, details and clarifies the requirements a CDM project is expected to meet;
- It ensures a transparent validation process where the validator will document how a particular requirement has been validated and the result of the validation.

The validation protocol consists of three tables. The different columns in these tables are described in the figure below.

The completed validation protocol is enclosed in Annex 1 to this report.

Validation Protocol Table 1: Conformity of Project activity and PDD				
Checklist Topic / Question	Reference	Comments	PDD in GSP	Final PDD
The checklist is organised in sections following the arrangement of the applied PDD version. Each section is then further sub-divided. The lowest level constitutes a checklist question / criterion.	Gives reference to documents where the answer to the checklist question or item is found in case the comment refers to documents other than the PDD.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached. In some cases sub-checklist are applied indicating yes/no decisions on the compliance with the stated criterion. Any Request has to be substantiated within this column	Conclusions are presented based on the assessment of the first PDD version. This is either acceptable based on evidence provided (p), or a Corrective Action Request (CAR) due to non-compliance with the checklist question (See below). Clarification Request (CR) is used when the validation team has identified a need for further clarification.	Conclusions are presented in the same manner based on the assessment of the final PDD version.

Validation Protocol Table 2: Resolution of Corrective Action and Clarification Requests			
Clarifications and corrective action requests	Ref. to table 1	Summary of project owner response	Validation team conclusion
If the conclusions from table 1 are either a Corrective Action Request or a Clarification Request, these should be listed in this section.	Reference to the checklist question number in Table 1 where the Corrective Action Request or Clarification Request is explained.	The responses given by the client or other project participants during the communications with the validation team should be summarised in this section.	This section should summarise the validation team's responses and final conclusions. The conclusions should also be included in Table 1, under "Final PDD".

In case of a denial of the project activity more detailed information on this decision will be presented in table 3.

Validation Protocol Table 3: Unresolved Corrective Action and Clarification Requests		
Clarifications and corrective action requests	Id. of CAR/CR 1	Explanation of the Conclusion for Denial
If the final conclusions from table 2 results in a denial the referenced request should be listed in this section.	Identifier of the Request.	This section should present a detail explanation, why the project is finally considered not to be in compliance with a criterion.

2.1 Appointment of the Assessment Team

According to the technical scopes and experiences in the sectoral or national business environment TÜV SÜD has composed a project team in accordance with the appointment rules of the TÜV SÜD certification body “climate and energy”. The composition of an assessment team has to be approved by the Certification Body ensuring that the required skills are covered by the team. The Certification Body TÜV SÜD operates four qualification levels for team members that are assigned by formal appointment rules:

- Ø Assessment Team Leader (ATL)
- Ø Greenhouse Gas Auditor (GHG-A)
- Ø Greenhouse Gas Auditor Trainee (T)
- Ø Experts (E)

It is required that the sectoral scope linked to the methodology has to be covered by the assessment team.

The validation team was consisting of the following experts (the responsible Assessment Team Leader is written in bold letters):

Name	Qualification	Coverage of technical scope	Coverage of sectoral expertise	Host country experience
Dr. Sven Kolmetz	ATL	p	p	
Feng Wan	GHG-A	p	p	p
Xiaoyan Liu	T		p	p
Paula Auer	T		p	

Dr. Sven Kolmetz is physicist and deputy head at the department “TÜV Carbon Management Service” located in the head office of TÜV Süddeutschland in Munich. Furthermore he is officially authorized expert in the verification of GHG emissions in the framework of the European Emission Trading Scheme. Before entering TÜV SÜD he worked as energy consultant for industrial companies and as consultant for the German Federal Government on instruments for the reduction of GHG emissions.

Mr. Wan Feng is an auditor for environmental management systems (according to ISO 14001) at Jiangsu TUV Product Service Ltd. She is based in Shanghai. In her position she is responsible for the implementation of validation, verification and certifications audits for management systems. She has received training in the CDM validation process and participated already in several CDM project assessments.

Ms. Xiaoyan Liu is a Lead auditor for environmental management systems (according to ISO 14001) at Jiangsu TUV Product Service Ltd. She is based in Beijing. In her position she is responsible for the implementation of validation, verification and certifications audits for

management systems. She has received training in the CDM validation process and participated already in several CDM project assessments as an auditor.

Ms. Paula Auer is an environmental engineer and auditor trainee for environmental management systems at the department "TÜV Carbon Management Service" located in the head office of TÜV Süddeutschland in Munich. She has received training in the CDM validation process and participated already in several CDM project assessments.

2.2 Review of Documents

The first PDD version submitted by the client and additional background documents related to the project design and baseline were reviewed as initial step of the validation process. A complete list of all documents and proofs reviewed is attached as annex 2 to this report.

2.3 Follow-up Interviews

On July 12th 2007 TÜV SÜD performed interviews on-site with project stakeholders to confirm selected information and to resolve issues identified in the first document review. The table below provides a list of all persons interviewed in the context of this on-site visit.

Name	Organisation
Mr. Wang Chunhe	Engineer of Tangshan Xinfeng Thermal & Power Co., Ltd
Mr. Sun Xun	General Manager of Beijing Yutong Co., Ltd (Consultant)

2.4 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the validation is to resolve the requests for corrective actions and clarifications and any other outstanding issues which needed to be clarified for TÜV SÜD's positive conclusion on the project design. The Corrective Action Requests and Clarification Requests raised by TÜV SÜD were resolved during communication between the client and TÜV SÜD. To guarantee the transparency of the validation process, the concerns raised and responses that have been given are summarised in chapter 3 below and documented in more detail in the validation protocol in annex 1.

2.5 Internal Quality Control

As final step of a validation the validation report and the protocol have to undergo an internal quality control procedure by the Certification Body "climate and energy", i.e. each report has to be approved either by the head of the certification body or his deputy. In case one of these two persons is part of the assessment team approval can only be given by the other one.

It rests at the decision of TÜV SÜD's Certification Body whether a project will be submitted for requesting registration by the EB or not.

3 SUMMARY OF FINDINGS

As informed above all findings are summarized in table 2 of the attached validation protocol.

History of the validation process

The audit team has been provided with a PDD in July 2007. Based on this documentation a document review and a fact finding mission in form of an on-site audit has taken place. Afterwards the client decided to revise the PDD according to the CARs and CRs indicated in the audit process. The final PDD version submitted in February 2008 serves as the basis for the assessment presented herewith. Changes are not considered to be significant with respect to the qualification of the project as a CDM project based on the two main objectives of the CDM to achieve a reduction of anthropogenic GHG emissions by sources and to contribute to sustainable development.

Project description

The following description of the project as per PDD could be verified during the on-site audit:

Tangshan Xinfeng Thermal & Power Co., Ltd. Waste Gas Power Generation Project utilizes waste gas (blast furnace gas) generated by Tangshan Guofeng Iron & Steel Co., Ltd. and Tangshan Bainite Iron and Steel Group Co., Ltd. to generate electricity.

The proposed project's installed capacity is 50MW, with 7,200 operation hours per year. It is estimated that the project will generate 360GWh of electricity annually of which 334.8GWh will be supplied to Guofeng transformation station. The electricity generated by the proposed project will be utilized by Guofeng Iron & Steel. It replaces imports from the North China Power Grid. The annual emission reductions are estimated to be 344,777 tCO₂e.

Findings

In total the assessment team expressed 3 Clarification Requests and 10 Corrective Action Requests.

The required additional information and data regarding training plans, sensitivity and common practice analysis, was submitted to the DOE and where required included into the PDD [CAR3, CAR6, CR1]. Additional information has been provided in the monitoring plan [CAR7, CAR8, CAR9] and the project description [CR3].

Additional documents regarding training courses [CAR3] as.

The formal information about

- the time schedule of the project activity [CAR4],
- the geographical coordinates [CAR2],
- the crediting period [CAR5, CAR10]

have been included in the PDD.

Inconsistencies between the PDD and the situation on-site have been revised and added to the PDD [CAR1, CAR9].

The barrier analysis was skipped, which is appropriate under the tool for demonstration and assessment of additionality [CR2].

After all the open questions have been closed, the PDD is considered to be in compliance with the CDM requirements.

Baseline calculation

Following ACM0002, the OM is calculated as the generation weighted average emissions per electricity unit (tCO₂/MWh) of all generating sources serving the system, excluding low-operating cost and must run power plants using a 3-year generation weighted average, based on the data of the most recently published China Energy Statistics Yearbooks at the time of PDD submission.

The calculation of the Build Margin for this project makes use of aggregated data to identify the 20% most recent capacity additions (sample group m). This is identified by direct comparison of the total installed capacity on the North China Power Network in the most recent year where data is available, in this case 2002-2006, and with historical data from preceding years until the 20% threshold is achieved.

Following guidance issued by the CDM Executive Board in response to a request for guidance from an accredited DOE on the determination of the Build Margin in methodology AM0005 (the predecessor of ACM0002) in China, the BM factor is calculated as the capacity weighted average emissions factor of new installed capacity instead of the generation weighted factor. Furthermore, it is suggested in the same guidance note that the efficiency level of the best technology commercially available in the provincial/regional or national grid of China is used as a conservative proxy for each fuel type in estimating the fuel consumption when calculating the Build Margin.

Moreover, the IPCC values 1996 as well as the statistical yearbooks 2000 – 2005 have been used. The calculation as described above results in a much lower grid factor than the published ones. Hence, the more conservative figures used in the PDD have been accepted.

Additionality

The additionality has been evidenced by investment analysis. Although the Project is a power generation project, the iron and steel sector is responsible for investment decisions and the investment would otherwise go toward the expansion of iron and steel production. The risks associated with the project are those of the iron and steel sector. Therefore the iron and steel industry sectoral benchmark is the appropriate and relevant benchmark project IRR, which is 12%. The IRR calculation sheet will be uploaded together with the PDD.

The underlying documents for the project IRR calculations (e.g. Feasibility Study Report, Electricity tariffs) have been verified by the native speaking local auditor.

Consideration of CDM before starting evidenced by the “Tangshan Xinfeng Thermal & Power Co., Ltd Directorate decision • dated 18th May, 2006”; references in Annex 2 no.20.

| Based on this justification the project is additional.

Monitoring

The monitoring plan considers all required parameters given by the methodology ACM0002/ Version 06. These parameters are the total generation output from the project activity EG_{GEN}, the electricity consumed in the power plant EG_{AUX} and the electricity supplied to the cement plants from the project activity EG_y.

The Power Meters will be calibrated at least once per year in accordance of the manufacturer's recommendations and National Regulations for ensuring reliability of the system. The accuracy of the power meters will be 0,5S.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

TÜV SÜD published the project documents on UNFCCC website by installing a link to TÜV SÜD's own website and invited comments by Parties, stakeholders and non-governmental organisations during a period of 30 days.

The following table presents all key information on this process:

webpage: http://www.netinform.de/KE/Wegweiser/Guide2_1.aspx?ID=3228&Ebene1_ID=26&Ebene2_ID=977&mode=1	
Starting date of the global stakeholder consultation process: 2007-06-20	
Comment submitted by: none	Issues raised: -
Response by TÜV SÜD: -	

5 VALIDATION OPINION

TÜV SÜD has performed a validation of the following proposed CDM project activity:

Tangshan Xinfeng Thermal & Power Co., Ltd. Waste Gas Power Generation Project

The review of the project design documentation and the subsequent follow-up interviews have provided TÜV SÜD with sufficient evidence to determine the fulfilment of stated criteria. In our opinion, the project meets all relevant UNFCCC requirements for the CDM. Hence TÜV SÜD will recommend the project for registration by the CDM Executive Board.

An analysis as provided by the applied methodology demonstrates that the proposed project activity is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that the project is implemented as designed, the project is likely to achieve the estimated amount of emission reductions as specified within the final PDD version.

The validation is based on the information made available to us and the engagement conditions detailed in this report. The validation has been performed using a risk based approach as described above. The only purpose of this report is its use during the registration process as part of the CDM project cycle. Hence, TÜV SÜD can not be held liable by any party for decisions made or not made based on the validation opinion, which will go beyond that purpose.

Munich, 2008-02-17



Certification Body "climate and energy"
TÜV SÜD Industrie Service GmbH

Munich, 2008-02-17



Assessment Team Leader

Annex 1: Validation Protocol

Validation Protocol

Project Title: Tangshan Xinfeng Thermal & Power Co., Ltd. Waste Gas Power Generation Project

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
A. General description of project activity				
A.1. Title of the project activity				
A.1.1. Does the used project title clearly enable to identify the unique CDM activity?	1, 2	The project is titled with the name of the project owner, project type and the energy source, it can be clearly identified.	p	p
A.1.2. Are there any indication concerning the revision number and the date of the revision?	1, 2	Yes, the available PDD is indicated as version 1, dated June 19, 2007.	p	p
A.1.3. Is this consistent with the time line of the project's history?	1, 2	This version is consistent with the one opened GSP.	p	p
A.2. Description of the project activity				
A.2.1. Is the description delivering a transparent overview of the project activities?	1, 2	<p>The project is described partially. The auditor found the proposed project activity is also using the BFG generated by another company named Beishitigang. This is not included in the PDD.</p> <p>And the electricity generated by the proposed project activity is offered to Guofeng Iron & steel Co, instead of North China Power Grid.</p> <p><u>Corrective Action Request No.1.</u></p> <p>The statements in the PDD should also be revised accordingly. The gas supply contract with Beishitigang should be submitted to the DOE.</p>	CAR1	p
A.2.2. What proofs are available demonstrating that the project description is in compliance with the actual situation or planning?	1, 2 7-15	The required documents have been delivered during the on-site audit and are listed in Annex 2 of this document.	p	p
A.2.3. Is the information provided by these proofs consistent with the information pro-	1, 2 7-15	Yes, it is.	p	p

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
vided by the PDD?				
A.2.4. Is all information presented consistent with details provided by further chapters of the PDD?	1, 2	Yes, there are no contradictions in the PDD.	p	p
A.3. Project participants				
A.3.1. Is the form required for the indication of project participants correctly applied?	1, 2	The form is correctly applied. Tangshan Xinfeng Thermal & Power Co., Ltd. and Climate Change Capital Carbon Fund II S.à r.l. and Climate Change Capital Carbon Managed Account Limited are considered as project participants.	p	p
A.3.2. Is the participation of the listed entities or Parties confirmed by each one of them?	1, 2	The LoAs and the MOC will be delivered to the DOE before submitting the project for registration.	p	p
A.3.3. Is all information on participants / Parties provided in consistency with details provided by further chapters of the PDD (in particular annex 1)?	1, 2	Yes. The contact information of the three project participants is listed in Annex 1.	p	p
A.4. Technical description of the project activity				
<i>A.4.1. Location of the project activity</i>				
A.4.1.1. Does the information provided on the location of the project activity allow for a clear identification of the site(s)?	1, 2	The proposed project is located in the north of Fengnan District, Tangshan City, Hebei Province, People's Republic of China. <u>Corrective Action Request No.2.</u> The geographical coordinates should be more precise including the seconds. Hence, the project should be easily identified using Google Earth.	CAR2	p
A.4.1.2. How is it ensured and/or demonstrated, that the project proponents can implement the project at this site (ownership, licenses, contracts etc.)?	1, 2	The construction work is finished and the main equipments are installed properly, the power plant is commissioning. This has been proved by the auditor.	p	p

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
<i>A.4.2. Category(ies) of project activity</i>				
A.4.2.1.To which category (ies) does the project activity belonging to? Is the category correctly identified and indicated?	1, 2	The project falls into scope 1: Energy Industries.	p	p
<i>A.4.3. Technology to be employed by the project activity</i>				
A.4.3.1.Does the technical design of the project activity reflect current good practices?	1, 2	Yes, the project design reflects current good practices. It is planned to install two 130t/h boilers and 2*25MW condensing turbine generators to generate electricity by using the surplus gas from the iron& steel plant nearby.	p	p
A.4.3.2.Does the description of the technology to be applied provide sufficient and transparent input/ information to evaluate its impact on the greenhouse gas balance?	1, 2	Yes, the project activity comprises the use of BFG and BOF for electricity generation. There is no doubt that this technology will reduce the GHG emissions significantly.	p	p
A.4.3.3.Does the implementation of the project activity require any technology transfer from annex-I-countries to the host country (ies)?	1, 2	The project entity uses domestic equipment for the project activity. There is no technology transfer from annex-I-countries to China.	p	p
A.4.3.4.Is the technology implemented by the project activity environmentally safe?	1, 2 ??	Yes. The main possible environmental problem produced by the technology implemented is noise. The project owner sets up special workshops, soundproof rooms and silencers to mitigate the noises. The noise level at the boundary of the plant could meet the national standard.	p	p
A.4.3.5.Is the information provided in compliance with actual situation or planning?	1, 2 11-14	Yes, the relevant contracts have been checked by the audit team. The information provided in the PDD is consistent with actual situation.	p	p
A.4.3.6.Does the project use state of the art	1, 2	The common practice for electricity generation is still coal-fired	p	p

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
technology and / or does the technology result in a significantly better performance than any commonly used technologies in the host country?		power plant. Hence, the project definitely would result in a better performance than the common practice.		
A.4.3.7. Is the project technology likely to be substituted by other or more efficient technologies within the project period?	1, 2	As the equipment is newly installed and it is state of the art and improves the common practise in China where the waste gas is normally vented to the air. It can be expected that there will be no substitution.	p	p
A.4.3.8. Does the project require extensive initial training and maintenance efforts in order to be carried out as scheduled during the project period?	1, 2	Yes, the training and maintenance for the power plant staff is necessary, because the project entity lack experience in using waste gas for power technology and the advanced DCS is implemented for the proposed project activity.	p	p
A.4.3.9. Is information available on the demand and requirements for training and maintenance?	1, 2 16	Although the power plant operational training contract has been signed, but there is no statement in the PDD. <u>Corrective Action Request No.3.</u> Please provide how, and when the training has been performed, as well as the training program for the project activity on the PDD.	CAR3	p
A.4.3.10. Is a schedule available for the implementation of the project and are there any risks for delays?	1, 2	The main equipments are installed and the power plant is commissioning, so there is no risk of delay. The PDD contains no project schedule. <u>Corrective Action Request No.4.</u> The time schedule of the implementation of the project should be included into the PDD.	CAR4	p
<i>A.4.4. Estimated amount of emission reductions over the chosen crediting period</i>				
A.4.4.1. Is the form required for the indication of projected emission reductions correctly applied?	1, 2	Yes. The form is correctly applied according to the version 3 of PDD template. <u>Corrective Action Request No.5.</u>	CAR5	p

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
		The crediting period will start after the registration of this project, so the starting date of the crediting period and the estimated emission reductions in 2007 and 2017 have to be revised.		
A.4.4.2. Are the figures provided consistent with other data presented in the PDD?	1, 2	Yes. The figures are consistent, but see CAR5.	p	p
A.4.5. Public funding of the project activity				
A.4.5.1. Is the information provided on public funding provided in compliance with the actual situation or planning as available by the project participants?	1, 2 17, 18	No official funds of Parties included in Annex I have been involved in the project; all costs are covered by bank loans and private equity. The bank loan contracts have been reviewed by the auditor.	p	p
A.4.5.2. Is all information provided consistent with the details given in remaining chapters of the PDD (in particular annex 2)?	1, 2	The statements are consistent within the PDD.	p	p
B. Application of a baseline and monitoring methodology				
B.1. Title and reference of the approved baseline and monitoring methodology				
B.1.1. Are reference number, version number, and title of the baseline and monitoring methodology clearly indicated?	1, 2	Approved consolidated baseline methodology ACM0004 (Consolidated baseline methodology for waste gas and /or heat and /or pressure for power generation, version 02) and ACM0002 (Consolidated baseline methodology for grid connected electricity generation from renewable sources, version 06) are applied to this project activity.	p	p
B.1.2. Is the applied version the most recent one and / or is this version still applicable?	1, 2	Yes, it is.	p	p
B.2. Justification of the choice of the methodology and why it is applicable to the project activity				
B.2.1. Is the applied methodology considered	1, 2	Yes. The approved methodology ACM0004 is exactly applicable	p	p

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the most appropriate one?		to the proposed project.										
B.2.2. Criterion 1: The applicability is limited to project activities that generates electricity from waste heat, waste pressure or the combustion of waste gases in industrial facilities	1, 2	<table><tr><td>Applicability checklist</td><td>Yes / No</td></tr><tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>	Applicability checklist	Yes / No	Criterion discussed in the PDD?	Yes	Compliance provable?	Yes	Compliance verified?	Yes	p	p
Applicability checklist	Yes / No											
Criterion discussed in the PDD?	Yes											
Compliance provable?	Yes											
Compliance verified?	Yes											
B.2.3. Criterion 2: The project activity has to displace electricity generation with fossil fuel in the electricity grid or captive electricity generation from fossil fuels	1, 2	<table><tr><td>Applicability checklist</td><td>Yes / No</td></tr><tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>	Applicability checklist	Yes / No	Criterion discussed in the PDD?	Yes	Compliance provable?	Yes	Compliance verified?	Yes	p	p
Applicability checklist	Yes / No											
Criterion discussed in the PDD?	Yes											
Compliance provable?	Yes											
Compliance verified?	Yes											
B.2.4. Criterion 3: After the implementation of the project activity there has to be done no fuel switch in the process, where the waste heat or pressure or the waste gas is produced.	1, 2	<table><tr><td>Applicability checklist</td><td>Yes / No</td></tr><tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>	Applicability checklist	Yes / No	Criterion discussed in the PDD?	Yes	Compliance provable?	Yes	Compliance verified?	Yes	p	p
Applicability checklist	Yes / No											
Criterion discussed in the PDD?	Yes											
Compliance provable?	Yes											
Compliance verified?	Yes											
B.2.5. Criterion 4: If capacity expansion of an existing facility is planned during the crediting period, the added capacity must be treated as a new facility.	1, 2	<table><tr><td>Applicability checklist</td><td>Yes / No</td></tr><tr><td>Criterion discussed in the PDD?</td><td>N/A</td></tr><tr><td>Compliance provable?</td><td>N/A</td></tr></table>	Applicability checklist	Yes / No	Criterion discussed in the PDD?	N/A	Compliance provable?	N/A	p	p		
Applicability checklist	Yes / No											
Criterion discussed in the PDD?	N/A											
Compliance provable?	N/A											

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		Compliance verified?	N/A												
B.3. Description of the sources and gases included in the project boundary															
B.3.1. Source: Grid electricity generation Gas (es): CO2 Type: Baseline Emissions	1, 2	<table><tr><td>Boundary checklist</td><td>Yes / No</td></tr><tr><td>Source and gas (es) discussed in the PDD?</td><td>Yes</td></tr><tr><td>Inclusion / exclusion justified?</td><td>Yes</td></tr><tr><td>Explanation / Justification sufficient?</td><td>Yes</td></tr><tr><td>Consistency with monitoring plan?</td><td>Yes</td></tr></table>		Boundary checklist	Yes / No	Source and gas (es) discussed in the PDD?	Yes	Inclusion / exclusion justified?	Yes	Explanation / Justification sufficient?	Yes	Consistency with monitoring plan?	Yes	p	p
Boundary checklist	Yes / No														
Source and gas (es) discussed in the PDD?	Yes														
Inclusion / exclusion justified?	Yes														
Explanation / Justification sufficient?	Yes														
Consistency with monitoring plan?	Yes														
B.3.2. Source: Captive electricity generation Gas (es): CO2 Type: Baseline Emissions	1, 2	<table><tr><td>Boundary checklist</td><td>Yes / No</td></tr><tr><td>Source and gas (es) discussed in the PDD?</td><td>N/A</td></tr><tr><td>Inclusion / exclusion justified?</td><td>N/A</td></tr><tr><td>Explanation / Justification sufficient?</td><td>N/A</td></tr><tr><td>Consistency with monitoring plan?</td><td>N/A</td></tr></table> <p>There is no existing coal-fired captive power plant.</p>		Boundary checklist	Yes / No	Source and gas (es) discussed in the PDD?	N/A	Inclusion / exclusion justified?	N/A	Explanation / Justification sufficient?	N/A	Consistency with monitoring plan?	N/A	p	p
Boundary checklist	Yes / No														
Source and gas (es) discussed in the PDD?	N/A														
Inclusion / exclusion justified?	N/A														
Explanation / Justification sufficient?	N/A														
Consistency with monitoring plan?	N/A														

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B.3.3. Source: On-site fossil fuel consumption due to the project activity Gas (es): CO2 Type: Project Emissions	1, 2	<table><tr><td>Boundary checklist</td><td>Yes / No</td></tr><tr><td>Source and gas (es) discussed in the PDD?</td><td>N/A</td></tr><tr><td>Inclusion / exclusion justified?</td><td>N/A</td></tr><tr><td>Explanation / Justification sufficient?</td><td>N/A</td></tr><tr><td>Consistency with monitoring plan?</td><td>N/A</td></tr></table> <p>There is no additive fossil fuel consumption on-site.</p>	Boundary checklist	Yes / No	Source and gas (es) discussed in the PDD?	N/A	Inclusion / exclusion justified?	N/A	Explanation / Justification sufficient?	N/A	Consistency with monitoring plan?	N/A	p	p
Boundary checklist	Yes / No													
Source and gas (es) discussed in the PDD?	N/A													
Inclusion / exclusion justified?	N/A													
Explanation / Justification sufficient?	N/A													
Consistency with monitoring plan?	N/A													
B.3.4. Do the spatial and technological boundaries as verified on-site comply with the discussion provided by / indication included to the PDD?	1, 2	Yes. Project boundary of the proposed project includes the gas pipeline transportation system, generator equipments and all power plants connected to the North China Power Grid.	p	p										
B.4. Description of how the baseline scenario is identified and description of the identified baseline scenario														
B.4.1. Have all technically feasible baseline scenario alternatives (a) - (f) to the project activity been identified and discussed by the PDD? Why can this list be considered as being complete?	1, 2	The baseline scenario alternatives in the ACM0004 have been identified and discussed.	p	p										
B.4.2. Does the project identify correctly and excludes those options not in line with regulatory or legal requirements?	1, 2	Yes. The alternatives (c) and (d) are excluded because it is not in line with regulatory requirements.	p	p										
B.4.3. Have applicable regulatory or legal requirements been identified?	1, 2	Yes. National Policy about prohibiting the construction of thermal power plants of less than 135MW in the areas covered by large grids and strictly controlling the construction of thermal power units with the single-unit capacity below 100MW are identified.	p	p										
B.4.4. If baseline scenario is captive power	1, 2	Not applicable.	p	p										

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generation (Option 1), is the estimated boiler efficiency determined due to Option A or B?				
B.4.5. If the baseline scenario is grid power imports (Option 2), is the Emission Factor calculated as in ACM0002?	1, 2	Yes. NDRC issued emission factors of North China Grid in December 2006 are used.	p	p
B.4.6. If the baseline scenario includes both captive and imported power (Option 3), is the emission factor weighted correctly?	1, 2	Not applicable.	p	p
B.5. Description of how the anthropogenic emissions of GHG by sources are reduced below those that would have occurred in the absence of the registered CDM project activity (assessment and demonstration of additionality):				
B.5.1. In case of applying step 2 / investment analysis of the additionality tool: Is the analysis method identified appropriately (step 2a)?	1, 2 3	Yes, the investment analysis is applied.	p	p
B.5.2. In case of Option I (simple cost analysis): Is it demonstrated that the activity produces no economic benefits other than CDM income?	1, 2 3	Since the proposed project will obtain the revenues not only from decreasing electricity purchase but also from CDM, the simple cost analysis method (option I) is not applicable.	p	p
B.5.3. In case of Option II (investment comparison analysis): Is the most suitable financial indicator clearly identified (IRR, NPV, cost benefit ratio, or (levelized) unit cost)?	1, 2 3	Investment comparison analysis method (option II) is applicable to projects whose alternatives are also investment projects. Only on such basis, comparison analysis can be conducted. The alternative baseline scenario of the project is the North China Power Grid rather than new investment projects. Therefore the option II is not applicable.	p	p
B.5.4. In case of Option III (benchmark analysis): Is the most suitable financial indicator clearly identified (IRR, NPV, cost benefit ratio, or (levelized) unit cost)?	1, 2 3	The total investment IRR calculation is presented Clarification Request No. 1. - Please provide the evidence to show whether only the project owner could apply for this project or there is other investor possible. If only the project owner could apply for this project,	CR1	p

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		<p>equity IRR has to be used.</p> <ul style="list-style-type: none"> - The source of each basic data in IRR calculation exce sheet should be delivered to the DOE. - The sensitive analysis calculation should be submitted to the DOE. 		
B.5.5. In case of Option II or Option III: Is the calculation of financial figures for this indicator correctly done for all alternatives and the project activity?	1, 2 3	See B.5.1.	p	p
B.5.6. In case of Option II or Option III: Is the analysis presented in a transparent manner including publicly available proofs for the utilized data?	1, 2 3	See B.5.1.	p	p
B.5.7. In case of applying step 3 (barrier analysis) of the additionality tool: Is a complete list of barriers developed that prevent the different alternatives to occur?	1, 2 3	The technology barrier is identified.	p	p
B.5.8. In case of applying step 3 (barrier analysis): Is transparent and documented evidence provided on the existence and significance of these barriers?	1, 2 3	<p><u>Clarification Request No. 2.</u></p> <ul style="list-style-type: none"> - The evidence of technology barrier has to be submitted to the DOE. - P11 sub-step 3a, it is stated that the boilers are designed for burning 100% BF-gas, but the project activity will use a mix gas of BF-gas and BOE-gas. Please clarify. 	CR2	p
B.5.9. In case of applying step 3 (barrier analysis): Is it transparently shown that the execution of at least one of the alternatives is not prevented by the identified barriers?	1, 2 3	Yes, it is obviously presented that the barriers identified will not prevent the scenario (b), i.e. import of electricity from grid.	p	p

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B.5.10. Have other activities in the host country / region similar to the project activity been identified and are these activities appropriately analyzed by the PDD (step 4a)?	1, 2 3	The project activity is the “first of its kind” in Hebei Province. <u>Corrective Action Request No.6.</u> As conservative approach, the common practice analysis should be referred to all North China Grid.	CAR6	p
B.5.11. If similar activities are occurring: Is it demonstrated that in spite of these similarities the project activity would not be implemented without the CDM component (step 4b)?	1, 2 3	Yes. The similar projects Tangshan Jinxi and Tangshan Iron&steel BFG utilizing projects would not apply to CDM project due to their free charge of BFG, and the other similar project Handan Iron& steel is in the CDM validation stage. Also see CAR6.	See CAR6	p
B.5.12. Is it appropriately explained how the approval of the project activity will help to overcome the economic and financial hurdles or other identified barriers (step 5)?	1, 2 3	Not applicable.	p	p
B.6. Emissions reductions				
<i>B.6.1. Explanation of methodological choices</i>				
B.6.1.1. Is it explained how the procedures provided in the methodology are applied by the proposed project activity?	1, 2	The calculation of the emission reduction is applied according to the steps described in ACM0002: <ul style="list-style-type: none"> - Calculation of the Operating Margin Emission Factor - Calculation of the Build Margin Emission Factor - Calculation of the Combined Baseline Emission Factor These steps are described in a transparent manner.	p	p
B.6.1.2. Is every selection of options offered by the methodology correctly justified and is this justification in line with the situation verified on-site?	1, 2	Yes, it is.	p	p

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B.6.1.3.Are the formulae required for the determination of project emissions correctly presented, enabling a complete identification of parameter to be used and / or monitored?	1, 2	There is no additional fossil fuel to be used as auxiliary fuel, so no project emission has to be considered.	p	p
B.6.1.4.Are the formulae required for the determination of baseline emissions correctly presented, enabling a complete identification of parameter to be used and / or monitored?	1, 2	Yes, formulae to calculate the baseline emissions are correctly presented.	p	p
B.6.1.5.Are the formulae required for the determination of leakage emissions correctly presented, enabling a complete identification of parameter to be used and / or monitored?	1, 2	No leakages have to be considered according to the methodology. Therefore the question is not applicable.	p	p
B.6.1.6.Are the formulae required for the determination of emission reductions correctly presented?	1, 2	The formula to calculate the emission reduction is correctly presented.	p	p
B.6.2. Data and parameters that are available at validation				
B.6.2.1.Is the list of parameters presented in chapter B.6.2 considered to be complete with regard to the requirements of the applied methodology?	1, 2	<p>Yes. A list of parameters is clearly presented.</p> <p><u>Corrective Action Request No.7.</u></p> <p>The following parameters have to be included in B.6.2</p> <ul style="list-style-type: none"> - Power generation by source - Internal power consumption rate of power plants - Efficiency of advanced thermal power plant additions - Capacity by power generation source - Electricity imports from connected grids 	CAR7	p

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B.6.2.2.Parameter Title: EF _i Carbon emissions factor of coal and coke gas (estimation of project emissions)	1, 2	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Choice of data correctly justified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr></table>	Data Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided?	N/A	Has this value been verified?	N/A	Choice of data correctly justified?	N/A	Measurement method correctly described?	N/A	p	p
Data Checklist	Yes / No																					
Title in line with methodology?	N/A																					
Data unit correctly expressed?	N/A																					
Appropriate description of parameter?	N/A																					
Source clearly referenced?	N/A																					
Correct value provided?	N/A																					
Has this value been verified?	N/A																					
Choice of data correctly justified?	N/A																					
Measurement method correctly described?	N/A																					
B.6.2.3. NCV _i Net calorific value per volume unit of coal and coke gas(estimation of project emissions)	1, 2	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Choice of data correctly justified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr></table>	Data Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided?	N/A	Has this value been verified?	N/A	Choice of data correctly justified?	N/A	Measurement method correctly described?	N/A	p	p
Data Checklist	Yes / No																					
Title in line with methodology?	N/A																					
Data unit correctly expressed?	N/A																					
Appropriate description of parameter?	N/A																					
Source clearly referenced?	N/A																					
Correct value provided?	N/A																					
Has this value been verified?	N/A																					
Choice of data correctly justified?	N/A																					
Measurement method correctly described?	N/A																					
B.6.2.4. OXID _i Oxidation factor of coal and coke gas(estimation of project emissions)	1, 2	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr></table>	Data Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided?	N/A	Has this value been verified?	N/A	p	p				
Data Checklist	Yes / No																					
Title in line with methodology?	N/A																					
Data unit correctly expressed?	N/A																					
Appropriate description of parameter?	N/A																					
Source clearly referenced?	N/A																					
Correct value provided?	N/A																					
Has this value been verified?	N/A																					

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		Choice of data correctly justified?	N/A																				
		Measurement method correctly described?	N/A																				
B.6.2.5.Parameter Title: Hr Average plant efficiency	1, 2	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Choice of data correctly justified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr></table>		Data Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided?	N/A	Has this value been verified?	N/A	Choice of data correctly justified?	N/A	Measurement method correctly described?	N/A	p	p
Data Checklist	Yes / No																						
Title in line with methodology?	N/A																						
Data unit correctly expressed?	N/A																						
Appropriate description of parameter?	N/A																						
Source clearly referenced?	N/A																						
Correct value provided?	N/A																						
Has this value been verified?	N/A																						
Choice of data correctly justified?	N/A																						
Measurement method correctly described?	N/A																						
B.6.2.6.Parameter Title: EF _y CO2 emission factor of the grid	1, 2	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Choice of data correctly justified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr></table> CM is calculated.		Data Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided?	Yes	Has this value been verified?	Yes	Choice of data correctly justified?	Yes	Measurement method correctly described?	Yes	p	p
Data Checklist	Yes / No																						
Title in line with methodology?	Yes																						
Data unit correctly expressed?	Yes																						
Appropriate description of parameter?	Yes																						
Source clearly referenced?	Yes																						
Correct value provided?	Yes																						
Has this value been verified?	Yes																						
Choice of data correctly justified?	Yes																						
Measurement method correctly described?	Yes																						

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B.6.2.7.Parameter Title: $EF_{OM,y}$ CO2 operating margin emission factor of the grid	1, 2	<table> <tr> <th>Data Checklist</th> <th>Yes / No</th> </tr> <tr><td>Title in line with methodology?</td><td>Yes</td></tr> <tr><td>Data unit correctly expressed?</td><td>Yes</td></tr> <tr><td>Appropriate description of parameter?</td><td>Yes</td></tr> <tr><td>Source clearly referenced?</td><td>Yes</td></tr> <tr><td>Correct value provided?</td><td>Yes</td></tr> <tr><td>Has this value been verified?</td><td>Yes</td></tr> <tr><td>Choice of data correctly justified?</td><td>Yes</td></tr> <tr><td>Measurement method correctly described?</td><td>Yes</td></tr> </table> <p>OM is calculated.</p> <p>.</p>	Data Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided?	Yes	Has this value been verified?	Yes	Choice of data correctly justified?	Yes	Measurement method correctly described?	Yes	p	p
Data Checklist	Yes / No																					
Title in line with methodology?	Yes																					
Data unit correctly expressed?	Yes																					
Appropriate description of parameter?	Yes																					
Source clearly referenced?	Yes																					
Correct value provided?	Yes																					
Has this value been verified?	Yes																					
Choice of data correctly justified?	Yes																					
Measurement method correctly described?	Yes																					
B.6.2.8.Parameter Title: $EF_{BM,y}$ CO2 build margin emission factor of the grid	1, 2	<table> <tr> <th>Data Checklist</th> <th>Yes / No</th> </tr> <tr><td>Title in line with methodology?</td><td>Yes</td></tr> <tr><td>Data unit correctly expressed?</td><td>Yes</td></tr> <tr><td>Appropriate description of parameter?</td><td>Yes</td></tr> <tr><td>Source clearly referenced?</td><td>Yes</td></tr> <tr><td>Correct value provided?</td><td>Yes</td></tr> <tr><td>Has this value been verified?</td><td>Yes</td></tr> <tr><td>Choice of data correctly justified?</td><td>Yes</td></tr> <tr><td>Measurement method correctly described?</td><td>Yes</td></tr> </table> <p>BM is calculated.</p>	Data Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided?	Yes	Has this value been verified?	Yes	Choice of data correctly justified?	Yes	Measurement method correctly described?	Yes	p	p
Data Checklist	Yes / No																					
Title in line with methodology?	Yes																					
Data unit correctly expressed?	Yes																					
Appropriate description of parameter?	Yes																					
Source clearly referenced?	Yes																					
Correct value provided?	Yes																					
Has this value been verified?	Yes																					
Choice of data correctly justified?	Yes																					
Measurement method correctly described?	Yes																					
B.6.2.9.Parameter Title: $F_{i,j,y}$ Amount of each fossil fuel consumed by	1, 2	<table> <tr> <th>Data Checklist</th> <th>Yes / No</th> </tr> </table>	Data Checklist	Yes / No	p	p																
Data Checklist	Yes / No																					

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each province/city power generation		Title in line with methodology?	Yes		
		Data unit correctly expressed?	Yes		
		Appropriate description of parameter?	Yes		
		Source clearly referenced?	Yes		
		Correct value provided?	Yes		
		Has this value been verified?	Yes		
		Choice of data correctly justified?	Yes		
		Measurement method correctly described?	Yes		
B.6.2.10. Parameter Title: COEF _{i,k} CO2 emission factor of each fuel type	1, 2	Data Checklist	Yes / No	p	p
		Title in line with methodology?	Yes		
		Data unit correctly expressed?	Yes		
		Appropriate description of parameter?	Yes		
		Source clearly referenced?	Yes		
		Correct value provided?	Yes		
		Has this value been verified?	Yes		
		Choice of data correctly justified?	Yes		
		Measurement method correctly described?	Yes		
B.6.2.11. Parameter Title: GEN _{j,y}	1, 2	Data Checklist	Yes / No	See CAR7	p

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Electricity generation of each province/city		Title in line with methodology?	No		
		Data unit correctly expressed?	No		
		Appropriate description of parameter?	No		
		Source clearly referenced?	No		
		Correct value provided?	No		
		Has this value been verified?	No		
		Choice of data correctly justified?	No		
		Measurement method correctly described?	No		
		See CAR7			
B.6.2.12. Parameter Title: EF _{CO2,i} CO2 emission factor of fuel used for captive power generation	1, 2	Data Checklist		p	p
		Title in line with methodology?	N/A		
		Data unit correctly expressed?	N/A		
		Appropriate description of parameter?	N/A		
		Source clearly referenced?	N/A		
		Correct value provided?	N/A		
		Has this value been verified?	N/A		
		Choice of data correctly justified?	N/A		
		Measurement method correctly described?	N/A		
B.6.2.13. Parameter Title: Eff _{captive} Energy efficiency of captive power plant (estimation of baseline emissions factor in case of captive power)	1, 2	Data Checklist		p	p
		Title in line with methodology?	N/A		
		Data unit correctly expressed?	N/A		
		Appropriate description of parameter?	N/A		
		Source clearly referenced?	N/A		
		Correct value provided?	N/A		
		Has this value been verified?	N/A		

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		Choice of data correctly justified?	N/A																				
		Measurement method correctly described?	N/A																				
B.6.2.14. S _i Share of facility electricity demand supplied by grid imports and captive power	1, 2	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Choice of data correctly justified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr></table>		Data Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided?	N/A	Has this value been verified?	N/A	Choice of data correctly justified?	N/A	Measurement method correctly described?	N/A	p	p
Data Checklist	Yes / No																						
Title in line with methodology?	N/A																						
Data unit correctly expressed?	N/A																						
Appropriate description of parameter?	N/A																						
Source clearly referenced?	N/A																						
Correct value provided?	N/A																						
Has this value been verified?	N/A																						
Choice of data correctly justified?	N/A																						
Measurement method correctly described?	N/A																						

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B.6.2.15. <i>Ir</i> Enthalpy of the saturated steam (estimation of the standard coal consumed for steam generation)	1, 2	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Choice of data correctly justified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr></table>	Data Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided?	N/A	Has this value been verified?	N/A	Choice of data correctly justified?	N/A	Measurement method correctly described?	N/A	p	p
Data Checklist	Yes / No																					
Title in line with methodology?	N/A																					
Data unit correctly expressed?	N/A																					
Appropriate description of parameter?	N/A																					
Source clearly referenced?	N/A																					
Correct value provided?	N/A																					
Has this value been verified?	N/A																					
Choice of data correctly justified?	N/A																					
Measurement method correctly described?	N/A																					
B.6.2.16. <i>η_{boiler}</i> Boiler efficiency of the private power plant(estimation of the standard coal consumed for steam generation)	1, 2	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Choice of data correctly justified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr></table>	Data Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided?	N/A	Has this value been verified?	N/A	Choice of data correctly justified?	N/A	Measurement method correctly described?	N/A	p	p
Data Checklist	Yes / No																					
Title in line with methodology?	N/A																					
Data unit correctly expressed?	N/A																					
Appropriate description of parameter?	N/A																					
Source clearly referenced?	N/A																					
Correct value provided?	N/A																					
Has this value been verified?	N/A																					
Choice of data correctly justified?	N/A																					
Measurement method correctly described?	N/A																					
B.6.3. Ex-ante calculation of emission reductions																						
B.6.3.1.Is the projection based on the same procedures as used for future monitor-	1, 2	Yes, the same procedures are used for future monitoring which only considers the baseline emission and no project emission or	p	p																		

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ing?		leakage emission. The projection is achieved by multiplying the baseline emission factor of North China power grid with the estimated net electricity generation.		
B.6.3.2.Are the GHG calculations documented in a complete and transparent manner?	1, 2	Yes, BEy=EGy*EFy; EFy=0.98255 tCO ₂ /MWh.	p	p
B.6.3.3.Is the data provided in this section consistent with data as presented in other chapters of the PDD?	1, 2	Yes, EGy=334800 MWh/y; ERy=328958 tCO ₂ e/y.	p	p
B.6.4. Summary of the ex-ante estimation of emission reductions				
B.6.4.1.Will the project result in fewer GHG emissions than the baseline scenario?	1, 2	Yes, the project will use BFG and BOF to generate electricity which will result in fewer GHG emissions than the baseline scenario.	p	p
B.6.4.2.Is the form/table required for the indication of projected emission reductions correctly applied?	1, 2	Yes, the form is correctly applied according to the PDD template.	p	p
B.6.4.3.Is the projection in line with the envisioned time schedule for the project's implementation and the indicated crediting period?	1, 2	No, please seeCAR5.	See CAR5	p
B.6.4.4.Is the data provided in this section in consistency with data as presented in other chapters of the PDD?	1, 2	Yes. The data is consistent.	p	p
B.7. Application of the monitoring methodology and description of the monitoring plan				
B.7.1. Data and parameters monitored				
B.7.1.1.Is the list of parameters presented in chapter B.7.1 considered to be complete	1, 2 19	<u>Corrective Action Request No.8.</u> - According to the statement of the project proponent, the elec-	CAR8	p

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with regard to the requirements of the applied methodology?		tricity generated by the proposed project activity is offered to Guofeng Iron & steel Co, instead of North China Power Grid. In emergency, electricity needed by the proposed project will be provided by Guofeng Iron & steel Co. So the description about parameters E _{Gy} and E _{Gin} presented in the PDD has to be revised. - According to the used methodology, the parameters: E _{GGen} (Total electricity generated) and E _{GAUX} (Auxiliary electricity) have to be monitored. - QA/QC procedures have to be appropriately presented.																											
B.7.1.2.Parameter Title: Q _i Volume of the auxiliary fuel used by project activity (estimation of project emissions)	1, 2	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided for estimation?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr><tr><td>Correct reference to standards?</td><td>N/A</td></tr><tr><td>Indication of accuracy provided?</td><td>N/A</td></tr><tr><td>QA/QC procedures described?</td><td>N/A</td></tr><tr><td>QA/QC procedures appropriate?</td><td>N/A</td></tr></table> <p>The WG is supplied from the nearby iron& steel plant, where another gas source is not possible. The gas pipelines were also verified during the on-site visit, Based on the clarification in the FSR and the validation findings, the possibility of using other fuel is therefore not given.</p>	Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A		p	p
Monitoring Checklist	Yes / No																												
Title in line with methodology?	N/A																												
Data unit correctly expressed?	N/A																												
Appropriate description of parameter?	N/A																												
Source clearly referenced?	N/A																												
Correct value provided for estimation?	N/A																												
Has this value been verified?	N/A																												
Measurement method correctly described?	N/A																												
Correct reference to standards?	N/A																												
Indication of accuracy provided?	N/A																												
QA/QC procedures described?	N/A																												
QA/QC procedures appropriate?	N/A																												

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B.7.1.3.Parameter Title: NCV _f Net Calorific Value of fuel (estimation of project emissions)	1, 2	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided for estimation?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr><tr><td>Correct reference to standards?</td><td>N/A</td></tr><tr><td>Indication of accuracy provided?</td><td>N/A</td></tr><tr><td>QA/QC procedures described?</td><td>N/A</td></tr><tr><td>QA/QC procedures appropriate?</td><td>N/A</td></tr></table>	Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A	p	p
Monitoring Checklist	Yes / No																											
Title in line with methodology?	N/A																											
Data unit correctly expressed?	N/A																											
Appropriate description of parameter?	N/A																											
Source clearly referenced?	N/A																											
Correct value provided for estimation?	N/A																											
Has this value been verified?	N/A																											
Measurement method correctly described?	N/A																											
Correct reference to standards?	N/A																											
Indication of accuracy provided?	N/A																											
QA/QC procedures described?	N/A																											
QA/QC procedures appropriate?	N/A																											

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B.7.1.4.Parameter Title: EG _{Gen} Total electricity generated (estimation of electricity generation by project activity)	1, 2	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>No</td></tr><tr><td>Data unit correctly expressed?</td><td>No</td></tr><tr><td>Appropriate description of parameter?</td><td>No</td></tr><tr><td>Source clearly referenced?</td><td>No</td></tr><tr><td>Correct value provided for estimation?</td><td>No</td></tr><tr><td>Has this value been verified?</td><td>No</td></tr><tr><td>Measurement method correctly described?</td><td>No</td></tr><tr><td>Correct reference to standards?</td><td>No</td></tr><tr><td>Indication of accuracy provided?</td><td>No</td></tr><tr><td>QA/QC procedures described?</td><td>Yes</td></tr><tr><td>QA/QC procedures appropriate?</td><td>No</td></tr></table> See CAR8	Monitoring Checklist	Yes / No	Title in line with methodology?	No	Data unit correctly expressed?	No	Appropriate description of parameter?	No	Source clearly referenced?	No	Correct value provided for estimation?	No	Has this value been verified?	No	Measurement method correctly described?	No	Correct reference to standards?	No	Indication of accuracy provided?	No	QA/QC procedures described?	Yes	QA/QC procedures appropriate?	No	See CAR8	
Monitoring Checklist	Yes / No																											
Title in line with methodology?	No																											
Data unit correctly expressed?	No																											
Appropriate description of parameter?	No																											
Source clearly referenced?	No																											
Correct value provided for estimation?	No																											
Has this value been verified?	No																											
Measurement method correctly described?	No																											
Correct reference to standards?	No																											
Indication of accuracy provided?	No																											
QA/QC procedures described?	Yes																											
QA/QC procedures appropriate?	No																											
B.7.1.5.Parameter Title: EG _{AUX} Auxiliary electricity (including electrical energy utilized by the power generating equipment in the project boundary)	1, 2	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>No</td></tr><tr><td>Data unit correctly expressed?</td><td>No</td></tr><tr><td>Appropriate description of parameter?</td><td>No</td></tr><tr><td>Source clearly referenced?</td><td>No</td></tr><tr><td>Correct value provided for estimation?</td><td>No</td></tr><tr><td>Has this value been verified?</td><td>No</td></tr><tr><td>Measurement method correctly described?</td><td>No</td></tr><tr><td>Correct reference to standards?</td><td>No</td></tr><tr><td>Indication of accuracy provided?</td><td>No</td></tr><tr><td>QA/QC procedures described?</td><td>No</td></tr><tr><td>QA/QC procedures appropriate?</td><td>No</td></tr></table>	Monitoring Checklist	Yes / No	Title in line with methodology?	No	Data unit correctly expressed?	No	Appropriate description of parameter?	No	Source clearly referenced?	No	Correct value provided for estimation?	No	Has this value been verified?	No	Measurement method correctly described?	No	Correct reference to standards?	No	Indication of accuracy provided?	No	QA/QC procedures described?	No	QA/QC procedures appropriate?	No	See CAR8	
Monitoring Checklist	Yes / No																											
Title in line with methodology?	No																											
Data unit correctly expressed?	No																											
Appropriate description of parameter?	No																											
Source clearly referenced?	No																											
Correct value provided for estimation?	No																											
Has this value been verified?	No																											
Measurement method correctly described?	No																											
Correct reference to standards?	No																											
Indication of accuracy provided?	No																											
QA/QC procedures described?	No																											
QA/QC procedures appropriate?	No																											

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		See CAR8.																										
B.7.1.6.Parameter Title: EG _y Net electricity supplied to facility	1, 2	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>No</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided for estimation?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr><tr><td>Correct reference to standards?</td><td>Yes</td></tr><tr><td>Indication of accuracy provided?</td><td>Yes</td></tr><tr><td>QA/QC procedures described?</td><td>Yes</td></tr><tr><td>QA/QC procedures appropriate?</td><td>No</td></tr></table> See CAR9.	Monitoring Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	No	Source clearly referenced?	Yes	Correct value provided for estimation?	Yes	Has this value been verified?	Yes	Measurement method correctly described?	Yes	Correct reference to standards?	Yes	Indication of accuracy provided?	Yes	QA/QC procedures described?	Yes	QA/QC procedures appropriate?	No	See CAR8	p
Monitoring Checklist	Yes / No																											
Title in line with methodology?	Yes																											
Data unit correctly expressed?	Yes																											
Appropriate description of parameter?	No																											
Source clearly referenced?	Yes																											
Correct value provided for estimation?	Yes																											
Has this value been verified?	Yes																											
Measurement method correctly described?	Yes																											
Correct reference to standards?	Yes																											
Indication of accuracy provided?	Yes																											
QA/QC procedures described?	Yes																											
QA/QC procedures appropriate?	No																											
B.7.1.7.Parameter Title: Q _{WG} Flow rate of waste gas	1, 2	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided for estimation?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr></table>	Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	p	p										
Monitoring Checklist	Yes / No																											
Title in line with methodology?	N/A																											
Data unit correctly expressed?	N/A																											
Appropriate description of parameter?	N/A																											
Source clearly referenced?	N/A																											
Correct value provided for estimation?	N/A																											
Has this value been verified?	N/A																											

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		Measurement method correctly described?	N/A																										
		Correct reference to standards?	N/A																										
		Indication of accuracy provided?	N/A																										
		QA/QC procedures described?	N/A																										
		QA/QC procedures appropriate?	N/A																										
B.7.1.8.Parameter Title: NCV _{WG} Net Calorific Value of the waste gas	1, 2	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided for estimation?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr><tr><td>Correct reference to standards?</td><td>N/A</td></tr><tr><td>Indication of accuracy provided?</td><td>N/A</td></tr><tr><td>QA/QC procedures described?</td><td>N/A</td></tr><tr><td>QA/QC procedures appropriate?</td><td></td></tr></table>		Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	QA/QC procedures appropriate?		p	p
Monitoring Checklist	Yes / No																												
Title in line with methodology?	N/A																												
Data unit correctly expressed?	N/A																												
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Measurement method correctly described?	N/A																												
Correct reference to standards?	N/A																												
Indication of accuracy provided?	N/A																												
QA/QC procedures described?	N/A																												
QA/QC procedures appropriate?																													
B.7.1.9.Parameter Title: Q _i Flow rate of fuel i	1, 2	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr></table>		Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	p	p														
Monitoring Checklist	Yes / No																												
Title in line with methodology?	N/A																												
Data unit correctly expressed?	N/A																												
Appropriate description of parameter?	N/A																												
Source clearly referenced?	N/A																												

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		Correct value provided for estimation?	N/A																										
		Has this value been verified?	N/A																										
		Measurement method correctly described?	N/A																										
		Correct reference to standards?	N/A																										
		Indication of accuracy provided?	N/A																										
		QA/QC procedures described?	N/A																										
		QA/QC procedures appropriate?																											
B.7.1.10. Parameter Title: NCV _i Net calorific value of fuel i	1, 2	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided for estimation?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr><tr><td>Correct reference to standards?</td><td>N/A</td></tr><tr><td>Indication of accuracy provided?</td><td>N/A</td></tr><tr><td>QA/QC procedures described?</td><td>N/A</td></tr><tr><td>QA/QC procedures appropriate?</td><td></td></tr></table>		Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	QA/QC procedures appropriate?		p	p
Monitoring Checklist	Yes / No																												
Title in line with methodology?	N/A																												
Data unit correctly expressed?	N/A																												
Appropriate description of parameter?	N/A																												
Source clearly referenced?	N/A																												
Correct value provided for estimation?	N/A																												
Has this value been verified?	N/A																												
Measurement method correctly described?	N/A																												
Correct reference to standards?	N/A																												
Indication of accuracy provided?	N/A																												
QA/QC procedures described?	N/A																												
QA/QC procedures appropriate?																													
B.7.1.11. Parameter Title: Use the latest approved version of ACM0002 to calculate the grid emission factor. If the power generation capacity	1, 2	Not Applicable		p	p																								

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of the project plant is less or equal to 15 MW, project participants may use the average CO2 emission factor of the electricity system, as referred to in option (d) in step 1 of the baseline determination in ACM0002. $EF_{grid,y}$				
B.7.2. Description of the monitoring plan				
B.7.2.1. Is the operational and management structure clearly described and in compliance with the envisioned situation?	1, 2	Yes, the operational and management structure is clearly described in B.7.2 of the PDD and in compliance with the envisioned situation.	p	p
B.7.2.2. Are responsibilities and institutional arrangements for data collection and archiving clearly provided?	1, 2	Yes, the responsibilities and institutional arrangements for data collection and archiving are clearly described, see P21, point 6 "data management" in the PDD.	p	p
B.7.2.3. Does the monitoring plan provide current good monitoring practice?	1, 2	<u>Corrective Action Request No.9.</u> The description about meter installation and data collection is not consistent with actual situation and has to be revised.	CAR9	p
B.7.2.4. If applicable: Does annex 4 provide useful information enabling a better understanding of the envisioned monitoring provisions?	1, 2	No additional information is provided in Annex 4.	p	p
B.8. Date of completion of the application of the baseline study and monitoring methodology and the name of the responsible person(s)/entity(ies)				
B.8.1.1. Is there any indication of a date when the baseline was determined?	1, 2	Yes, the date is 20 th , April, 2007.	p	p
B.8.1.2. Is this consistent with the time line of	1, 2	Yes.	p	p

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the PDD history?				
B.8.1.3. Is the information on the person(s) / entity(ies) responsible for the application of the baseline and monitoring methodology provided consistent with the actual situation?	1, 2	Yes, Beijing Yu Tong Lian Xiang Tour Information Consultancy Co., Ltd determined the baseline and monitoring methodology.	p	p
B.8.1.4. Is information provided whether this person / entity is also considered a project participant?	1, 2	No, the entity is not considered to be a project participant.	p	p
C. Duration of the project activity / crediting period				
C.1. Duration of the project activity				
C.1.1. Are the project's starting date and operational lifetime clearly defined and reasonable?	1, 2 22	<p>A 20 years operation lifetime at least has been clearly defined. The proposed project started construction in September 2006. CDM considering evidence at the early stage of the project activity is verified by the audit team.</p> <p><u>Corrective Action Request No.10.</u> Please define the project starting date based on actual situation.</p> <p><u>Clarification Request No. 3.</u> Please provide English translation about CDM considering evidence to the DOE.</p>	CAR10 CR3	p
C.2. Choice of the crediting period and related information				
C.2.1. Is the assumed crediting time clearly defined and reasonable (renewable crediting period of max 7 years with potential for 2 renewals or fixed crediting period of max. 10 years)?	1, 2	A fixed 10 years is chosen as the crediting period. But see CAR5	See CAR5	p

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D. Environmental impacts				
D.1. Documentation on the analysis of the environmental impacts, including transboundary impacts				
D.1.1. Has the analysis of the environmental impacts of the project activity been sufficiently described?	1, 2 9, 10	Yes, the environmental impacts from waste gas, waste water, solid waste, noises and ecology impacts have been clearly described.	p	p
D.1.2. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, has an EIA been approved?	1, 2 9, 10	Yes, EIA is a must in P. R. China for new construction projects. The EIA of the project were approved by National Environment Protection Bureau. The documents have been reviewed by the audit team.	p	p
D.1.3. Will the project create any adverse environmental effects?	1, 2 9, 10	No. There is no adverse environmental effects for the project activity.	p	p
D.1.4. Were transboundary environmental impacts identified in the analysis?	1, 2 9, 10	There is no trans-boundary impact described in EIA report or approval of EIA.	p	p
D.2. If environmental impacts are considered significant by the project participants or the host Party, please provide conclusions and all references to support documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party				
D.2.1. Have the identified environmental impacts been addressed in the project design sufficiently?	1, 2 9, 10	Yes, it has.	p	p
D.2.2. Does the project comply with environmental legislation in the host country?	1, 2 9, 10	Yes, the project is in conformity with the environmental legislation of P. R. China and the EIA has been approved by authorized organization.	p	p

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E. Stakeholders' comments				
E.1. Brief description how comments by local stakeholders have been invited and compiled				
E.1.1. Have relevant stakeholders been consulted?	1, 2 20, 21	Yes, a workshop was held to gather the relevant stakeholder's comments. Local residents, workers of the power plant, local governmental officer have been consulted, the meeting minutes has been reviewed by the auditor.	p	p
E.1.2. Have appropriate media been used to invite comments by local stakeholders?	1, 2 20, 21	The project owner has published posters to invite relevant stakeholders to attend the workshop.	p	p
E.1.3. If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws?	1, 2	There are no regulations/laws in China for carrying out the stakeholder consultation process for this project activity.	p	p
E.1.4. Is the undertaken stakeholder process that was carried out described in a complete and transparent manner?	1, 2 20, 21	Yes, all the stakeholder living nearby has the opportunity to give their comments.	p	p
E.2. Summary of the comments received				
E.2.1. Is a summary of the received stakeholder comments provided?	1, 2	Yes, E.2 of the PDD give a summary of stakeholder comments received by the public stakeholder meeting.	p	p
E.3. Report on how due account was taken of any comments received				
E.3.1. Has due account been taken of any stakeholder comments received?	1, 2	No adjustments were necessary because no adverse comments have been received.	p	p

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F. Annexes 1 - 4				
F.1. Annex 1: Contact Information				
F.1.1. Is the information provided consistent with the one given under section A.3?	1, 2	Yes.	p	p
F.1.2. Is the information on all private participants and directly involved Parties presented?	1, 2	The information about Tangshan Xinfeng Thermal & Power Co., Ltd., Climate Change Capital Carbon Fund II S.à r.l. and Climate Change Capital Carbon Managed Account Limited is listed.	p	p
F.2. Annex 2: Information regarding public funding				
F.2.1. Is the information provided on the inclusion of public funding (if any) in consistency with the actual situation presented by the project participants?	1, 2	Yes, no public funding has been involved in the project; all costs are covered by bank loans and private equity.	p	p
F.2.2. If necessary: Is an affirmation available that any such funding from Annex-I countries does not result in a diversion of ODA?	1, 2	See F2.1.	p	p
F.3. Annex 3: Baseline information				
F.3.1. If additional background information on baseline data is provided: Is this information consistent with data presented by other sections of the PDD?	1, 2	Yes, the background information on OM and BM factor is provided which is consistent with data in other sections of the PDD.	p	p
F.3.2. Is the data provided verifiable? Has sufficient evidence been provided to the validation team?	1, 2	Yes. The data is consistent with NDRC issued data of Northeast China Grid.	p	p
F.3.3. Does the additional information substantiate / support statements given in	1, 2	Yes, the additional information also is presented in chapter B.6.	p	p

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other sections of the PDD?				
F.4. Annex 4: Monitoring information				
F.4.1. If additional background information on monitoring is provided: Is this information consistent with data presented in other sections of the PDD?	1, 2	No additional information is provided in Annex 4.	p	p
F.4.2. Is the information provided verifiable? Has sufficient evidence been provided to the validation team?	1, 2	See F.4.1.	p	p
F.4.3. Do the additional information and / or documented procedures substantiate / support statements given in other sections of the PDD?	1, 2	See F.4.1.	p	p

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Table 2 Resolution of Corrective Action and Clarification Requests

Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
<p>The project is described partially. The auditor found the proposed project activity is also using the BFG generated by another company named Beishitigang. This is not included in the PDD.</p> <p>And the electricity generated by the proposed project activity is offered to Guofeng Iron & steel Co, instead of North China Power Grid.</p> <p><u>Corrective Action Request No.1.</u></p> <p>The statements in the PDD should also be revised accordingly. The gas supply contract with Beishitigang should be submitted to the DOE.</p>	A.2.1	<p><u>PP's first response:</u></p> <p>We have corrected the PDD. Clarifying that gas is received from 2 separate sources and that electricity is supplied to Guofeng Iron & Steel. The latter is connected to the North China Power grid. We will provide the gas supply contracts to the DOE (available surplus gas from both sources mentioned in Section A.2 is from the gas purchase contracts). Additionally, we have corrected the IRR calculation (based on gas prices from the two gas purchase contracts), which we will also provide to the DOE.</p> <p><u>DOE's first response:</u></p> <p>In the PDD Tanshan Bainite Iron and Steel Group Co., Ltd. Is mentioned to be the second gas supplier. Our local auditor mentioned a company named Beishitigang to supply gas to the project. Please clarify.</p> <p><u>PP's second response:</u></p> <p>The two are the same entity. We believe the name we use in the PDD is correct.</p> <p>-“Gang” is pinyin for “Steel”.</p> <p>-“Bei Shi Ti” is the literal pinyin translation of the Chinese characters that make up part of the name of the entity. We believe this literal pinyin translation of the characters is not correct and that “Bainite” (i.e. a mostly metallic substance that exists in steel after certain heat treatments) is the appropriate English translation. We therefore use “Tangshan Bainite Iron and Steel Group</p>	<p>⌋ The gas supply contract with Beishitigang has been delivered to the DOE and was checked and verified by the DOE.</p>

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		Co. Ltd.” as we believe this is the most appropriate translation of the official Chinese name of the entity.	
<p>The proposed project is located in the north of Fengnan District, Tangshan City, Hebei Province, People’s Republic of China.</p> <p><u>Corrective Action Request No.2.</u></p> <p>The geographical coordinates should be more precise including the seconds. Hence, the project should be easily identified using Google Earth.</p>	A.4.1.1	<p><u>PP’s first response:</u></p> <p>Completed</p>	<p>⌋ The geographical coordinates have been supplemented.</p>
<p>Although the power plant operational training contract has been signed, there is no statement in the PDD.</p> <p><u>Corrective Action Request No.3.</u></p> <p>Please provide how, and when the training has been performed, as well as the training program for the project activity on the PDD.</p>	A.4.3.9	<p><u>PP’s first response:</u></p> <p>Revised</p>	<p>⌋ Training Plan has been mentioned in the PDD</p>
<p>The main equipments are installed and the power plant is commissioning, so there is no risk of delay. The PDD contains no project schedule.</p> <p><u>Corrective Action Request No.4.</u></p> <p>The time schedule of the implementation of the project should be included into the PDD.</p>	A.4.3.10	<p><u>PP’s first response:</u></p> <p>Revised</p>	<p>⌋ Implementation schedule has been included into the PDD.</p>
<p>Yes. The form is correctly applied according to the version 3 of PDD template.</p> <p><u>Corrective Action Request No.5.</u></p> <p>The crediting period will start after the registration of this project, so the starting date of the crediting period and the estimated emis-</p>	A.4.4.1	<p><u>PP’s first response:</u></p> <p>The starting data have been revised to Jan. 1, 2008 and the emission reductions in 2007 and 2017 have been revised.</p>	<p>⌋</p>

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sion reductions in 2007 and 2017 have to be revised.		<u>PP's second response:</u> We have corrected the starting date of the crediting period to the 1 st of June 2008 throughout the PDD.	
The project activity is the "first of its kind" in Hebei Province. <u>Corrective Action Request No.6.</u> As conservative approach, the common practice analysis should be referred to all North China Grid.	B.5.10	<u>PP's first response:</u> Revised.	p
Yes. A list of parameters is clearly presented. <u>Corrective Action Request No.7.</u> The following parameters have to be included in B.6.2 <ul style="list-style-type: none"> - Power generation by source - Internal power consumption rate of power plants - Efficiency of advanced thermal power plant additions - Capacity by power generation source - Electricity imports from connected grids 	B.6.2.1	<u>PP's first response:</u> Revised.	p
<u>Corrective Action Request No.8.</u> <ul style="list-style-type: none"> - According to the statement of the project owner, the electricity generated by the proposed project activity is offered to Guofeng Iron & steel Co, instead of North China Power Grid. In emergency, electricity needed by the proposed project will be provided by Guofeng Iron & steel Co. So 	B.7.1.1	<u>PP's first response:</u> Revised. <u>DOE's first response:</u> The monitored parameters should be consistent with the methodology, e.g the unit, the description of the measurement etc. <u>PP's second response:</u>	p

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<p>the description about parameters E_{Gy} and E_{Gin} presented in the PDD has to be revised.</p> <ul style="list-style-type: none"> - According to the used methodology, the parameters: E_{G_{Gen}} (Total electricity generated) and E_{G_{AUX}} (Auxiliary electricity) have to be monitored. - QA/QC procedures have to be appropriately presented. 		<p>We have corrected Section B.7.1 (and accordingly Section B.7.2) to include E_{G_{Gen}}, E_{G_{AUX}}, and E_{G_{yen}} in accordance with the methodology and the requirements by the DOE (E_{G_{in}} is no longer included as this is not required).</p>	
<p><u>Corrective Action Request No.9.</u></p> <p>The description about meter installation and data collection is not consistent with actual situation and has to be revised.</p>	B.7.2.3	<p><u>PP's first response:</u></p> <p>Revised.</p>	<p>Ⓟ</p>
<p>A 20 years operation lifetime at least has been clearly defined.</p> <p>The proposed project started construction in September 2006. CDM considering evidence at the early stage of the project activity is verified by the audit team.</p> <p><u>Corrective Action Request No.10.</u></p> <p>Please define the project starting date based on actual situation.</p>	C.1.1	<p><u>PP's first response:</u></p> <p>The construction starting date is Sep.26, 2006. PDD has been revised.</p>	<p>Ⓟ</p>
<p>The total investment IRR calculation is presented</p> <p><u>Clarification Request No. 1.</u></p> <ul style="list-style-type: none"> - Please provide the evidence to show whether only the project owner could apply for this project or there is other investor possible. If only the project owner 	B.5.4	<p><u>PP's first response:</u></p> <p>The sources of basic data in IRR are shown in the excel. Equity IRR is used.</p> <p><u>PP's second response:</u></p> <p>We will provide a clear IRR calculation sheet to the DOE which specifies which data sources have been used. The original data sources will also be provided to</p>	<p>Ⓟ The relevant evidences and the IRR calculation have been checked and verified by the DOE.</p>

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<p>could apply for this project, equity IRR has to be used.</p> <ul style="list-style-type: none"> - The source of each basic data in IRR calculation excel sheet should be delivered to the DOE. - The sensitive analysis calculation should be submitted to the DOE. 		<p>the DOE in a transparent manner.</p> <p>Sensitivities are presented in the sheet and can be conveniently checked by adding or deducting 5 or 10% from the total investment cost, annual power supply cost, or O&M cost in the tab "project information".</p>	
<p><u>Clarification Request No. 2.</u></p> <ul style="list-style-type: none"> - The evidence of technology barrier has to be submitted to the DOE. - P11 sub-step 3a, it is stated that the boilers are designed for burning 100% BF-gas, but the project activity will use a mix gas of BF-gas and BOE-gas. Please clarify. 	B.5.8	<p><u>PP's first response:</u></p> <p>BF-gas is characterised by little combustible components (such as CO and H₂), low calorific value, hardly burning and low burning efficiency, so the boilers need to be specially designed so that BF-gas is more flammable and burn more efficiently. The boilers should be specially designed for burning 100% BF-gas. BOE-gas contains more combustible components (such as CO and H₂), so the mixed gas containing of BF-gas and BOE-gas is more flammable and burn efficiently.</p> <p>The content in PDD has been revised.</p> <p><u>DOE's first response:</u></p> <p>The third party evidence is necessary for the demonstration of the barriers.</p> <p><u>PP's second response:</u></p> <p>We have deleted the barrier.</p>	<p>⌋ In accordance with the tool for the demonstration and assessment of additionality the barrier analysis has been skipped.</p>
<p><u>Clarification Request No. 3.</u></p> <p>Please provide English translation about CDM considering evidence to the DOE.</p>	C.1.1	<p><u>PP's first response:</u></p> <p>See to the file 'Board Decision'.</p> <p><u>Additional comment from PP:</u></p> <p>We have added information of the consideration of CDM in the PDD (in the conclusion of Section B.5), and will provide evidence for this consideration to the DOE.</p>	<p>⌋</p>

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Table 3 Unresolved Corrective Action and Clarification Requests (in case of denials)

Clarifications and / or corrective action requests by validation team	Id. of CAR/CR	Explanation of Conclusion for Denial
-	-	-

Annex 2: Information Reference List

Final Report	2008-02-17	Validation of the “Tangshan Xinfeng Thermal & Power Co., Ltd. Waste Gas Power Generation Project” Information Reference List	Page 1 of 2	 Industrie Service
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Reference No.	Document or Type of Information								
1.	Project Design Document for CDM project “Tangshan Xinfeng Thermal & Power Co., Ltd. Waste Gas Power Generation Project”, version 01 • dated 19th, June, 2007.								
2.	Consolidated baseline methodology for grid-connected electricity generation from renewable sources, ACM0002, version 06								
3.	Consolidated methodology for waste gas and/or heat and/or pressure for power generation, ACM0004, version 2.								
4.	Tool for the demonstration and assessment of additionality, version 03.								
5.	Participant list of on-site interview, signed on 12 th , July, 2007.								
6.	<p>On-site interviews at the project site in Fengnan district, Tangshan city, Hebei province, P.R China., conducted on July, 12th, 2007 by auditing team of TÜV SÜD:</p> <p>Validation team:</p> <table> <tr> <td>Mr. Wan Feng</td><td>CDM Auditor, TÜV Product Service Ltd.</td></tr> <tr> <td>Ms. CHEN Xiaoying</td><td>CDM Auditor trainee, TUV Product Service Ltd.</td></tr> </table> <p>Interviewed persons:</p> <table> <tr> <td>Mr. Wang Chunhe</td><td>Engineer of Tangshan Xinfeng Thermal & Power Co., Ltd.</td></tr> <tr> <td>Mr. Sun Xun</td><td>General Manager of Beijing Yutong Co., Ltd.</td></tr> </table>	Mr. Wan Feng	CDM Auditor, TÜV Product Service Ltd.	Ms. CHEN Xiaoying	CDM Auditor trainee, TUV Product Service Ltd.	Mr. Wang Chunhe	Engineer of Tangshan Xinfeng Thermal & Power Co., Ltd.	Mr. Sun Xun	General Manager of Beijing Yutong Co., Ltd.
Mr. Wan Feng	CDM Auditor, TÜV Product Service Ltd.								
Ms. CHEN Xiaoying	CDM Auditor trainee, TUV Product Service Ltd.								
Mr. Wang Chunhe	Engineer of Tangshan Xinfeng Thermal & Power Co., Ltd.								
Mr. Sun Xun	General Manager of Beijing Yutong Co., Ltd.								
7.	Applications Report for “Tangshan Xinfeng Thermal & Power Co., Ltd. Waste Gas Power Generation Project”, issued by Northern Design Institute, dated July, 2005.								
8.	Approval of Tangshan Xinfeng Thermal & Power Co., Ltd. Waste Gas Power Generation Project, issued by Hebei development and reform commission, dated 12 th , Dec, 2006.								
9.	EIA of “Tangshan Xinfeng Thermal & Power Co., Ltd. Waste Gas Power Generation Project”, issued by Hebei zhonglian energy and environmental protection technology. Co. dated Aug, 2006.								
10.	Approval of EIA of “Tangshan Xinfeng Thermal & Power Co., Ltd. Waste Gas Power Generation Project”, issued by Hebei EPB, dated 24th, Aug, 2006.								

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		Information Reference List		

Reference No.	Document or Type of Information
11.	Bank loan signed with Bank of China Tangshan branch, RMB 50million.
12.	Loan contract signed with Tangshan fengnan district economic development company, RMB 30million.
13.	2*130t/h boiler purchasing contract, signed with Tangshan Xinde boiler group, dated 15 th , July, 2006.
14.	2*25MW turbine generator purchasing contract, signed with Nanjing turbine generator group, dated 19 th , July, 2006.
15.	BFG supply contract, signed with Guofeng Iron& steel Co., dated 21 st , June, 2006. gas price: 0.045yuan/m3, permanent effective.
16.	Electricity supply contract, signed with Guofeng Iron& steel Co., dated 21 st , June, 2006. electricity price: 0.4yuan/KWh, permanent effective.
17.	Business license of Tangshan Xinfeng Thermal & Power Co., Ltd, issued by Tangshan city Fengnan district industry and business administration, dated 19 th , Aug, 2005.
18.	Training service contract signed with Tangshan Iron& steel Co, dated 29 th , Aug, 2006. (for power plant operation)
19.	Gas contract between Xinfeng and Beinite Steel, dated Aug. 1 st 2007
20.	Tangshan Xinfeng Thermal & Power Co., Ltd Directorate decision • dated 18 th May, 2006. submission date: 1 st , Oct 2007.
21.	Purchasing Contract for BFG boiler, dated 13 th and 15 th July, 2006
22.	Bank loan agreements, dated 21 st Sept. 2006, 13 th Nov. 2006, 24 th Feb. 2007 and 2 nd March 2007
23.	Relevant pages of the Feasibility study report
24.	Report for World Bank; China Energy Efficiency Financing Project; Tokyo Energy Efficiency Group, dated 31 st December, 2006
25.	China Electric Power Yearbook 2003-2005
26.	China Energy Statistical Yearbook 2000-2005