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Validation Report

Sulige Fuel Gas Power Generation Co., Ltd. of Inner Mongolia

VALIDATION OF THE CDM-PROJECT: SULIGE NATURAL GAS BASED POWER GENERATION PROJECT

REPORT NO. 905181

2008, July 09

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

Report No.	Date of first issue	Revision No.	Date of this revision	Certificate No.
905181	2007-05-21	4	2008-07-09	-

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: Jiangsu TUV Product Service Ltd. Shanghai Branch 16F, West Building New Hua Lian Mansion No. 775 Huai Hai Road - 200020 Shanghai P. R. CHINA
Client: Sulige Fuel Gas Power Generation Co., Ltd. of Inner Mongolia 017300 Wushen Banner of Erdos City Inner Mongolia Autonomous Region P. R. CHINA	Project Site(s): Peak Regulation Power Plant near Wu-Tao Road Dabuchake Town, Wushen Banner, Erdos City, Inner Mongolia Autonomous Region P. R. CHINA
Project Title: Sulige Natural Gas based Power Generation Project	
Applied Methodology / Version: AM0029 vers. 01, ACM0002 vers. 06	Scope(s): 1
First PDD Version: Date of issuance: 2006-10-30 Version No.: 01 Starting Date of GSP 2006-11-08	Final PDD version: Date of issuance: 2007-12-01 Version No.: 05
Estimated Annual Emission Reduction:	593 981 tons CO _{2e}
Assessment Team Leader: Dr. Sven Kolmetz	Further Assessment Team Members: Cuiyun Zhang
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
AOR	Ammonia Oxidation Reactor
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
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

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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:
Sulige Natural Gas based 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 subdivided. 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 (L), 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

<p>If the conclusions from table 1 are either a Corrective Action Request or a Clarification Request, these should be listed in this section.</p>	<p>Reference to the checklist question number in Table 1 where the Corrective Action Request or Clarification Request is explained.</p>	<p>The responses given by the client or other project participants during the communications with the validation team should be summarised in this section.</p>	<p>This section should summarise the validation team's responses and final conclusions. The conclusions should also be included in Table 1, under "Final PDD".</p>
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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
<p>If the final conclusions from table 2 results in a denial the referenced request should be listed in this section.</p>	<p>Identifier of the Request.</p>	<p>This section should present a detail explanation, why the project is finally considered not to be in compliance with a criterion.</p>

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 in written in bold letters):

Name	Qualification	Coverage of technical scope	Coverage of sectoral expertise	Host country experience
Dr. Sven Kolmetz	ATL	L	L	
Cuiyun Zhang	A			L

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.

Cuiyun Zhang 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.

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 December 8th, 2006 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. Zheng Zhaoning	Tuttle International Co., Ltd. (Consultant)
Ms. Pan Tao	Tuttle International Co., Ltd. (Consultant)
Mr. Meng Tao	The Su Li Ge Electric Company Ltd., Inner Mongolia (Deputy General Manager)
Mr. Niu Wenbin	The Su Li Ge Electric Company Ltd., Inner Mongolia (Senior Engineer)
Mr. Cui Jinbao	The Su Li Ge Electric Company Ltd., Inner Mongolia (Senior Engineer)
Mr. Masanobu Kataoka	Chubu Electric Power Co., Ltd. (Project Manager)
Ms. Lu Yuhui	KOE Environmental Consultancy, Inc., Japan (Directing Manager)
Mr. Zhang Fan	KOE Environmental Consultancy, Inc., Japan (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

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

The Sulige Natural Gas based Power Generation Project is a peak regulation power plant including installation of two sets of 150 MW level air-cooling gas-steam combined cycle power generation equipments which use natural gas to generate electricity. The annual consumption of natural gas by the project is 247 million Nm³. It is estimated that the feed-in electricity to the North China Grid from this project is approximately 1.196 GWh per year via two 220 kV outlet circuits.

As informed above all findings are summarized in table 2 of the attached validation protocol. In total the assessment team expressed 12 Corrective Action Requests.

The required formal changes have been made:

- a time schedule has been added to the final version of the PDD [CAR2].
- the geographical coordinates are given [CAR4].
- the currency in table 3, B.4. of the PDD has been changed [CAR6].
- the IRR calculation sheet has been delivered. [CAR 5]
- Chubu Electric Power Co., Inc., Japan has been determined as the investor of the project [CAR3].
- the starting date of the crediting period had to be revised before uploading.

Hence, the CAR are resolved accordingly.

Concerning the emission reductions and monitoring procedures the missing parameters have been added to or updated in the PDD [CAR7 to 12].

Furthermore the required standards and the measurement accuracy of particular parameters have been described more detailed [CAR8, CAR10].

Hence, the PDD complies with the requirement of the monitoring methodology.

For the BM calculation the PDD adopts modified methods agreed by the EB for the approved methodologies AM0005 and AMS I.D. because plant specific data are not available in China. The emission factor of the thermal power plants is calculated by the proportion of the emissions of coal, gas and oil times the emission factor of the best available coal, gas and oil power plant as defined and published by the Chinese DNA. The new thermal capacity installation that exceeds 20% in the last years, for which data are available, is finally assessed with this factor.

The additionality has been evidenced by investment analysis. The benchmark used (IRR) and the IRR calculation will be uploaded together with the PDD.

Hence, the project complies with the requirements.

As the project has been requested for review additional corrections have been added into the PDD and validated by the DOE:

Request 3; Issue 1:

The DOE shall further clarify how they validated that the CDM was considered prior to the decision to carry on the project activity.

Response by TÜV SÜD:

According to the annex 2 of the validation report the reference 28 (signed contract with the CDM consultant KOE) delivered the evidence. The documents have been validated during the on-site visit. For clarification the documents were attached to the response (cover page and signed page of the contract with KOE in Chinese and English as one PDF document)

Request 3, Issue 2:

The DOE shall further clarify how they have validated the feasibility study as they state in the Validation report (page 16 of 44) that “The Investment analysis should be based on the proofed figures of the feasibility study instead of the figures delivered by the project owner as far as no additional evidence can be delivered”.

Response by TÜV SÜD:

For the additionality the information available during the decision making process before starting construction is relevant. Hence, the DOE was asking for evidences available from that time period. The feasibility study (FSR) has been validated on-site and the figures used for the IRR calculation and the figures of the FSR have been compared. As the FSR has been officially approved by the provincial authorities (ref. 9) no further evidences have been requested. The approval and the main figures have been uploaded together with the PDD to deliver the evidences. If figures have been used that are not based on the FSR the relying references have been requested and checked (see annex 2 of the validation report).

Request 1,2 issue 1 Request 3: Issue 3:

Further clarification is required as to whether and how all relevant power plant technologies that have recently been constructed or are under construction or are being planned, including those of other investors, were considered as additional baseline scenario candidates.

Project owner's response:

We understand that this issue focuses on the requirement of methodology AM0029 as “Note further that the baseline scenario candidates identified may not be available to project participants, but could be other stakeholders within the grid boundary (e.g. other companies investing in power capacity expansions). Ensure that all relevant power plant technologies that have recently been constructed or are under construction or are being planned (e.g. documented in official power expansion plans) are included as plausible alternatives.” We would like to clarify, with further information and explanation, in combination with the Section B.4 of the PDD of the Project, as following:

(1) Determine “relevant power plant technologies that have recently been constructed”

The Project is located in Inner Mongolia Autonomous Region. According to data provided in China Electric Power Yearbook, installed capacity of different power generation technology in Inner Mongolia Autonomous Region in 2004 is summarized in Table 1 below. These data are also adopted by China's DNA as a part of *Notification on Determining Baseline Emission Factor of China's Grid* and provided in Table A9 in the PDD.

Table 1. Installed capacity of Inner Mongolia Power Grid in 2004

	2004
Thermal power (MW)	13641.5
Hydro power (MW)	567.9
Nuclear power (MW)	0
Wind power and other (MW)	111.7
Total (MW)	14321.2

It can be seen from Table 1 that "relevant power plant technologies that have recently been constructed" in Inner Mongolia Autonomous Region include fossil-fuel fired power, hydropower and wind power and other.

(2) Determine "relevant power plant technologies that are under construction or are being planned"

The Project is located in Inner Mongolia Autonomous Region. In the "*Eleventh-five*" Year Plan for Energy Industry of Inner Mongolia Autonomous Region^{*} which provide guidance on energy industry for 2006~2010, only construction of coal fired power plants, wind power, solar power plants and biomass power plants are mentioned.

For coal fired power plants, based on *2004~2010 Power Plant Construction Plan of Inner Mongolia Autonomous Region* drafted by Inner Mongolia Electric Power (Group) Co., Ltd., power plants that are under construction or are being planned in Inner Mongolia Autonomous Region besides the Project are all coal fired power plants with unit capacity of 150 MW, 200 MW, 300 MW or 600 MW. All of these projects are invested by the power plant investors within the Inner Mongolia Autonomous Region.

Therefore, "relevant power plant technologies that are under construction or are being planned" in Inner Mongolia Autonomous Region include coal fired power plants with unit capacity of 150 MW, 200 MW, 300 MW or 600 MW, wind power, solar power plants and biomass power plants.

(3) Consideration of relevant laws and regulations

Based on the analysis of (1) and (2) above, "all relevant power plant technologies that have recently been constructed or are under construction or are being planned" in Inner Mongolia Autonomous Region include coal fired power plants with unit capacity of 150 MW, 200 MW, 300 MW or 600 MW, hydropower, wind power, solar power plants and biomass power plants.

^{*} http://www.xjgl.gov.cn/zwgkj/jhgh/jhgh_sywgh/zzq115/200705/t20070524_11308.html

(As a new added evidence, descriptions referred in Chinese and English are all provided as one PDF document attached to this response)

Validation of the CDM Project:
Sulige Natural Gas based Power Generation Project



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Annex 1: Validation Protocol

Validation Protocol

Project Title: Sulige Natural Gas based 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	The project is clearly identified by the location and the energy source. The project owner is the Sulige Fuel Gas Power Generation Co.	L	L
A.1.2. Are there any indication concerning the revision number and the date of the revision?	1	For the GSP the first version has been delivered, dated on October 30 th , 2006.	L	L
A.1.3. Is this consistent with the time line of the project's history?	1	Yes. The project started in 10/12/2004 with the release of the feasibility report by the NDRC. On 12/4/2005 the contract with the CDM consultant has been signed. Construction started on 18/4/2005 and operation shall start in January 2007. Feed in of electricity is planned for April 2007.	L	L
A.2. Description of the project activity				
A.2.1. Is the description delivering a transparent overview of the project activities?	1	The project is a peak regulation power plant comprising two sets of 150 MW gas steam combined cycle power generation equipment. The annual gas consumption will be 200 million m ³ natural gas. The electricity generation will be around 864 GWh per year.	L	L
A.2.2. What proofs are available demonstrating that the project description is in compliance with the actual situation or planning?	1, 6, 7, 30	The project description has been checked during the on-site visit. The power plant has been seen installed (see pictures). Further documents have been delivered: <ul style="list-style-type: none"> • Feasibility report • Approval of feasibility report by Inner Mongolian DRC • EIA • Approval of EIA • Purchase Agreement of Equipment 		L

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
A.2.3. Is the information provided by these proofs consistent with the information provided by the PDD?	1, 6, 7, 30	Most of the documents are consistent with the description in the PDD. Bt there are some figures that are different. <u>Corrective Action Request No.1.</u> The Investment analysis should be based on the proofed figures of the feasibility study instead of the figures delivered by the project owner as far as no additional evidence can be delivered.	CAR1	L
A.2.4. Is all information presented consistent with details provided by further chapters of the PDD?	1	The figures for the determination of the baseline scenario are identical to the figures used for the additionality discussion. <u>Corrective Action Request No.2.</u> The time schedule of the project activity should be included as explained during the audit.	CAR2	L
A.3. Project participants				
A.3.1. Is the form required for the indication of project participants correctly applied?	1	<u>Corrective Action Request No.3.</u> The purchasing party has to be determined prior to registration.	CAR3	L
A.3.2. Is the participation of the listed entities or Parties confirmed by each one of them?	1	Open issue	Open issue	L
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	Yes, but see A.3.1.	L	L
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, 7, 30	<u>Corrective Action Request No.4.</u> The GPS data or a postal code has to be delivered.	CAR4	L
A.4.1.2. How is it ensured and/or demonstrated,	1	See A.2.2.	L	L

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
that the project proponents can implement the project at this site (ownership, licenses, contracts etc.)?				
<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 category is scope 1, energy industries.	L	L
<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, 20, 21, 22, 23	The gas turbines will be manufactured by the well-known Nanjing Turbine and Electric Machinery Co.; Ltd under license from GE and Brush. A combined cycle will be implemented.	L	L
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, 20, 21, 22, 23	As there is a displacement of electricity from coal-fired power plants by a gas-fired power plant the impact is obvious.	L	L
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, 20, 21, 22, 23	The turbines are manufactured under the license of GE from United States resp. of Brush from UK. Hence, there will be a technology transfer.	L	L
A.4.3.4. Is the technology implemented by the project activity environmentally safe?	1, 20, 21, 22, 23	There is no doubt that the gas turbines that will be installed are environmentally safe.	L	L
A.4.3.5. Is the information provided in compliance with actual situation or planning?	1, 20, 21, 22, 23	The compliance with the actual planning has been checked by technical agreements between the project owner and the gas turbine manufacture. (see Annex 2).	L	L
A.4.3.6. Does the project use state of the art technology and / or does the technology result in a significantly better performance than	1, 20, 21, 22, 23	The gas and steam turbines are state of the art from an international producer. Commonly used technologies in Inner Mongolia are mainly coal-fired power plants.	L	L

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any commonly used technologies in the host country?				
A.4.3.7. Is the project technology likely to be substituted by other or more efficient technologies within the project period?	1, 20, 21, 22, 23	It can not be expected that there will be a substitution during the lifetime as the equipment is newly ordered.	L	L
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, 20, 21, 22, 23	As the staff is quite experienced in operating a power plant we do not expect extensive training but some basic training for the special requirements of this kind of equipment.	L	L
A.4.3.9. Is information available on the demand and requirements for training and maintenance?	25, 26, 27	The training agreement of Plant Operation and Maintenance between Shenzhen Nanshan Power Plant and The Su Li Ge Electric Company Ltd. was available during the audit as well as a training certificate of the operator and a training agreement of the grid operation between Dalate Power Plant and Su Li Ge Electric Company Ltd.	L	L
A.4.3.10. Is a schedule available for the implementation of the project and are there any risks for delays?	1	See CAR2	L	L
A.4.4. Estimated amount of emission reductions over the chosen crediting period				
A.4.4.1. Is the form required for the indication of projected emission reductions correctly applied?	1	The estimation of the emission reductions is shown for the first crediting period starting April 2007 until March 2014 in the required table.	L	L
A.4.4.2. Are the figures provided consistent with other data presented in the PDD?	1	Yes.	L	L
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	1, 7	The IRR calculation has been checked and there is no public funding necessary. But there were discrepancies between the figures used in the IRR calculation and the figures of the feasibility	See CAR1	L

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD								
project participants?		study. This has to be changed or additional evidences for the figures used has to be delivered.										
A.4.5.2. Is all information provided consistent with the details given in remaining chapters of the PDD (in particular annex 2)?	1, 7	Yes.	L	L								
B. Application of a baseline and monitoring methodology												
B.1. Title and reference of the approved baseline and monitoring methodology												
B.1.1.1. Are reference number, version number, and title of the baseline and monitoring methodology clearly indicated?	1, 2	AM0029 version 1 in combination with ACM0002 version 6 has been used.	L	L								
B.1.1.2. Is the applied version the most recent one and / or is this version still applicable?	1, 2	This versions are the most recent one and both are still applicable.	L	L								
B.2. Justification of the choice of the methodology and why it is applicable to the project activity												
B.2.1.1. Is the applied methodology considered the most appropriate one?	1, 2	For this kind of project activity no other methodology is available.	L	L								
B.2.2. Criterion 1: construction and operation of a new natural gas fired grid-connected electricity generation plant	1, 2	<table border="1"> <thead> <tr> <th>Applicability checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <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> </tbody> </table>			Applicability checklist	Yes / No	Criterion discussed in the PDD?	Yes	Compliance provable?	Yes	Compliance verified?	Yes
					Applicability checklist	Yes / No						
					Criterion discussed in the PDD?	Yes						
					Compliance provable?	Yes						
Compliance verified?	Yes											
B.2.3. Criterion 2: The geographical/ physical boundaries of the baseline grid can be clearly identified and information pertaining to the grid and estimating baseline	1, 2	<table border="1"> <thead> <tr> <th>Applicability checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <tr> <td>Criterion discussed in the PDD?</td> <td>Yes</td> </tr> <tr> <td>Compliance provable?</td> <td>Yes</td> </tr> </tbody> </table>			Applicability checklist	Yes / No	Criterion discussed in the PDD?	Yes	Compliance provable?	Yes		
					Applicability checklist	Yes / No						
					Criterion discussed in the PDD?	Yes						
Compliance provable?	Yes											

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emissions is publicly available		Compliance verified? Yes												
B.2.4. Criterion 3: Natural gas is sufficiently available in the region or country, e.g. future natural gas based power capacity additions, comparable in size to the project activity, are not constrained by the use of natural gas in the project activity	1, 2	<table border="1"> <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	L	L		
Applicability checklist	Yes / No													
Criterion discussed in the PDD?	Yes													
Compliance provable?	Yes													
Compliance verified?	Yes													
B.3. Description of the sources and gases included in the project boundary														
B.3.1. Source: Power generation Gas(es): CO2 Type: Baseline Emissions	1	<table border="1"> <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	L	L
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: On-site fuel combustion Gas(es): CO2 Type: Project Emissions	1	<table border="1"> <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	L	L
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.3.3. Do the spatial and technological boundaries as verified on-site comply with the discussion provided by / indication included to	1	According to methodology AM0029, the spatial extent of the project boundary includes the project site and all power plants connected physically to the baseline grid as defined in ACM0002.	L	L										

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the PDD?		Electricity generated by the Project will be transmitted to the Inner Mongolia Power Grid. Inner Mongolia Power Grid is an integral part of the North China Grid which is composed of Beijing Power Grid, Tianjin Power Grid, Hebei Power Grid, Shanxi Power Grid, Shandong Power Grid and Inner Mongolia Power Grid.		
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 to the project activity been identified and discussed by the PDD? Why can this list be considered as being complete?	1	<p>There are four alternative baseline scenarios considered:</p> <ul style="list-style-type: none"> • The project activity without CDM • Other energy generation using natural gas such as simple cycle gas or steam turbines • Other energy generation using coal, oil or renewable sources • Importing electricity from the grid <p>This list can be considered to be complete as there are no other realistic possibilities of electricity generation remaining that delivers the same service (peak regulation).</p>	L	L
B.4.2. Does the project identify correctly and excludes those options not in line with regulatory or legal requirements?	16	The installation of small coal-fired power plants has been ruled out due to legal restriction. Other baseline scenarios have been ruled out due to technical and financial reasons according to AM0029.	L	L
B.4.3. Have applicable regulatory or legal requirements been identified?	16	The Notice on Strictly Prohibiting the Installation of Fuel-fired Generators with the Capacity of 135MW or below (decree no. 2002-6), General Office of the State Council has been delivered to the DOE.	L	L

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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	The benchmark analysis method (option III) has been adopted in compliance with the additionality tool.	L	L
B.5.2. In case of Option III (benchmark analysis): Is the most suitable financial indicator clearly identified (IRR, NPV, cost benefit ratio, or (levelized) unit cost)?	29	The IRR has been chosen as financial indicator in compliance with the additionality tool.	L	L
B.5.3. 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?	29	As the bench mark analysis has been chosen only the IRR of the project activity has to be calculated.	L	L
B.5.4. In case of Option II or Option III: Is the analysis presented in a transparent manner including publicly available proofs for the utilized data?	7	<p>Most of the parameters are not identical to those in the feasibility study (annual output, investment, bus bar tariff - see CAR1). The additional documents shown in the foot note of the PDD have been delivered during the on-site audit. The IRR calculation has been delivered as Excel-sheet to the DOE. The calculation is correct.</p> <p><u>Corrective Action Request No.5.</u> The IRR calculation has to be delivered as PDF version ready to upload together with the PDD.</p> <p><u>Corrective Action Request No.6.</u> Table 3 should be delivered with costs in \$ instead of RMB according to the methodology. The exchange rate should be mentioned.</p>	CAR5 CAR6	L

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B.5.5. 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)?	17	There is only one project activity, the Jingfeng Thermal Power Plant that is applying for CDM as well. Besides this there are no other project activities found after investigations carried out by the DOE.	L	L
B.5.6. 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	Not applicable.	L	L
B.5.7. 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	The CER will help the project to increase financial reliability but will not be sufficient to meet the IRR benchmark. Despite this the CER can support the project in getting more political and financial (subsidies) support and strengthen the financial indicators of the project.	L	L
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, 18, 19	The methodology AM0029 is applied in the context of the Project in the following five steps: <ul style="list-style-type: none"> · First, determine the project boundary; · Second, calculate the baseline GHG emissions; · Third, calculate the project GHG emissions; · Fourth, calculate the project leakage; · Fifth, calculate the emission reductions. 	L	L
B.6.1.2. Is every selection of options offered by the methodology correctly justified and is this justification in line with the situation veri-	1, 2, 18, 19	There are three options for calculating the baseline emissions and the option resulting in the lowest emissions has to be considered: <ol style="list-style-type: none"> 1) OM grid factor 	L	L

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fired on-site?		<p>2) BM grid factor</p> <p>3) Emission factor of the baseline scenario</p> <p>In this case the baseline scenario would be the construction of a new coal fired power plant. The comparison of the three options clearly identifies option 2 as the baseline option that has to be used. This choice is quite obvious.</p>		
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, 18, 19	The project emissions are caused by the burning of natural gas for electricity generation. Hence, the project emissions clearly result by multiplication of the gas volume and the emission factor. Both parameters are completely identified.	L	L
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, 18, 19	The same is valid for the baseline emissions as these are the emissions of the coal fired power plant resp. the OM or BM factor. Using the BM factor results into the lowest emissions and for that reason this parameter has been adopted. The calculation method is transparently demonstrated in Annex 3. Moreover the BM factor has been published by the Chinese DNA, the NDRC.	L	L
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, 18, 19	According to methodology AM0029, leakage emission includes the fugitive CH4 emissions associated with fuel extraction, processing, transportation and distribution of natural gas used in the project plant and fossil fuels used in the grid in the absence of the project activity. The leakages with and without the project activity have to be determined, this means the leakages of upstream methane emissions of gas fired versus coal fired electricity generation. In this case the leakages are zero.	L	L

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B.6.1.6. Are the formulae required for the determination of emission reductions correctly presented?		The emission reductions are determined by the difference between baseline and project emissions. They are correctly presented.	L	L																		
<i>B.6.2. Data and parameters that are available at validation</i>																						
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, 18, 19	Corrective Action Request No.7. In table B.6.2. and B.6.7.1 all parameters that are described in the methodology should be mentioned completely. If they have not to be monitored then the non-applicability should be declared. There are different letters used for the identification of the share of coal-fired generation on page 22 and 27 (the Greek phi and lamda). The description should be consistent!	CAR7	L																		
B.6.2.2. Parameter Title: Baseline emissions BEy	1, 2, 18, 19	<table border="1"> <thead> <tr> <th>Data Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <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> </tbody> </table>	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	L	L
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.6.2.3. Parameter Title: Project emissions PEy	1, 2, 18, 19	<table border="1"> <thead> <tr> <th>Data Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <tr> <td>Title in line with methodology?</td> <td>yes</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>yes</td> </tr> </tbody> </table>	Data Checklist	Yes / No	Title in line with methodology?	yes	Data unit correctly expressed?	yes	L	L												
Data Checklist	Yes / No																					
Title in line with methodology?	yes																					
Data unit correctly expressed?	yes																					

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		<table border="1"> <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>	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								
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.6.2.4. Parameter Title: Leakages LEy	1, 2, 18, 19	<table border="1"> <thead> <tr> <th>Data Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <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 (0)</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>n.a.</td> </tr> </tbody> </table>	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 (0)	Has this value been verified?	yes	Choice of data correctly justified?	yes	Measurement method correctly described?	n.a.	L	L
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 (0)																					
Has this value been verified?	yes																					
Choice of data correctly justified?	yes																					
Measurement method correctly described?	n.a.																					
<i>B.6.3. Ex-ante calculation of emission reductions</i>																						
B.6.3.1. Is the projection based on the same procedures as used for future monitoring?	1, 2, 18, 19	The projection is based on the electricity produced and natural gas used. The estimated figures will be metered after starting of the project.	L	L																		
B.6.3.2. Are the GHG calculations documented in a complete and transparent manner?	1, 2, 18, 19	The calculations are complete and transparent and have been recalculated by the DOE.	L	L																		
B.6.3.3. Is the data provided in this section consis-	1, 2,	There are no inconsistencies, but the data used for the calculation	L	L																		

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tent with data as presented in other chapters of the PDD?	18, 19	are based on un-evidenced figures of the project owners instead of the approved figures of the feasibility study (see CAR1).										
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	Due to the replacement of coal there will be fewer GHG emissions.	L	L								
B.6.4.2. Is the form/table required for the indication of projected emission reductions correctly applied?	1	The table shows the projected project emissions, the baseline emissions as well as the leakages and the resulting emission reductions.	L	L								
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	As the project already started operation in January 2007 the crediting period may start in April 2007 if the registration process goes smoothly.	L	L								
B.6.4.4. Is the data provided in this section in consistency with data as presented in other chapters of the PDD?	1	Yes.	L	L								
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 with regard to the requirements of the applied methodology?	1, 2	See CAR 7. especially the ACM0002 parameters should be included as well.		L								
B.7.1.2. Parameter Title: Electricity supplied to the grid	1, 2	<table border="1"> <thead> <tr> <th>Monitoring Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <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> </tbody> </table>	Monitoring Checklist	Yes / No	Title in line with methodology?	yes	Data unit correctly expressed?	yes	Appropriate description of parameter?	yes	CAR8	L
Monitoring Checklist	Yes / No											
Title in line with methodology?	yes											
Data unit correctly expressed?	yes											
Appropriate description of parameter?	yes											

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Indication of accuracy provided?	no																									
QA/QC procedures described?	no																									
QA/QC procedures appropriate?	no																									
B.7.1.3. Parameter Title: FCf,y	1, 2	<table border="1"> <thead> <tr> <th>Monitoring Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <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 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>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> </tbody> </table>	Monitoring 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 for estimation?	Yes	Has this value been verified?	Yes	Measurement method correctly described?	Yes	Correct reference to standards?	No	Indication of accuracy provided?	No	QA/QC procedures described?	No	CAR9	L
Monitoring Checklist	Yes / No																									
Title in line with methodology?	Yes																									
Data unit correctly expressed?	Yes																									
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		<table border="1"> <tr> <td>QA/QC procedures appropriate?</td> <td>No</td> </tr> </table> <p>The QA / QC procedures are missing in the PDD. see CAR8 Corrective Action Request No.9. The diesel consumption should be added into the monitoring plan, even if it may be negligible.</p>	QA/QC procedures appropriate?	No																								
QA/QC procedures appropriate?	No																											
B.7.1.4. Parameter Title: NCVf,y	1, 2	<table border="1"> <tr> <td>Monitoring Checklist</td> <td>Yes / No</td> </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 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>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> <p>Corrective Action Request No.10. The monitoring frequency should be adapted according to the methodology and the measurement method and procedure should be described. The accuracy of the parameter should be delivered.</p>	Monitoring 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 for estimation?	Yes	Has this value been verified?	Yes	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	CAR10	L
Monitoring Checklist	Yes / No																											
Title in line with methodology?	Yes																											
Data unit correctly expressed?	Yes																											
Appropriate description of parameter?	Yes																											
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Correct reference to standards?	No																											
Indication of accuracy provided?	No																											
QA/QC procedures described?	No																											
QA/QC procedures appropriate?	No																											
B.7.1.5. Parameter Title: OXIDf	1, 2	<table border="1"> <tr> <td>Monitoring Checklist</td> <td>Yes / No</td> </tr> <tr> <td>Title in line with methodology?</td> <td>No</td> </tr> </table>	Monitoring Checklist	Yes / No	Title in line with methodology?	No	CAR11	L																				
Monitoring Checklist	Yes / No																											
Title in line with methodology?	No																											

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Indication of accuracy provided?	No																											
QA/QC procedures described?	No																											
QA/QC procedures appropriate?	No																											
B.7.1.6. Parameter Title: EFCO _{2,f}	1, 2	<table border="1"> <tr><td>Monitoring Checklist</td><td>Yes / No</td></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> <p>Corrective Action Request No.12. The parameter is missing.</p>	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	CAR12	L
Monitoring Checklist	Yes / No																											
Title in line with methodology?	No																											
Data unit correctly expressed?	No																											
Appropriate description of parameter?	No																											
Source clearly referenced?	No																											
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B.7.1.7. Parameter Title: COEFy	1, 2	<table border="1"> <thead> <tr> <th>Monitoring Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <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> </tbody> </table> <p>Corrective Action Request No.13. The parameter is missing.</p>	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	CAR13	L
Monitoring Checklist	Yes / No																											
Title in line with methodology?	No																											
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QA/QC procedures described?	No																											
QA/QC procedures appropriate?	No																											
B.7.1.8. Parameter Title: PEy	1, 2	<table border="1"> <thead> <tr> <th>Monitoring Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <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> </tbody> </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	CAR14	L
Monitoring Checklist	Yes / No																											
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		<u>Corrective Action Request No.14.</u> The parameter is missing.		
<i>B.7.2. Description of the monitoring plan</i>				
B.7.2.1. Is the operational and management structure clearly described and in compliance with the envisioned situation?	1, 2	The management structure is described in a qualitative manner in section B.7.2 of the PDD.	L	L
B.7.2.2. Are responsibilities and institutional arrangements for data collection and archiving clearly provided?	1, 2	Yes.	L	L
B.7.2.3. Does the monitoring plan provide current good monitoring practice?	1, 2	Besides the above mentioned requests a good monitoring practice has been described. Moreover, there are further procedures described to improve the monitoring during the verification process.	L	L
B.7.2.4. If applicable: Does annex 4 provide useful information enabling a better understanding of the envisioned monitoring provisions?	1, 2	There is not much additional information delivered in Annex 4 besides a clarification of the basic documents.	L	L
B.8. Date of completion of the application of the baseline study and monitoring methodology an 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	The baseline was determined on 30/10/2006.	L	L
B.8.1.2. Is this consistent with the time line of the PDD history?	1	Yes.	L	L
B.8.1.3. Is the information on the person(s) / entity(ies) responsible for the application of the baseline and monitoring methodology	1	The person participated at the on-site audit.	L	L

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provided consistent with the actual situation?				
B.8.1.4. Is information provided whether this person / entity is also considered a project participant?	1	These persons are no project participants.	L	L
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	The project's starting date is defined as the time of first operation (1/1/2007) and the operational lifetime is expected to be 20 years. Both data are reasonable.	L	L
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	A renewable crediting period has been chosen. This seems to be reasonable for this kind of project activity.	L	L
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?	30, 31	An approved EIA exists (see Annex 2) and the environmental impacts are described for the construction as well as the operational phase. The EIA has been approved on Nov. 18 th , 2005 by the Inner Mongolia Environment Protection Bureau.	L	L
D.1.2. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, has an EIA been approved?	30, 31	Yes, as mentioned in D.1.1	L	L

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D.1.3. Will the project create any adverse environmental effects?	30, 31	The environmental impacts arising from the Project are considered insignificant	L	L
D.1.4. Were transboundary environmental impacts identified in the analysis?	30, 31	No.	L	L
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?	30, 31	Not applicable.	L	L
D.2.2. Does the project comply with environmental legislation in the host country?	30, 31	Yes.	L	L
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?	33, 34	In October 2006, assisted by the local government, the project owner carried out a survey of the local residents who might be affected by the Project.	L	L
E.1.2. Have appropriate media been used to invite comments by local stakeholders?	33, 34	After selecting the affecting stakeholders these were addressed directly via a questionnaire.	L	L
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?	33, 34	There are no regulations that require a stakeholder process.	L	L
E.1.4. Is the undertaken stakeholder process that was carried out described in a complete	33, 34	The process and the results are described. Some questions have been raised by the stakeholders regarding an increase of the	L	L

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and transparent manner?		natural gas prices and endangering the local water supply. Both concerns have been responded to by the project owner in an adequate manner.		
E.2. Summary of the comments received				
E.2.1. Is a summary of the received stakeholder comments provided?	33, 34	There is a statistical overview over the participants of the process and there are answers to the questions.	L	L
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?	33, 34	The stakeholders were concerned about an increase of the natural gas prices and about endangering the local water supply. As the gas prices are regulated the first concerned has no relevance. As the power plant is air-cooled instead of water-cooled the impacts on the water supply will be very low as well.	L	L
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	The purchasing party has to be determined. The data of the project owner are complete.	See CAR	L
F.1.2. Is the information on all private participants and directly involved Parties presented?	1	See F.1.1	L	L
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	Yes.	L	L
F.2.2. If necessary: Is an affirmation	1	Not applicable	L	L

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available that any such funding from Annex-I-countries does not result in a diversion of ODA?				
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	The baseline information consists of the calculation of the grid factors that are used for the calculation of the baseline emissions in chapter B of the PDD.	L	L
F.3.2. If additional background information on project data is provided: Is this information consistent with data presented by other sections of the PDD?	1, 2	Not applicable	L	L
F.3.3. Is the data provided verifiable? Has sufficient evidence been provided to the validation team?	1	The provided data are published by the DNA and have been checked with the public available statistical data such as the Chinese Energy Yearbook.	L	L
F.3.4. Does the additional information substantiate / support statements given in other sections of the PDD?	1	They are the basis for the further calculation.	L	L
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	There is no significant additional information.	L	L
F.4.2. Is the information provided verifiable? Has sufficient evidence been provided to the validation team?	1	Not applicable.	L	L
F.4.3. Do the additional information and /	1	Not applicable.	L	L

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or documented procedures substantiate / support statements given in other sections of the PDD?				

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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>Most of the documents are consistent with the description in the PDD. But there are some figures that are different.</p> <p><u>Corrective Action Request No.1.</u> The Investment analysis should be based on the proofed figures of the approved feasibility study instead of the figures delivered by the project owner as far as no additional evidence can be delivered</p>	A.2.3.	The figures of the feasibility study have been used and the evidence of this figures have been delivered (translation of the respective pages of the FSR). The electricity generation has been increased significantly compared to the GSP, but the GSP data could not be verified.	L The changed electricity generation has been verified by the translated feasibility study report.
<p><u>Corrective Action Request No.2.</u> The time schedule of the project activity should be included as explained during the audit.</p>	A.2.4.	A time schedule has been added.	L
<p><u>Corrective Action Request No.3.</u> The investor has to be determined prior to registration.</p>	A.3.1.	The investor is Chubu Electric Power Co. Inc. from Japan.	L
<p><u>Corrective Action Request No.4.</u> The GPS data or a postal code has to be delivered.</p>	A.4.1.1.	The coordinates are given.	L
<p><u>Corrective Action Request No.5.</u> The IRR calculation has to be delivered as PDF version ready to upload together with the PDD.</p>	B.5.4.	The Excel sheet has been delivered.	L

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<p><u>Corrective Action Request No.6.</u> Table 3 should be delivered with costs in \$ instead of RMB according to the methodology. The exchange rate should be mentioned.</p>	B.5.4.	The currency has been changed.	L
<p><u>Corrective Action Request No.7.</u> In table B.6.2. and B.6.7.1 all parameters that are described in the methodology should be mentioned completely. If they have not to be monitored then the non-applicability should be declared. There are different letters used for the identification of the share of coal-fired generation on page 22 and 27 (the Greek phi and lamda). The description should be consistent!</p>	B.6.2.1.	The tables have been updated.	L
<p><u>Corrective Action Request No.8.</u> The relevant national or local standards should be mentioned explicitly. Hence, a clear reference is given to the verifier where he can find the required accuracy of the meters. The accuracies should be included in to the PDD in a quantitative manner according to EB 25 for this and the following parameter.</p>	B.7.1.2.	The accuracy and a more detailed description have been included.	L
<p><u>Corrective Action Request No.9.</u> The diesel consumption should be added into the monitoring plan, even if it may be negligible.</p>	B.7.1.3.	The diesel consumption has been added.	L
<p><u>Corrective Action Request No.10.</u> The monitoring frequency should be adapted according to the methodology and the measurement method and procedure should be</p>	B.7.1.4.	The fortnightly measurement of the NCV and the daily measurement of the natural gas have been confirmed in the PDD.	L

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described. The accuracy of the parameter should be delivered			
<u>Corrective Action Request No.11.</u> The parameter is missing.	B.7.1.5.	The parameter has been included.	L
<u>Corrective Action Request No.12.</u> The parameter is missing.	B.7.1.6.	The parameter has been included.	L
<u>Corrective Action Request No.13.</u> The parameter is missing.	B.7.1.7.	The parameter has been included.	L
<u>Corrective Action Request No.14.</u> The parameter is missing.	B.7.1.8.	The parameter has been included.	L


Validation of the CDM Project:
Sulige Natural Gas based Power Generation Project




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Annex 2: Information Reference List


Reference No.	Document or Type of Information																														
1	The Project Design Document for CDM project "Sulige Natural Gas Based Power Generation Project", version 01, submitted in Oct., 2006																														
2	Baseline Methodology for Grid Connected Electricity Generation Plants using Natural Gas, version 1																														
3	Tool for the demonstration and assessment of additionality, version 02																														
4	Participant list of on-site interview, signed on Dec. 08, 2006																														
5	<p>On-site interviews and inspection at the office conducted on Dec. 8th, 2006 by validators of TÜV SÜD.</p> <p>Validation team:</p> <table border="0"> <tr> <td>Sven Kolmetz</td> <td>TÜV SÜD Industrie Service GmbH</td> <td></td> </tr> <tr> <td>Cuiyun Zhang</td> <td>Jiangsu TUV Product Service Ltd</td> <td></td> </tr> </table> <p>Interviewed persons:</p> <table border="0"> <tr> <td>Mr. Zheng zhaoning</td> <td>Tuttle International Co., Ltd.</td> <td>Consultant</td> </tr> <tr> <td>Ms. Pan Tao</td> <td>Tuttle International Co., Ltd.</td> <td>Consultant</td> </tr> <tr> <td>Mr. Meng Tao</td> <td>The Su Li Ge Electric Company Ltd., Inner Mongolia</td> <td>Deputy General Manager</td> </tr> <tr> <td>Mr. Niu Wenbin</td> <td>The Su Li Ge Electric Company Ltd., Inner Mongolia</td> <td>Senior Engineer</td> </tr> <tr> <td>Mr. Cui Jinbao</td> <td>The Su Li Ge Electric Company Ltd., Inner Mongolia</td> <td>Senior Engineer</td> </tr> <tr> <td>Mr. Masanobu Kataoka</td> <td>Chubu Electric Power Co., Ltd.</td> <td>Project Manager</td> </tr> <tr> <td>Ms. Lu Yuhui</td> <td>KOE Environmental Consultancy, Inc. (Japan)</td> <td>Directing Manager</td> </tr> <tr> <td>Mr. Zhang Fan</td> <td>KOE Environmental Consultancy, Inc. (Japan)</td> <td>Consultant</td> </tr> </table>	Sven Kolmetz	TÜV SÜD Industrie Service GmbH		Cuiyun Zhang	Jiangsu TUV Product Service Ltd		Mr. Zheng zhaoning	Tuttle International Co., Ltd.	Consultant	Ms. Pan Tao	Tuttle International Co., Ltd.	Consultant	Mr. Meng Tao	The Su Li Ge Electric Company Ltd., Inner Mongolia	Deputy General Manager	Mr. Niu Wenbin	The Su Li Ge Electric Company Ltd., Inner Mongolia	Senior Engineer	Mr. Cui Jinbao	The Su Li Ge Electric Company Ltd., Inner Mongolia	Senior Engineer	Mr. Masanobu Kataoka	Chubu Electric Power Co., Ltd.	Project Manager	Ms. Lu Yuhui	KOE Environmental Consultancy, Inc. (Japan)	Directing Manager	Mr. Zhang Fan	KOE Environmental Consultancy, Inc. (Japan)	Consultant
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6	Reply Letter to Application of Erdos City Government to Grant Wushen Banner Natural Gas Preferential Price and Quotas (Shiyoujihuan(2003)102), dated on Dec. 22 nd , 2003, The Su Li Ge Electric Company Ltd., Inner Mongolia, submitted on Dec. 8 th , 2006																														
7	Feasibility report of Sulige Natural Gas Based Power Generation Project, dated in Oct., 2004, Inner Mongolia Electricity Research Institution, submitted on Dec. 8 th , 2006																														
8	Expert Comments on Feasibility Report of Sulige Natural Gas Based Power Generation Project, dated in April, 2005, Inner Mongolia																														

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Reference No.	Document or Type of Information
	DNRC, submitted on Dec. 8th, 2006
9	Approval of feasibility report of Sulige Natural Gas Based Power Generation Project, dated on Dec. 10th, 2004, Inner Mongolia Development and Reform Commission, submitted on Dec. 8th, 2006
10	Report on the Analysis Data of Component of Natural Gas, dated on April 12 th , 2006, Geology Research Institute of the First Gas Extractor of Changqing Gas Field of Petro China Company Limited, submitted on Dec. 8 th , 2006
11	Interim Rules on Economic Assessment of Electrical Engineering Retrofit Projects, State Power Corporation of China, submitted on Dec. 8 th , 2006
12	Letter by Erdos City Government to Apply for Preferential Natural Gas Price and Quotas for Wushen Banner (Wuzhenghan (2004)16), dated on Feb. 12 th , 2004, Wushenqi Government, submitted on Dec. 8 th , 2006
13	Agreement to Cooperate on Developing Natural Gas Power Generation Project in Erdos City, Erdos City Government and Inner Mongolia Electricity Group company Limited, submitted on Dec. 8 th , 2006
14	Minutes on Implementing the Notice by NDRC of Reforming the Natural Gas Producer Price Formation Mechanism and Appropriately Increasing the Natural Gas Producer Price and Opinions of Inner Mongolia Gas Power Generation Company Limited on Implementing the New Natural Gas Price, dated on Dec. 26 th , 2005, NDRC, submitted on Dec. 8 th , 2006
15	Adjustment of Power Price of North China Grid Notice (2006-1228), NDRC, submitted on Dec. 8 th , 2006
16	Notice on Strictly Prohibiting the Installation of Fuel-fired Generators with the Capacity of 135MW or below (decree no. 2002-6), General Office of the State Council, submitted on Dec. 8 th , 2006
17	Clean Development Mechanism in china, in 2004, Tsinghua Press, submitted on Dec. 8 th , 2006
18	China Electric Power Yearbook 2003-2005, submitted on Dec. 8 th , 2006
19	China Energy Statistical Yearbook 2000-2005, submitted on Dec. 8 th , 2006
20	Technical Agreement of LZN60-5.7/0.58, dated on Sept. 20 th , 2004, Nanjing Turbine and Electric Machinery Group Co., Ltd. and The Su Li Ge Electric Company Ltd., Inner Mongolia, submitted on Dec. 8 th , 2006
21	Technical Agreement of PG9171E, dated on Sept. 13 th , 2004, Nanjing Turbine and Electric Machinery Group Co., Ltd. and The Su Li Ge Electric Company Ltd., Inner Mongolia, submitted on Dec. 8 th , 2006
22	Technical Agreement of 9E Boiler, dated in Oct., 2004, Hangzhou Boiler Company and The Su Li Ge Electric Company Ltd. Inner

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Reference No.	Document or Type of Information
	Mongolia, submitted on Dec. 8 th , 2006
23	Technical Agreement of 60MW generator and turbine, dated on Sept. 13 th , 2004, Nanjing Turbine and Electric Machinery Group Co., Ltd. and The Su Li Ge Electric Company Ltd., Inner Mongolia, submitted on Dec. 8 th , 2006
24	Agreement on Electricity Supplied to Inner Mongolia Grid, Inner Mongolia Grid Company and The Su Li Ge Electric Company Ltd., Inner Mongolia, submitted on Dec. 8 th , 2006
25	Training Agreement of Plant Operation and Maintenance, Shenzhen Nanshan Power Plant and The Su Li Ge Electric Company Ltd., Inner Mongolia, submitted on Dec. 8 th , 2006
26	Training certificate of operator, date in Nov., 2005, submitted on Dec. 8 th , 2006
27	Training Agreement of Grid Operation, Dalate Power Plant and The Su Li Ge Electric Company Ltd., Inner Mongolia, submitted on Dec. 8 th , 2006
28	CDM Consulting Contract, dated on April 12 th , 2005, KOE Environmental Consultancy, Inc. (Japan) and The Su Li Ge Electric Company Ltd., Inner Mongolia, submitted on Dec. 8 th , 2006
29	IRR calculation sheet, Tuttle International Co., Ltd., submitted on Dec. 8 th , 2006
30	EIA of Sulige Natural Gas Based Power Generation Project, dated in Nov., 2004, Environmental Science Institute, Inner Mongolia, submitted on Dec. 8 th , 2006
31	Approval of EIA, date on Nov. 18 th , 2005, Inner Mongolia Environment Protection Bureau, submitted on Dec. 8 th , 2006
32	Support Letter of Implementing CDM, dated Dec. 4 th , 2006, Erdos City Government, The Su Li Ge Electric Company Ltd., Inner Mongolia, dated on Dec. 8 th , 2006
33	Criteria of Choosing Local Stakeholder, Tuttle International Co., Ltd., submitted on Dec. 8 th , 2006
34	Questionnaire of local stakeholder comments, Tuttle International Co., Ltd., submitted on Dec. 8 th , 2006
35	The Project Design Document for CDM project "Sulige Natural Gas Based Power Generation Project", version 05, submitted in Dec., 2007
36	Eleventh-five year plan for energy industry of Inner Mongolia, submitted in Dec., 2007
37	Power Plan of Inner Mongolia from 2004 to 2010, submitted in Dec., 2007

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Reference No.	Document or Type of Information
38	Directive Catalog on Industry Structure Adjustment Degree No. 40 of NDRC (Dec. of 2005), submitted in Dec., 2007
39	Announcement of the grid connection of the 600 MW Shanghai Wujing Thermal Power Plant dated on May 2000
40	Certification of the Inner Mongolia Electric Power (Group) Co. Ltd.; dated on December 2007