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# Validation Report

**Sindicatum Carbon Capital Ltd.**

VALIDATION OF THE CDM-PROJECT:  
DUERPING COAL MINE METHANE UTILIZATION  
PROJECT

REPORT NO. 927755

**2009, February 27**

TÜV SÜD Industrie Service GmbH  
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<b>Subject:</b> Validation of a CDM Project	
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<b>Client:</b> Sindicatum Carbon Capital Ltd. 18 Hanover Square London W1S 1HX United Kingdom	<b>Project Site(s):</b> Shanxi Coking Coal Group Company Ltd. Duerping Coal Mine Shanxi Province, Vanbailim District, 20 km West of Taiyuan City, 030022 People's Republic of China
<b>Project Title:</b> Duerping Coal Mine Methane Utilization Project	
<b>Applied Methodology / Version:</b> ACM0008 / Version 03	<b>Scope(s):</b> 8, 10
<b>First PDD Version:</b> Date of issuance: 2006-11-20 Version No.: 1 Starting Date of GSP 2006-11-28 (2007-05-01 Repeat)	<b>Final PDD version:</b> Date of issuance: 2009-02-18 Version No.: 04.09
<b>Estimated Annual Emission Reduction:</b> 368 076 tCO <sub>2</sub> e	
<b>Assessment Team Leader:</b> Sven Kolmetz	<b>Further Assessment Team Members:</b> Konrad Tausche Jiming Zhang Yutaka Yoshida Karin Wagner
<b>Summary of the Validation Opinion:</b> <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

<b>ACM</b>	Approved Consolidated Methodology
<b>AM</b>	Approved Methodology
<b>CAR</b>	Corrective Action Request
<b>CBM</b>	Coalbed Methane
<b>CDM</b>	Clean Development Mechanism
<b>CER</b>	Certified Emission Reduction
<b>CMM</b>	Coal Mine Methane
<b>CR</b>	Clarification Request
<b>DNA</b>	Designated National Authority
<b>DOE</b>	Designated Operational Entity
<b>EB</b>	Executive Board
<b>EIA / EA</b>	Environmental Impact Assessment / Environmental Assessment
<b>ER</b>	Emission Reduction
<b>FSR</b>	Feasibility Study Report
<b>GHG</b>	Greenhouse gas(es)
<b>IRR</b>	Internal Rate of Return
<b>KP</b>	Kyoto Protocol
<b>MP</b>	Monitoring Plan
<b>NGO</b>	Non Governmental Organisation
<b>NMHC</b>	Non-methane Hydrocarbons
<b>PDD</b>	Project Design Document
<b>NPV</b>	Net Present Value
<b>PP</b>	Project Participant
<b>TÜV SÜD</b>	TÜV SÜD Industrie Service GmbH
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>VAM</b>	Ventilation Air Methane
<b>VVM</b>	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:  
Duerping Coal Mine Methane Utilization 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:

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

<b>Validation Protocol Table 1: Conformity of Project Activity and PDD</b>				
<b>Checklist Topic / Question</b>	<b>Reference</b>	<b>Comments</b>	<b>PDD in GSP</b>	<b>Final PDD</b>
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 <b>Request</b> 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 (✓), or a <b>Corrective Action Request (CAR)</b> due to non-compliance with the checklist question (See below). <b>Clarification Request (CR)</b> 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.

As for this specific project the final PDD was applying a different version of the methodology than the first one, a table 1a and a table 1b are presented reflecting the changes by the revision of the methodology.



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

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

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

## 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:

- Assessment Team Leader (ATL)
- Greenhouse Gas Auditor (GHG-A)
- Greenhouse Gas Auditor Trainee (T)
- 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
<b>Sven Kolmetz</b>	ATL	☑	☑	☑
Konrad Tausche	GHG-A	☑	☑	☑
Jiming Zhang	GHG-A	☑	☑	☑
Yutaka Yoshida	GHG-A		☑	☑
Karin Wagner	GHG-A	☑	☑	

**Dr. Sven Kolmetz** is physicist and 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.

**Konrad Tausche**, the deputy head of the department “TÜV Carbon Management Service” is located in the head quarter in Munich. Because of his long term experience in environmental measurement technique he works as a GHG auditor with a special focus on the scope “Industrial Gases”. The former head of department environmental measurement technique at the Frankfurt office of TÜV SÜD Industrie Service GmbH supports the team since Dec. 2006.

He has an academic background in physical and chemical engineering. An additional economic study was completed with the academic degree of a Master of Business Administration and Engi-



neering (MBA and Eng.). In his experience of more than 15 years he verified a lot of different energy, chemical and incineration plants, emission control and mitigation projects.

**Jiming Zhang** is an auditor for environmental management systems (according to ISO 14001) at Jiangsu TUV Product Service Ltd. He is based in Beijing. In his position he is responsible for the implementation of validation, verification and certifications audits for management systems. He has received training in the CDM validation process and participated already in several CDM project assessments.

**Yutaka Yoshida** is a production engineer and responsible for the carbon market of TÜV SÜD in Japan. He is working as a GHG auditor and is recently involved in various CDM projects most of which are N<sub>2</sub>O (linked to the sectoral scope #5 defined under UNFCCC). He used to work as a project engineer for tyre manufacturing and had comprehensive responsibilities for various capital investment projects including development of new facilities/plants/equipment/products, modernization/refurbishment, production expansion, new factory construction, production improvement, energy conservation projects, total preventative maintenance, environmental legislative compliance, etc. And he received extensive training on all aspects of the flexible mechanism. For this specific project he was responsible for input to the technical aspects within the chemical industry and the contact to technical expert aside of Japanese project developer.

**Karin Wagner** is an auditor at the “Carbon Management Service” department of TÜV SÜD Industrie Service GmbH in Munich, Germany. She holds a M.Sc. in geological sciences and has gathered experience in environmental consulting before joining TÜV SÜD. She has received training in the CDM validation process and participated 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

In the period of January 31<sup>st</sup> to February 2<sup>nd</sup>, 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
Ms. Liu Aixiang (Staff)	Sindicatum Carbon Capital Ltd., Beijing
Mr. David Creedy (CMM Director)	Sindicatum Carbon Capital Ltd., Beijing
Mr. Zhang Yunwen (Staff)	Shanxi Coking Coal Group Ltd.
Mr. Qu Shulin (Staff)	Shanxi Coking Coal Group Ltd.
Mr. Yu Jianrong (Staff)	Shanxi Coking Coal Group Ltd.
Mr. Qiao Zhigang (Staff)	Shanxi Coking Coal Group Ltd.
Mr. Wang Baoping (Staff)	Shanxi Coking Coal Group Ltd.

## **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 re-requesting registration by the EB or not.

### 3 SUMMARY OF FINDINGS

The assessment work and the main results are described below, including a short summary of the type of the project activity, the resolution of the requests raised by the DOE as well as the assessment and outcome of the additionality and the emission reduction calculations. A more detailed description of the findings and their resolution can be found in Annex 1, Table 2.

#### History of the validation process

A first PDD was submitted to the audit team in November 2006, and the first GSP was started with this PDD version in late November 2006. Since the first PDD was missing the version of the methodology and the financial analyses, the PDD was revised and the GSP was repeated in May 2007. As part of the validation process, the audit team performed a document review and a fact finding mission in form of an on-site audit. Afterwards the client decided to revise the PDD according to the CARs and CRs indicated during the audit process. After the clarification of several issues regarding the additionality and the investment analysis during the request for review and under review stage in October / November 2008 and December 2008, respectively, it was agreed to register this project at the EB meeting No. 45 in February 2009 subject to the satisfactory corrections discussed below.

The final PDD version submitted in February 2009 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 also described in the PDD could be verified during the on-site audit:

The Duerping mine is located within the Xishan coalfield near Taiyuan city, in Shanxi Province, China. The mine belongs to one of the major coal producer's in China, i.e. Shanxi Coking Coal Company Ltd.

Duerping mine is expected to have reserves of approximately 700 million tonnes of coal. The operational lifetime was estimated at about 50 years. Currently, the total relative emission of the mine is estimated at almost 18 m<sup>3</sup> of methane per tonne of coal mined. Approximately 15% of this gas is captured by methane drainage for safety reasons, whereas 85% is released to the environment through VAM. It is suggested to raise the capture efficiency up to 40%.

The focus of the proposed project activity is to use the CMM for the generation of electricity. A feasibility study performed in 2005 indicated that sufficient gas would be available to maintain a 12 MW electrical plant and to replace coal-fired electricity generated in the North China Power Grid. In addition, waste heat of the exhaust of the generators are used for warming the intake air of the mine and therefore replace the 4.2 MW coal-fired boilers (i.e. approximately 54 TJ of heat energy) during the cold season (5-6 months) of the year.

The proposed project activity will be implemented gradually over the first three years. In summary, the proposed project activity could reduce a total of approximately 3,700,000 tCO<sub>2</sub>e during the fixed crediting period of 10 years.

#### Findings

In total, the assessment team expressed 4 Clarification Requests (CRs) and 18 Corrective Action Requests (CARs).

As a response to the formal requests raised by the assessment team, the following items were added to amended in the most recent PDD version:

- The correct PPs names and contact info (CAR1),
- The update to the latest additionality tool including the correct performance of step 2 of this tool (CAR2, CAR3),
- EF calculations were updated, corrected and made consistent throughout the PDD (CAR8, CAR9, CAR12), and
- The coal production was revised and is now consistent throughout the whole PDD (CAR18).

The sensitivity analysis was performed on a reasonable variety of parameters (CAR5) and the common practice step was discussed in a detailed manner (CAR6).

The early, serious CDM consideration is described in detail and the evidence documents were submitted to the assessment team (CAR7). For more info on early CDM consideration please see the following sections of this report (i.e. Additionality).

Additional documents that were requested by and submitted to the assessment team for further verification included the document indicating the benchmark value (CAR4), the traceable IRR and ER calculation sheets (CAR13) as well as the grid tariff (CR1) and the FSR and its approval (CR4).

The tables in the PDD in section B.6.2 and B.7.1 were updated and can be considered as complete (CAR11, CAR14, CAR15 and CAR16).

The common practice list was revised and can be considered as complete (CAR12). The main issues of the EIA were summarized and discussed in the most recent PDD version (CAR16).

The required documents such as the benchmark evidence (IRL 12), the NMHC test report (IRL 32) and the documents indicating the CDM was seriously taken into consideration from the beginning of the project were submitted to the assessment team (CR2, CR4 and CAR11).

The monitoring process is described in detail in Annex 4 of the PDD including the accuracy and the calibration of the measuring devices (CAR15, CR4).

In summary, all required documents were delivered and the required amendments were performed in the latest PDD version, respectively. Therefore, all requests were solved satisfactory and all requests could be closed successfully. To guarantee the transparency of the validation process, the concerns raised and responses given are documented in the validation protocol in Annex 1, Table 2.

Considering these findings the previous PDD versions have been revised and the latest PDD is in compliance with the CDM requirements.

### **Calculation of the emission reductions**

The GHG emission reductions were calculated according to the methodology ACM0008, Version 03. There are no leakage emissions for this type of project; therefore the overall emission reductions equal the difference between the baseline emissions and the project emissions.

The project emissions were calculated according to the methodology. The GHG emissions from the use of electricity in the pumping stations are not accounted for in the project emissions because they would have been emitted in the baseline scenario as well.

Since no methane was destroyed in the baseline scenario, the baseline emissions equal the sum of the methane that was released into the atmosphere and the emissions from the power generation of the NCPG that was supplied to the mine and heat generation from the coal fired boilers.

The emission factor was calculated based on the guidance of the ACM0002 methodology (Version 06). The values provided in the PDD is similar to the one published by the NDRC in August 2007 and can therefore be considered as correct.

In summary, the calculation of the emission reductions exactly follows the guidelines provided in the applicable methodology and the emission factors are consistent with the ones published by the NDRC. Therefore, the calculation of the emission reductions can be considered as valid and correct.

### **Additionality**

The additionality of this project as well as the timeline with respect to the early consideration of CDM was checked thoroughly by the assessment team.

The starting date of the project is consistent with the first real action, i.e. when the equipment purchase contract was signed in March 2007 (IRL 13). Prior to this date, applying for CDM was seriously considered because the first GSP was started for this project in November 2006 (see section 4) and even the on-site audit was performed prior to the starting date of the project.

The step-wise approach as indicated in the additionality tool (IRL 4) was used to demonstrate that the proposed project activity is additional.

As part of step 1 of the tool, two possible alternatives to the proposed project activity were identified, that are in line with legal or regulatory requirements and that do not face any technological barriers. The alternatives (including the baseline scenario) are mentioned as following:

1. Continued release of methane to the atmosphere (baseline scenario), and
2. flaring of CMM.

TÜV SÜD was able to verify that the mentioned alternatives listed above are realistic and credible, and also that the list provided can be considered as complete.

The further demonstration of the additionality of the project activity was performed by applying step 2, i.e. the investment analysis.

As required by the methodology, an investment comparison analysis was performed to determine the most economically attractive scenario. The financial indicators (i.e. net present value = NPV) were identified for each of the scenarios mentioned above as well as the project scenario without CDM revenues. The calculations were checked by TÜV SÜD and found to be correct. The input parameters used for the calculations were checked thoroughly by TÜV SÜD and also found to be valid and applicable.

The NPV of the baseline scenario was calculated based on the expenses of the coal for the coal fired boilers. The quantity of coal used was calculated based on the hourly coal consumption as specified in the technical agreement (IRL 39), assuming an operational time of five months per year (i.e. during the cold season). The result (i.e. 2200 t/y) was checked by TÜV SÜD and found to be realistic. The price per tonne of coal was assumed to be 150 RMB/tonne of raw coal, which was evidenced by the prices released by the World Bank (IRL 38). Based on TÜV SÜD's expertise, this value appears to be realistic. In summary, the input data used for the NPV calculation of the baseline scenario are deemed reasonable and realistic.

The flaring option (alternative scenario 2 from above) is of course less economically attractive than the baseline scenario, since coal is still used for the boilers and extra costs are spent on the installation and maintenance of the flaring equipment without getting any extra revenues. Thus, the NPV of this option is lower than the NPV of the baseline scenario.

The calculation of the NPV and the IRR of the usage of CMM for the generation of electricity was also checked and verified by TÜV SÜD. The input data, such as the O&M costs and the power generation were derived from the officially approved FSR. Deviating key input parameters include the static total investment and the refurbishment costs of the equipment. The evidences for these two figures were checked by TÜV SÜD and found to be appropriate and also valid at the time of the investment decision (IRL 13, 35, 36). The plant load factor was calculated at about 80% which is typi-



cally seen for this type of equipment. After excluding the CMM usage charge, the O&M costs are about 3.5% of the total investment, which is on the lower end compared to other projects and thus can be considered as more conservative in the context of demonstrating the project's additionality. The tariff was adopted from the Shanxi power grid tariff (IRL 34), which was listed in Appendix 2 of the FSR. This tariff represents the tariff for purchasing power from the grid at the time of the investment decision and is actually higher than the tariff mentioned in the main section of the FSR and can therefore be considered as conservative. TÜV SÜD considers the applied tariff value as valid and applicable since power generated by CMM will be exported to the grid and then bought back in order to cover on-site power needs.

In summary, based on local and sectoral expertise, TÜV SÜD considers the input values used for the investment calculations reasonable and valid.

A discount rate (benchmark) of 12% before tax was applied. This rate is evidenced by the "Economic Evaluation Codes and Parameters for Construction Projects" which was issued by the Chinese NDRC and the Chinese Ministry of Construction in 2006 (IRL 31). According to this document, the applied benchmark of 12% (project, before tax) is applicable to the coal and gas relevant industry in China and therefore found to be appropriate and valid for this type of project activity. TÜV SÜD assessed and validated the suitability of this benchmark for the project activity and TÜV SÜD's rationales are explained as following:

The applied benchmark was published by the National Development and Reform Commission and Ministry of Construction in China and is widely used by the relevant authorities in China for assessing the financial viability of potential new projects. The project will generate power by utilizing CMM that is currently vented. The uncertainty relating to volumes and concentration of CMM released from the mine will lead to high risks for power generation, which are generally out of the control of the power generation facility operator. Although the project is a power generation project, given that the core investment focus of the project owner is the coal mining industry, the sectoral benchmark of the coal mining industry is adopted. The reasons are as follows:

According to this benchmark document, when a project owner invests in a project based on another sector rather than its own core business base, and has little experience in characteristics and the project and risk, the sectoral benchmark IRR of its own core business will be applied. In addition, this can be considered as a conservative assumption, since the mining industry has little experience in power generation and this adds a significant risk to their investment decision compared to the energy sector. They would therefore expect higher returns than they would normally expect from an investment in their core business. And also they would certainly expect higher return from a power plant than the energy sector due to additional risk due to lack of experience. Therefore, using the sectoral benchmark of the coal and gas relevant industry rather than benchmark of the power sector is reasonable.

The applicability of this benchmark was also discussed in a request for review for a similar project (Jilin Liaoyuan Meihe coal mine methane power generation project, No. 1468). This project applies an equity benchmark of 15% (after tax) which is also suggested by the same document for the coal mining industry and has been approved by the EB.

In summary, the NPVs were calculated for the baseline scenario, the flaring scenario and the project activity (without CDM). The results clearly indicate that the continuation of the baseline scenario would be the financially most attractive scenario, and the proposed project activity without being registered as CDM is the least financially attractive scenario. In addition, the IRR of the project scenario without CDM is well below the benchmark of 12%, thus further demonstrating the financial risks and unattractiveness of the project activity.

Sensitivity analyses were performed on all three scenarios mentioned above. It could be successfully demonstrated that the financial or economic attractiveness of the individual scenarios are robust to a 10% variation of the main input parameters such as investment costs, O&M costs, power

generation (i.e. tariff), etc. The range of 10% is deemed reasonable and was also observed in the past for similar projects.

In summary, TÜV SÜD was able to verify the input data as well as the individual calculation steps and the results, thus the investment analysis can be considered as correct (IRL 25), and step 2 of the additionality tool can be considered as fully completed.

Since step 2 already clearly indicated that the project activity is not financially attractive, step 3 of the additionality tool (i.e. barrier analysis) was not applied.

The common practice analyses (step 4) demonstrated that all of the existing CMM projects in the area applied for CDM projects due to the existence of similar investment barriers and financial unattractiveness. This analysis could be verified based upon the comparison of the listed projects with those listed at the independent international initiative methane to markets webpage (IRL 37) and is therefore deemed to be acceptable. All other CMM projects in the area are already registered at the UNFCCC webpage. Thus, the analysis has been verified and is deemed to be acceptable.

In summary, it is sufficiently demonstrated that the project is not a likely a baseline scenario and that emission reductions are hence additional.

**All of the questions raised and corrections provided relate to the investment analysis performed as part of the proof of additionality:**

This project was under consideration for review (Request for Review) in October/November 2008. Two questions were raised with respect to the investment analysis and TÜV SÜD's responses are given below:

**Issue 1:** The DOE shall clarify how it has validated that the input values used in the investment analysis are appropriate in the economic context of the underlying project activity considering that the: (a) key input values (such as discount rate, maintenance/education tax rates, static total investment, maintenance costs, annual inflation of 2.5% and operating hours) do not appear to be consistently applied between PDD, investment analysis and emission reduction spreadsheets; this clarification should follow the guidance provided in EB 38 paragraph 54.b.; and (b) the electricity tariffs are assumed to be fixed for the entire investment period without any justification.

Referring to Issue 1a:

TÜV SÜD performed a thorough review of the input values used in the investment analysis by comparing the values given in the PDD with the values applied in the investment analysis spreadsheet and the emission reduction calculation spreadsheet.

There appear to be some inconsistencies between the applied value for the discount rate, the city maintenance and education tax rates, the static total investment as well as the maintenance costs indicated in the PDD and the "IRR with CER" calculation spreadsheet of the investment analysis spreadsheet. These inconsistencies were removed and a revised investment analysis spreadsheet is submitted as an attachment to this response. However, the revision of the "IRR with CER" spreadsheet has no impact on the additionality of the proposed project activity. The revised "IRR with CER" is still above the benchmark, hence clearly indicates that CDM would help to overcome the financial issues that the project is facing without any CER revenues.

Operating hours were slightly higher in the emission reduction calculation spreadsheet compared to the hours indicated in the PDD (section B.4 and B.5) and applied for the investment analysis ("IRR with CER" sheet). This inconsistency was also removed by applying a consistent value of 7000 hours throughout the revised PDD as well as for the revised emission reduction calculation spreadsheet. The emission reduction figures were also adjusted in the revised PDD that is submitted as an attachment to this response.

In addition, inflation was removed from the investment analysis in order to be consistent. For the discussion on the inflation please also see the responses to 1b.

As indicated by the project participants (IRL 43), the refurbishment costs now include an exchange rate adjustment. TÜV SÜD evaluated this adjustment, and confirms that the indicated source (i.e. Global Insight) is reliable. In addition, the adjustment was cross-checked with the exchange rate observed throughout the last eight years between the Euro and the Chinese Yuan Renminbi as demonstrated by the FX Oanda Currency Converter ([www.oanda.com](http://www.oanda.com)) and the applied rate can be considered as reasonable and valid.

In summary, TÜV SÜD confirms that the input values indicated in the revised PDD are fully consistent with the revised associated calculation sheets attached to this response. Furthermore, TÜV SÜD also confirms that the applied values are consistent with the values indicated in the FSR. The only positions where the PPs updated FSR data to more actual data comprise the tariff and the static total investment costs. However, as already discussed in the validation report, the applied values are appropriate and valid and were also known at the time of the investment decision.

As a result, TÜV SÜD ensures that the requirements of EB38,§54 are fully met for this proposed project activity.

Referring to Issue 1b:

TÜV SÜD was further requested to clarify why the applied electricity tariff was assumed to be fixed for the entire investment period without any justification.

First of all, TÜV SÜD confirms that the investment calculations were following all guidelines and rules issued by the EB at the time the actual validation work was performed (i.e. before July 2008). In addition, TÜV SÜD further confirms that the investment calculations are also in line with most recent EB rules and guidelines such as EB41, Annex 45. According to No. 6 of EB41, Annex 45, "Guidance: Input values used in all investment analysis should be valid and applicable at the time of the investment decision taken by the project participant. ... Rationale: ...This decision will therefore be based on the relevant information available at the time of the investment decision and not information available at an earlier or later point. ...".

The input values used for this investment analysis were valid and applicable at the time of the investment decision. In addition, as per further explanation in the guidance, no information from a later point should be the basis for the investment decision. However, the application of nonfixed, fluctuating input values would not be in line with this guidance, because at that time, any information on the variation of these input values over the following 20 years was simply not available. TÜV SÜD also considers it as highly impossible to reasonably forecast the values of these figures for the next 20 years, based on the information given at the time of the investment decision.

The investment analysis calculations performed as part of the FSR and also as part of the PDD follow the Chinese Economic Evaluation Code. This document clearly indicates that constant values should be applied for the financial evaluation of a project. This further demonstrates that the application of fluctuating input values, i.e. increasing electricity tariff would not be in line with the applied guidelines and national standards. Based on local and sectoral expertise, TÜV SÜD can confirm that this code is widely applied in China, and that all feasibility studies in this sector are based on fixed input values.

Furthermore, as also indicated by the project participants, the application of incrementing input values for the tariff would also require considering increasing values for other parameters such as O&M costs during the given period to compensate for inflation. As an alternative approach, the project participants evaluated the impact on the NPV/IRR with varying 20 year average inflation rates in electricity prices and O&M costs between 0% and 10%. TÜV SÜD performed a thorough review of the statistical evaluation and confirms that the results are correct (see attached Excel spreadsheet with variable inflation rates).



The results of this evaluation on varying inflation rates indicated that the proposed project activity would only become financially attractive if the electricity price increased at a faster rate than the O&M costs over a 20 year period. However, based on TÜV SÜD's local and sectoral expertise as well as based on trends observed in the past for various provinces in China, O&M costs typically increased at a faster rate than electricity prices, which are regulated by the government, which results in negative NPVs indicating that the project is expected to remain financially unattractive.

As further indicated by the results of this approach of varying inflation rates, the project would also become financially attractive if a consistent inflation rate of around 5% was applied to the O&M costs as well as to the electricity price throughout the 20 years. However, as mentioned above, this scenario is highly unlikely given the fact that O&M costs tend to increase at a faster rate than the electricity price. In addition, if O&M costs' rate of increase would grow by only 0.1% faster than the tariff's rate of increase, the project would remain financially unattractive in any case.

Based on the published data by Global Insight ([www.globalinsight.com](http://www.globalinsight.com)), which can be considered as a reliable source, an average inflation rate of 3.3% was forecasted for China between 2007 and 2027. Given this inflation rate applied on the electricity price as well as on the O&M costs, the project would still be financially unattractive, i.e. remain additional.

In summary, TÜV SÜD confirms that the proposed project activity is facing financing and investment issues in any case. The application of a fixed tariff as well as the application of reasonable increments on the tariff and O&M costs still results in negative NPVs and IRRs below the benchmark, hence the project is not economically attractive and therefore additional.

**Issue 2:** The PDD (p.13), stipulates tax incentives for projects in China that drain and utilize methane, however the PP/DOE has not evaluated and validated the impact such tax incentives on the investment analysis.

In response to the second question of the request for review, TÜV SÜD evaluated the impact of tax incentives on the investment analysis.

The applied benchmark of 12% is indicated as a pre-tax benchmark. The calculation of the project IRR was also based on a pre-tax valuation. As a result, the effects of any tax benefits are fairly minor.

As demonstrated by the project participants, the reduction of the income taxes to zero throughout the first five years (as suggested by the Chinese State Council) still results in negative pre and post-tax NPVs, hence the project is still not financially attractive.

Although the project participants indicated that this project is not claiming any tax benefits, it was not possible to provide any evidences to TÜV SÜD for that case.

However, TÜV SÜD confirms that the impact of such tax incentives on the result of the investment analysis is fairly minor and the overall result, i.e. the project being financially unattractive is not changed even if the project is duty-free throughout the first five years.

In summary, TÜV SÜD is convinced; that even with the tax holiday, the proposed project activity is still facing a serious financing problem, hence can be considered as additional in the CDM context.

At the EB44 meeting the Board agreed to undertake a review of this project activity. Four questions were raised and the answers from TÜV SÜD are given below.

**Context:** The PDD (p21) mentions that the engines require a refurbishment costs (40% of capital costs) on generator sets after 64,000 hours of operation (i.e., once per 7 years). The revised IRR calculations, PDD and the PP/DOE response to request for review indicate that the operating costs

and maintenance costs are applied separately in addition to the refurbishment costs and the refurbishment costs are not sourced from the FSR. The PP/DOE response to request for review also mention that the operating hours have been corrected to 7,000 hours. Apart from this, the revised IRR calculation and the PDD now mentions a change in the input values by introducing a variable exchange rate between Euro and RMB on the refurbishment costs, for which no clear justification has been provided. The DOE, in its response, has confirmed that the benchmark of 12% is a pre-tax benchmark and the project applies taxation as an expense. The Board is particularly concerned with the application of variable exchange rate between Euro and RMB on the refurbishment costs and the income tax as an expense.

**Issue 1:** The DOE is requested to clarify how it has validated that the refurbishment costs on generators and its exchange rate adjustment, between Euro and RMB, is appropriate for the underlying project activity, given that the previous version of validated PDD assumed it to be constant throughout the crediting period. In doing so, the DOE should provide the detailed calculation of the refurbishment costs and the timelines of when they are expected to be incurred during the IRR period.

Refurbishment costs were determined as 40% of the equipment costs. These costs were confirmed by Deutz Power Systems (see Validation Report, Annex 2, IRL 36). Furthermore, based on local and sectoral expertise, TÜV SÜD confirms that the local equipment also requires periodical refurbishments, which is also typically in the range of 40%. As indicated in detail in the response to the request for review, the applied value for the investment costs in the investment analysis includes exclusively expenses on equipment. Therefore, the refurbishment costs were calculated with 40% of the overall investment costs.

As already described in the response to the request for review, an exchange rate adjustment between the Euro and the Chinese RMB was applied on the refurbishment costs. The applicability of this adjustment was further confirmed by a large and recognized professional service firm, Ernst and Young LLP. TÜV SÜD reviewed a letter from E&Y which confirms the applicability of the basis of the forward exchange rate calculation applied (which utilizes the 'Purchase Power Parity' concept; IRL 41 and 43). This letter concludes that "PPP is a widely accepted economic theory to explain the relationship between inflation differentials between economies and foreign exchange rates. In practice, PPP theory may be used by investors to provide an estimate of the likely impact of future foreign exchange rates on asset values and investment returns when converting from one currency to another at a future point in time."

The exchange rate adjustment was applied on the total refurbishment costs, because the local refurbishment costs are minimal compared to the foreign costs. In addition, as already indicated by the project participants, even without any exchange rate adjustment, the project would still be financially unattractive with a negative NPV which is lower than the NPVs calculated for the alternatives.

In summary, TÜV SÜD considers the exchange rate adjustment as minimal, given the fact that the overall investment costs were underestimated (i.e. only costs on equipment are included, but no construction and other costs), and that the expenses on coal were double-counted (once for the BAU scenario, and once in the project scenario without CERs) which results in a smaller difference between the baseline and the project scenario).

Refurbishment costs were included twice throughout the 20-year investment horizon. As indicated by the project participants, these costs were included in the financial analysis every 64000 hours after the arrival of the equipment on site. This can be considered as reasonable since the equipment deteriorates even if it is not operational.

As indicated by the project participants and confirmed by TÜV SÜD, the equipment is typically ordered and paid the year before it actually gets finally refurbished. Refurbishment works are typically planned to be performed in the spring / summer time (after the winter). However, in order to make sure that the necessary equipment is on site for these refurbishment works, the order and payment are made in advance (i.e. at the end of the previous year) and therefore happens to cross the finan-

cial accounting year. In summary, TÜV SÜD considers the refurbishment costs in the year 7 and 8 and year 14 and 15, respectively reasonable and appropriate.

The shift of these costs to two years later has only a minor impact on the result of the investment analysis, with an NPV of -14.5 Mio RMB.

As a result, TÜV SÜD confirms that the applied exchange rate adjustment as well as the timing of the refurbishment costs can be considered as reasonable and plausible. Any changes in the timing or the exchange rate have only a minor effect on the resulting NPV and the project re-mains additional in any case.

**Issue 2:** The DOE is requested to clarify how they have validated that the simultaneous application of operation costs, maintenance costs and the refurbishment costs in the IRR analysis is appropriate for the underlying project activity and does not lead to double counting of the expenses.

Annual O&M costs include material costs, water costs, salary and welfare, maintenance costs, insurance and a few other costs (IRL 44). TÜV SÜD considers these costs as independent that may occur in addition to the refurbishment costs. The only parameter that may be considered for the double-counting are the maintenance costs in the years of refurbishing equipment, as there is a small risk that some labor and parts costs for maintenance can be lowered in these specific years.

However, even by eliminating these maintenance costs during the years where the refurbishment costs are applied, the result of the investment analysis only increases slightly to -19 Mio RMB, however, the overall result, i.e. the project is lacking financial attractiveness does not change.

**Issue 3:** The DOE is requested to clarify why the refurbishment costs of generator has been calculated and applied in the IRR analysis: (a) on the basis of 40% of the total static investment cost and not on the basis of 40% of total cost of generator sets; and (b) by applying these costs after every 7 years and not after every 64,000 hours of operation at an annual operation rate of 7,000 hours.

As indicated in the response to the request for review, the investment costs only include equipment costs. Since all equipment needs some type of periodical refurbishment works, TÜV SÜD considers it as reasonable and appropriate to apply the refurbishment costs on 40% of the overall equipment costs, which equal the investment costs.

These costs were applied after every seven years because this is the time when the actual payment of these costs will be made, i.e. the equipment arrives on site. There are several reasons for this timing of the refurbishment costs as explained in more detail by the project participants. Given the fact that the equipment will deteriorate even if it is not operational, as well as the 7000 operational hours are an estimate of the engines running at full load, but longer hours are expected due to the fact that the engines are likely to run under partial loads when CMM volumes are reduced (IRL 42, 45).

In summary, TÜV SÜD considers the timing of the refurbishment costs as reasonable and appropriate. Furthermore, as already indicated in the response to question 1, the shifting of these costs to two years later would only have a minor impact on the overall result of the investment analysis and the project remains financially unattractive, i.e. additional.

**Issue 4:** The DOE is requested to clarify how it has validated that the application of income tax as an expense is appropriate for the underlying project activity and is in line with the guidance provided by EB 41 [Annex 5, paragraph 5].

TÜV SÜD would like to point out that the income tax is only initially included as an expense, but is subtracted again from the final result. Therefore, the final result does not include any income tax as an expense.

The income tax expenses are included in the “cash out” (Row 12 of the submitted Excel file along with the response to the request for review), but are added back to the final “net cash flow before income tax” (Row 31).

Therefore, TÜV SÜD confirms that income taxes are not included as an expense.

TÜV SÜD further confirms that the revised PDD has incorporated all required information and that all this information has been validated.

## 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:

<b>webpage:</b> <a href="http://www.netinform.net/KE/Wegweiser/Guide2_1.aspx?ID=2476&amp;Ebene1_ID=26&amp;Ebene2_ID=696&amp;mode=1">http://www.netinform.net/KE/Wegweiser/Guide2_1.aspx?ID=2476&amp;Ebene1_ID=26&amp;Ebene2_ID=696&amp;mode=1</a>	
<b>Starting date of the global stakeholder consultation process:</b> 2006-11-28	
<b>Comment submitted by:</b> Longyan69@163.com	<b>Issues raised:</b> The project section B.1. doesn't describe the version of methodology. It doesn't have reference to methodologies or tools which the approved methodology draws upon and their version. Such mistakes should be corrected before putting on the website for global public comments. The major barrier described by the developer is the low power tariff (26 cents per kWh. But the developer didn't do any investment analysis. Only some barriers are described, such as investment barrier (but the project owner is a public listed company with good performance), technology barrier (but there are some similar projects in China, many in the world). Power generation use CMM is a mature technology.
<b>Response by TÜV SÜD:</b> The GSP was re-started in May 2007 with an updated and revised PDD (see below). The revised PDD presents the investment analysis and discusses the results. In addition, as part of the identification of the baseline scenario, barriers were also discussed in the revised PDD. TÜV SÜD can confirm that the revised PDD sufficiently demonstrates and discusses the barriers associated with different options of CMM drainage and usage.	

Due to the fact that the revised PDD is applying a more recent revision of the approved methodology this global stakeholder consultation process has been repeated. Information is presented below.

<b>webpage:</b> <a href="http://www.netinform.net/KE/Wegweiser/Guide2_1.aspx?ID=3155&amp;Ebene1_ID=26&amp;Ebene2_ID=887&amp;mode=1">http://www.netinform.net/KE/Wegweiser/Guide2_1.aspx?ID=3155&amp;Ebene1_ID=26&amp;Ebene2_ID=887&amp;mode=1</a>	
<b>Starting date of the global stakeholder consultation process:</b> 2007-05-01	
<b>Comment submitted by:</b> -	<b>Issues raised:</b> -
<b>Response by TÜV SÜD:</b> -	

## 5 VALIDATION OPINION

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

Duerping Coal Mine Methane Utilization Project.

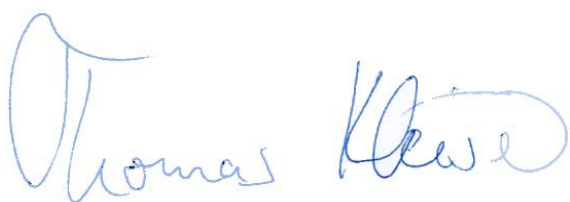
The review of the project design documentation and the subsequent follow-up interviews have provided TÜV SÜD with sufficient evidence to determine the fulfilment of stated criteria. In our opinion, the project meets all relevant UNFCCC requirements for the CDM. Hence TÜV SÜD will recommend the project 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, 2009-02-27

Munich, 2009-02-27



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



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Assessment Team Leader



## **Annex 1: Validation Protocol**



## Validation Protocol

Project Title: Duerping Coal Mine Methane Utilization Project

Date of Completion: 27/02/2009

Number of Pages: 71



Industrie Service

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
<b>A. General description of project activity</b>					
<b>A.1. Title of the project activity</b>					
A.1.1.	Does the used project title clearly enable to identify the unique CDM activity?	1	Yes, the project title includes the name of the coal mine, therefore is unique.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.1.2.	Are there any indication concerning the revision number and the date of the revision?	1,27	The available PDD for document review and on-site assessment was based on the ACM0008 version 2 and indicated as "Val01, 20 <sup>th</sup> of November 2006". This PDD was revised according to ACM0008 version 3 followed up by a repetition of the Global Stakeholder process. The first version was used for the GSP start on November 28, 2006.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.1.3.	Is this consistent with the time line of the project's history?	1,27	Yes, see A.1.2.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>A.2. Description of the project activity</b>					
A.2.1.	Is the description delivering a transparent overview of the project activities?	1	The project is described transparently and the project activities described have been proofed on-site.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.2.2.	What proofs are available demonstrating that the project description is in compliance with the actual situation or planning?	1,,6,7,8,11	The planning is described in the feasibility study. The project activity is the displacement of electricity and the displacement of two coal fired mine ventilation air heaters with electricity generated by coal mine Methane. The following data/action deliver evidences for the project activity: <ul style="list-style-type: none"> <li>- Feasibility study report</li> <li>- Environment Impact Assessment (EIA)</li> <li>- Approval of the EIA</li> <li>- "Emission Reduction Purchase Contract" signed between project developer and CERs buyer in year 2007</li> </ul>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



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CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
			Those data and equipments purchased and installed have been evidenced during the validation on-site.		
A.2.3.	Is the information provided by these proofs consistent with the information provided by the PDD?	1,5	Yes, the information provided by proofs is consistent with those provided by the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.2.4.	Is all information presented consistent with details provided by further chapters of the PDD?	1,5,2 7	In general, yes. However refer to CAR 12 of B.6.4.4	See CAR 12	<input checked="" type="checkbox"/>
<b>A.3. Project participants</b>					
A.3.1.	Is the form required for the indication of project participants correctly applied?	1,12, 27	<u>Corrective Action Request No.1</u> The right participation entities should be listed.	CAR 1	<input checked="" type="checkbox"/>
A.3.2.	Is the participation of the listed entities or Parties confirmed by each one of them?	1,5	Yes, it has been confirmed on site.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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)?	1,5,2 7	Refer to CAR 1 of A.3.1	See CAR 1	<input checked="" type="checkbox"/>
<b>A.4. Technical description of the project activity</b>					
<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	Coordinates of the coal mine reserves as well as a map and the location of the Duerping coal mine are presented in the PDD	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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.)?	1,7, 11,1 6	The project activities are all taken within the Shanxi Coking Coal Group Ltd. The EIA of the proposed project was approved by Shanxi Province Environment Protection Bureau on 30 <sup>th</sup> Sep.,2006 with No.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
		396 (2006). The validator has checked the owner's business license. The "Emission Reduction Purchase Contract" signed between project developer and CERs buyer was checked during the onsite audit.		
<b>A.4.2. Category(ies) of project activity</b>				
A.4.2.1. To which category(ies) does the project activity belonging to? Is the category correctly identified and indicated?	1,2,3 ,4,17	Sectoral Category 8 – Mining and mineral production Sectoral Category 10 – Fugitive emissions from fuels Sectoral Category 1 - Energy industries (renewable - / non-renewable sources)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>A.4.3. Technology to be employed by the project activity</b>				
A.4.3.1. Does the technical design of the project activity reflect current good practices?	1,5	So far the technical design of the envisaged installations can not be judged, because the purchases of the equipment are still in a tendering process. It's expected to reflect current good practice because the described methane use needs modern efficient gas-engines.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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?	1,8	Yes, the project activity comprises the use of methane for the substitution of grid supplied electricity and thermal energy mainly from coal fired plants.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.3.3. Does the implementation of the project activity require any technology transfer from annex-I-countries to the host country(ies)?	1,13	The gas-engines will be transferred from Annex I countries	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.3.4. Is the technology implemented by the project activity environmentally safe?	1,7	As described in the approved EIA, no significant impacts are expected.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.3.5. Is the information provided in compliance with actual situation or planning?	1,5	Yes, the information provided in the PDD is in compliance with the actual situation and planning as validated on site.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
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 any commonly used technologies in the host country?	1,8, 13	This technology is not widely spread yet, however the equipment installed for the project activity appears to be able to perform well. The common practice for electricity generation is still coal-fired power plant. Hence, the project definitely would result in a better performance than the common practice.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.3.7. Is the project technology likely to be substituted by other or more efficient technologies within the project period?	8,13	The envisaged technology represents state-of-the-art and is likely to remain so for the duration of the project	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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?	13,2 6	Some training is needed for routine maintenance. The supplier will identify specialist contractors for detailed maintenance in future.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.3.9. Is information available on the demand and requirements for training and maintenance?	13	In general this will be available from the principal contractor after purchasing.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.3.10. Is a schedule available for the implementation of the project and are there any risks for delays?	13	A schedule of the implementation is available. The delivery of the engines is on the critical path.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>A.4.4. Estimated amount of emission reductions over the chosen crediting period</b>				
A.4.4.1. Is the form required for the indication of projected emission reductions correctly applied?	1,8, 25	The project emission reductions are shown in table of chapter A.4.4 in the PDD. The form is correctly applied	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.4.2. Are the figures provided consistent with other data presented in the PDD?	1,27	No, see CAR 5 of B.5.7	See CAR 5	<input checked="" type="checkbox"/>
<b>A.4.5. Public funding of the project activity</b>				
A.4.5.1. Is the information provided on public funding provided in compliance with the actual	1,5	There is no public funding and all costs are covered by private	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
situation or planning as available by the project participants?		equity.		
A.4.5.2. Is all information provided consistent with the details given in remaining chapters of the PDD (in particular annex 2)?	1,5	The information both in this chapter and annex 2, as well as other chapters in the PDD, is the same.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>B. Application of a baseline and monitoring methodology</b>				
<b>B.1. Title and reference of the approved baseline and monitoring methodology</b>				
B.1.1.1. Are reference number, version number, and title of the baseline and monitoring methodology clearly indicated?	1,2,17	The PDD was revised according to ACM0008 version 3. The project activity applies to "ACM0008 version 03 Consolidated baseline methodology for coal bed methane and coal mine methane capture and use for power (electrical or motive) and heat and/or destruction by flaring".	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.1.1.2. Is the applied version the most recent one and / or is this version still applicable?	1,2,3,4,27	<u>Corrective Action Request No.2</u> The applied version of the Tool for the Demonstration and Assessment of Additionality is not the mentioned in the PDD. Obviously not the latest version is used. Please indicate and use the Tool for the demonstration and assessment of additionality (Version 03)	CAR 2	<input checked="" type="checkbox"/>
<b>B.2. Justification of the choice of the methodology and why it is applicable to the project activity</b>				
B.2.1.1. Is the applied methodology considered the most appropriate one?	1,2,17	The CMM consolidated methodology was designed with this type of project in mind. All applicability criteria as specified by the methodology are met.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Integrate the required amount of sub-checklists on the applicability criteria as given by the applied methodology and comment on at least every line answered with "No"				

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B.2.2. Criterion 1: Is one of the following extraction activities involved by the project activities? - surface drainage wells to capture CBM associated with mining activities - underground boreholes in the mine to capture pre mining CMM - surface goaf wells, underground boreholes, gas drainage galleries or other goaf gas capture techniques, including gas from sealed areas, to capture post mining CMM - ventilation CMM, that would normally be vented		<table><tr><th>Applicability checklist</th><th>Yes / No</th></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> <p>All gas is captured by underground drainage methods. So, surface CBM not relevant in this project.</p>	Applicability checklist	Yes / No	Criterion discussed in the PDD?	Yes	Compliance provable?	Yes	Compliance verified?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Applicability checklist	Yes / No											
Criterion discussed in the PDD?	Yes											
Compliance provable?	Yes											
Compliance verified?	Yes											
B.2.3. Criterion 2: Does the baseline include a partial or total atmospheric release of the methane?		<table><tr><th>Applicability checklist</th><th>Yes / No</th></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	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Applicability checklist	Yes / No											
Criterion discussed in the PDD?	Yes											
Compliance provable?	Yes											
Compliance verified?	Yes											
B.2.4. Criterion 3: Is the gas captured treated by one of the following methods? - destroying through flaring and/or - utilization to produce electricity, motive power and/or thermal energy		<table><tr><th>Applicability checklist</th><th>Yes / No</th></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	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Applicability checklist	Yes / No											
Criterion discussed in the PDD?	Yes											
Compliance provable?	Yes											
Compliance verified?	Yes											

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B.2.5. Criterion 4: Is it ensured, that all the CBM or CMM captured by the project is used or destroyed and not vented? (Exception: the remaining share of methane to be diluted for safety reason)		<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> <p>The operation of methane drainage pumps is part of the base-line activity and not due to the project, therefore all project CMM is either used or destroyed.</p>	Applicability checklist	Yes / No	Criterion discussed in the PDD?	Yes	Compliance provable?	Yes	Compliance verified?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Applicability checklist	Yes / No											
Criterion discussed in the PDD?	Yes											
Compliance provable?	Yes											
Compliance verified?	Yes											
B.2.6. Criterion 4: Is it ensured, that the project activity does <i>not</i> include one of the following features: - operate in an open cast mine - capture methane from a abandoned or decommissioned coalmine - capture/use of a virgin coal mine - use of CO2 or any other fluid/gas to enhance CBM drainage before mining takes place		<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	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Applicability checklist	Yes / No											
Criterion discussed in the PDD?	Yes											
Compliance provable?	Yes											
Compliance verified?	Yes											
B.2.7. Criterion 5: Are the project participants able to supply the necessary data for ex-ante projections of methane demand to determine the baseline emissions and the leakage?		<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><tr><td>Compliance verified?</td><td>N.a.</td></tr></table>	Applicability checklist	Yes / No	Criterion discussed in the PDD?	N.a.	Compliance provable?	N.a.	Compliance verified?	N.a.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Applicability checklist	Yes / No											
Criterion discussed in the PDD?	N.a.											
Compliance provable?	N.a.											
Compliance verified?	N.a.											
B.3. Description of the sources and gases included in the project boundary												
Integrate the required amount of sub-checklists for sources and gases as given by the methodology applied and comment on at least every line answered with “No”												
B.3.1. Source:			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>								

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Emission of methane as a result of venting Gas: CH <sub>4</sub> Type: Baseline Emissions			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: Emission from destruction of methane in the baseline Gas: CO <sub>2</sub> Type: Baseline Emissions		Boundary checklist	Yes / No	☑	☑
			Source and gas(es) discussed in the PDD?	No		
			Inclusion / exclusion justified?	No		
			Explanation / Justification sufficient?	No		
			Consistency with monitoring plan?	No		
B.3.3.	Source: Grid electricity generation (electricity provided to the grid) Gas: CO <sub>2</sub> Type: Baseline Emissions		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.3.4.	Source: Captive power and/or heat, and vehicle fuel use Gas: CO <sub>2</sub>		Boundary checklist	Yes / No	☑	☑
			Source and gas(es) discussed in the PDD?	Yes		
			Inclusion / exclusion justified?	Yes		

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		PDD in GSP	Final PDD										
Type: Baseline Emissions		<table><tr><td>Explanation / Justification sufficient?</td><td>Yes</td></tr><tr><td>Consistency with monitoring plan?</td><td>Yes</td></tr></table> Only heat is included.		Explanation / Justification sufficient?	Yes	Consistency with monitoring plan?	Yes								
Explanation / Justification sufficient?	Yes														
Consistency with monitoring plan?	Yes														
B.3.5. Source: On- site fuel consumption due to the project activity, including transport of gas Gas: CO2 Type: Project Emissions		<table><tr><td>Boundary checklist</td><td>Yes / No</td></tr><tr><td>Source and gas(es) discussed in the PDD?</td><td>No</td></tr><tr><td>Inclusion / exclusion justified?</td><td>No</td></tr><tr><td>Explanation / Justification sufficient?</td><td>No</td></tr><tr><td>Consistency with monitoring plan?</td><td>No</td></tr></table> The project does not use any additional energy as the pumping station is part of the baseline scenario.		Boundary checklist	Yes / No	Source and gas(es) discussed in the PDD?	No	Inclusion / exclusion justified?	No	Explanation / Justification sufficient?	No	Consistency with monitoring plan?	No	☑	☑
Boundary checklist	Yes / No														
Source and gas(es) discussed in the PDD?	No														
Inclusion / exclusion justified?	No														
Explanation / Justification sufficient?	No														
Consistency with monitoring plan?	No														
B.3.6. Source: Emission from methane destruction Gas: CO2 Type: Project Emissions		<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	☑	☑
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.3.7. Source: Emission from NMHC destruction Gas: CO2 Type: Project Emissions		<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	☑	☑
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.3.8. Source:				☑	☑										



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Fugitive emission of unburned methane Gas: CH <sub>4</sub> Type: Project Emissions			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.3.9.	Do the spatial and technological boundaries as verified on-site comply with the discussion provided by / indication included to the PDD?	1,5	<p>The spatial and technological boundaries are consistent with the information provided by the PDD.</p> <p>The project boundary for the proposed project is represented by the North China Power Grid, the installation of the project facilities excluding the extraction of the CMM and the coalmine itself. It was verified on site and complies with the description in the PDD.</p>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>B.4. Description of how the baseline scenario is identified and description of the identified baseline scenario</b>					
<p>The baseline scenario shall be identified using procedure for Identification of the baseline scenario described in the approved methodology ACM0008 "Consolidated baseline methodology for coal bed methane and coal mine methane capture and use for power (electrical or motive) and heat and/or destruction by flaring" version 03.</p>					
B.4.1.	Have all technically feasible options for capturing and /or using CBM or CMM (Step 1) to the project activity been identified and discussed by the PDD? Why can this list be considered as being complete?	1,2,5,14	<p>Well established from the many published CMM PDDs</p> <p>All technically feasible options for capturing and /or using CBM or CMM (Step 1) to the project activity have been identified and discussed by the PDD.</p> <p>It is considered as being completed because the discussion contents in the PDD follow the procedures described by the Methodology ACM0008 version 03.</p> <p><u>Clarification Request No.1</u></p> <p>The PDD states:" Generated power must be sold to the grid and the tariff paid is low – 26 Chinese cents per kWh. Or approximately 3 US cents." Please provide evidence to this statement</p>	CR 1	<input checked="" type="checkbox"/>

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			to the validation team		
B.4.2.	Does the project identify correctly and excludes those options not in line with regulatory or legal requirements (Step 2)?	1,18, 19,2 0,21, 22,2 3	The project participants discussed the legal requirements supported by documents to exclude those options not in line with regulatory sufficiently.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.4.3.	Have applicable regulatory or legal requirements been identified?	1,18, 19,2 0,21, 22,2 3	There are no regulatory or legal requirements concerning the use or treatment of the methane identified in the PDD.  <u>Clarification Request No.2</u> The PDD states that a minimum concentration of 30% CH <sub>4</sub> to operate the generators is required. Please provide evidence for this statement.	CR 2	<input checked="" type="checkbox"/>
B.4.4.	Have all baseline scenario alternatives due to the listed options (Step 1) and complying with the requirements of Step 2 in ACM0008, vers.2 been identified, discussed and clearly described (regarding share of volume of CBM/CMM treated, end-uses, source of power used) by the PDD? Why can this list be considered as being complete? (Step 3)	1,2	Yes, all baseline scenario alternatives due to the listed options (Step 1) and complying with the requirements of Step 2 in ACM0008, vers.03 have been identified, discussed and clearly described (regarding the share of volume of CBM/CMM treated, end-uses, source of power used) by the PDD. All baseline scenario alternatives regarding CMM extraction and treatment are considered in Step 3 of the PDD. No additional alternatives are reasonable so it can be considered to be complete.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.4.5.	Is a complete list of barriers developed that prevent alternatives to occur (step 4)?	1	In the PDD step 4, barriers have been analyzed regarding CBM/CMM treatment and extraction. There are different barriers mentioned concerning the geological consistency, use of VAM, flaring or use of the methane for power generation without CDM revenues. The barriers are well known and reliable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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B.4.6. Is transparent and documented evidence provided on the existence and significance of these barriers?	1,5	<p>The mentioned barriers are transparent. During the on-site visit it could be assessed that no CBM is extracted. Public available info on Chinese websites (coalinfo.net among others) are indicated that discuss several barriers.</p> <p><u>Clarification Request No.3</u></p> <p>In the PDD there is stated, that surface CBM extraction from conventional, vertical, hydro fractured wells is not an option due to the low permeability of the coal seams at Duerping. Please provide evidence following the methodology of the low permeability in this region.</p>	CR 3	<input checked="" type="checkbox"/>
B.4.7. If there are several potential alternatives scenario candidates that do not face barriers, is there the most conservative (result in least emission) or the economically most viable alternative chosen for baseline scenario (step 4)?	1	There's only one likely baseline scenario remaining. So the optional Step 5a and 5b is not required.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.4.8. Is a sensitivity analysis (step 5c) performed for all baseline scenarios that have not eliminated in step 4?	1	The sensitivity analysis has been performed for the remaining baseline in the application of the additionality tool.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.4.9. In case of application of step 5, is the most economically attractive baseline scenario alternative identified and is a clear comparison of the financial indicator for the proposed project alternatives presented by the pdd?	1	Not applicable	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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<b>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>					
B.5.1.	Is the consistency ensured between base-line scenario determination and additional-ity demonstration due to the latest version of " <i>Tool for the demonstration and as-sessment of additionality</i> " agreed by the EB?		See CAR 2 of B.1.1.2	See CAR 2	<input checked="" type="checkbox"/>
B.5.2.	In case of applying step 2 / investment analysis of the additionality tool: Is the analysis method identified appropriately (step 2a)?	1,4,2 7	<u>Corrective Action Request No.3</u> Please choose the options and procedures according to the requirements of the additionality tool and follow the idea of this tool in a transparent way.	CAR 3	<input checked="" type="checkbox"/>
B.5.3.	In case of Option I (simple cost analysis): Is it demonstrated that the activity produces no economic benefits other than CDM income?		Not applied	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.4.	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)?		See CAR 3 of B.5.2 The revised PDD includes the investment comparison analysis as required by the methodology.	CAR 3	<input checked="" type="checkbox"/>
B.5.5.	In case of Option III (benchmark analysis): Is the most suitable financial indicator clearly identified (IRR, NPV, cost benefit ratio, or (levelized) unit cost)?		See CAR 3 of B.5.2	CAR 3	<input checked="" type="checkbox"/>
B.5.6.	In case of Option II or Option III: Is the		See CAR 3 of B.5.2	CAR 3	<input checked="" type="checkbox"/>

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calculation of financial figures for this indicator correctly done for all alternatives and the project activity?				
B.5.7. In case of Option II or Option III: Is the analysis presented in a transparent manner including publicly available proofs for the utilized data?	1,27	<u>Corrective Action Request No.4</u> The benchmark evidence as well as the source documents for the IRR calculation needs to submit to the DOE.	CAR 4	<input checked="" type="checkbox"/>
B.5.8. Is a sensitivity analysis (step 2 d) performed for a realistic range of assumptions?	1,27	The sensitivity analysis is provided in the PDD, however it could be more detailed and transparent.  <u>Corrective Action Request No.5</u> Please include more parameters (e.g. operational costs) and demonstrate the variations of the single parameters in a range of assumptions.	CAR 5	<input checked="" type="checkbox"/>
B.5.9. 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?		Not applicable	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.10. In case of applying step 3 (barrier analysis): Is transparent and documented evidence provided on the existence and significance of these barriers?		Not applicable	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.11. 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?		Not applicable	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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B.5.12. 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)?	1,27, 28	<u>Corrective Action Request No.6</u> The analysis and detailed data for other similar activities occurring in the host country / region should be provided in a comprehensive list of projects in order to follow the argumentation and make it available to the DOE.	CAR 6	<input checked="" type="checkbox"/>
B.5.13. 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)?		See CAR 6 of B.5.12	See CAR 6	<input checked="" type="checkbox"/>
B.5.14. 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)?	1,27	<u>Corrective Action Request No.7</u> Please provide an evidence to ensure that the equipment would not have been ordered without the prospect of registration.	CAR 7	<input checked="" type="checkbox"/>
<b>B.6. Emissions reductions</b>				
<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	Yes, it is clearly described in the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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?	1,5,2 7	Partially, most of the chosen selection of options are justified by the methodology and are in line with the situation verified on-site.  <u>Corrective Action Request No.8</u> To determine the emission factor for heat generation there is no option mentioned in the methodology to use the IPCC 1996 revised guidelines for boiler efficiency like stated in the PDD page	CAR 8	<input checked="" type="checkbox"/>

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		18. Please revise this due to options delivered by the methodology.		
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? (Details go to B 6.1.4. - B 6.1.7)	1,27	Yes, most of the formulae are presented correctly. But see CAR 2	See CAR 2	<input checked="" type="checkbox"/>
B.6.1.4. In case of combustion emissions (CO <sub>2</sub> ) from additional energy required for CBM/CMM capture and use (ACM 0008 vers.03: 6.1) Is the additional energy for the capture, transport, compression and use considered and is the same electricity and heat generation emission factor used as in the calculation of baseline emissions?		Not applicable.	See CAR 2	<input checked="" type="checkbox"/>
B.6.1.5. Calculation of combustion emissions (CO <sub>2</sub> ) from use of captured methane (ACM 0008 vers.03: 6.2) Are the combustion emissions of Non Methane Hydro Carbons (NMHC) included if they account more than 1% by volume of extracted coal mine gas?	1,2	No, the calculation of the combustion emissions of Non Methane Hydro Carbons (NMHC) is not included, as the volume of extracted coal mine gas is less than 1%.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.1.6. Calculation of combustion emissions (CO <sub>2</sub> ) from use of captured methane (ACM 0008 vers.03: 6.2): Are the project emissions from flaring the residual gas stream calculated following the procedures described in the " <i>Tool to determine project emissions from flaring</i> "		Yes, the calculations presented in the tool are correctly applied.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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<i>gases containing Methane" ?</i>				
B.6.1.7. Calculation of combustion emissions (CO <sub>2</sub> ) from use of captured methane (ACM 0008 vers.03: 6.2): Are the IPCC default values applied to fix the efficiency for power generation, heat generation and/or combustion of methane at end user?	1,2	Yes, where applicable the IPCC default values were used.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.1.8. Is the un-combusted methane from flaring and end uses included to calculate the project emissions do to "Tool to determine project emissions from flaring gases containing Methane"? (ACM 0008 vers.03: 6.3)?	1,2	Yes.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.1.9. Are the formulae required for the determination of baseline emissions correctly presented, enabling a complete identification of parameter to be used and / or monitored? (Details go to B 6.1.9. - B 6.1.23)	1,3,2 7	Yes, in general they are the same as described in the methodology. <u>Corrective Action Request No.9</u> : The figures of calculating the emission reductions of the replaced coal fired boilers are not consistent in the PDD (page 23 and Annex III). In addition the calculation of the baseline emission factor due to ACM0002 is not based on the recent data. Please actualize these calculations or us the latest available data published by NDRC.	CAR 9	<input checked="" type="checkbox"/>
B.6.1.10. Is there any methane destroyed in the baseline and are the CO <sub>2</sub> emissions resulting from this destruction calculated properly?	1	No methane has been destroyed in the baseline, thus BE <sub>MD,y</sub> = 0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



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B.6.1.11. Is the calculation of the mean annual demand (Thy) for each year of the crediting period existent and comprehensible?		Not applicable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.1.12. Are real measured data on a daily base available for estimating the scalar factor for each of the last five years before of the starting date of the proposed project activity?		Not applicable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.1.13. If B.6.1.11 is not the fact, which method (AMC0008 vers.03: 7.2 a, b or c) is used to project thermal energy demand on a monthly data base and is it documented comprehensible, why method a (and b in case of applied method c) can't be used?		Not applicable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.1.14. Is the methane released into the atmosphere in the baseline scenario described and is it calculated properly excluding the captured and used methane as well as methane still vented in the project activity?	1	Only the change in CMM emissions release will be taken into account, by monitoring the methane used or destroyed by the project activity. No CBM is extracted in the proposed project	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.1.15. In order to quantify the eligible CBM, are the relevant wells identified? (AMC0008 vers.03: 7.3.1 Step 1)		Not applicable	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.1.16. In order to quantify the eligible CBM, are the project specific values for the zone of influence elaborated in the PDD? (AMC0008 vers.03: 7.3.1 Step 2)		Not applicable	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.1.17. Are the relevant project specific data provided by the PDD consistent to calculate the project emissions of methane and		Not applicable	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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CO2 resulting from CBM due to the requirements? (AMC0008 vers.03: 7.3.1 Step 2)				
B.6.1.18. Is there any temporal adjustment for baseline emissions (in case of CBM utilization and or destruction) within a defined crediting period? (AMC0008 vers.03: 7.3.1 Step 3)		Not applicable	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.1.19. Is the amount of pre-mining and post-mining CMM captured in the baseline scenario defined as an absolute amount or as a share of the amount captured in the project activity and is this justified by the project participants comprehensible?	1	In practical this is indistinguishable as both kinds of methane are transported in the same pipe and a differentiation has no impact on the project	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.1.20. Are there any emissions from power/heat generation and vehicle fuel replaced by the project?	1	The emissions which are replaced by the project are these from the existing two coal fired boilers and these of replacing the generation of grid power.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.1.21. If 6.1.19 applies and both CMM and CBM are used for replacing the emissions, is the distinction between CMM and CBM considered?		Not applicable	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.1.22. If 6.1.20 applies is the emission factor for grid power and or captive power calculated correctly?		See CAR 9	See CAR 9	<input checked="" type="checkbox"/>
B.6.1.23. If 6.1.19 applies is the emission factor for heat generation calculated with the boiler efficiency due to option A or option B?		Option B was chosen.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.1.24. If 6.1.19 applies is the emission factor for vehicle fuel use calculated due to the con-		Not applicable	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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servative approach?				
B.6.1.25. Are the formulae required for the determination of leakage emissions correctly presented, enabling a complete identification of parameter to be used and / or monitored?	1,25	There are no leakage emissions in the proposed project. $LE_y=0$ .	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.1.26. Is there any displacement of baseline thermal energy uses to be considered?	1	No. There is no need to consider thermal energy used in the proposed project. No methane is used in the baseline to produce thermal energy.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.1.27. Is there any CBM drainage from outside the de-stressed zone to be considered?	1	All gas drainage is from underground. So no CBM drainage from outside the de-stressed zone is captured in the proposed project.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.1.28. Does the CDM project activity impact the coal production (if baseline scenario is ventilation only) and how is it taken into account to determine the leakage?	1	Not applicable as gas drainage happens in the baseline	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.1.29. Are the formulae required for the determination of emission reductions correctly presented?	1	Yes, after resolving all related CARs and CRs the formulae required for the determination of emission reductions are correctly presented in the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>B.6.2. Data and parameters that are available at validation</b>				
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?	1,27	<u>Corrective Action Request No.10</u> Please add all parameter to the section B.6.2 of the PDD, which are referenced in the following section to this CAR 10.	CAR 10	<input checked="" type="checkbox"/>
Integrate the required amount of sub-checklists for monitoring parameter and comment on any line answered with "No"				
B.6.2.2. Parameter Title P8: CEF <sub>ELEC-PJ</sub>	1,27,		See CAR 10	<input checked="" type="checkbox"/>

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Carbon emission factor of additional electricity consumption by project $CONS_{ELEC-PJ}$  (Project emissions: Combustion emissions from additional energy required for CBM/CMM capture and use)		<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.			
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. Parameter Title P9: $CEF_{HEAT-PJ}$ Carbon emission factor of additional heat consumption by project $CONS_{HEAT-PJ}$  (Project emissions: Combustion emissions from additional energy required for CBM/CMM capture and use)		<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		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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. Parameter Title P10: $CEF_{FF-PJ}$ Carbon emission factor of additional fossil fuel consumption by project $CONS_{FF-PJ}$  (Project emissions: Combustion emissions from additional energy required for CBM/CMM capture and use)		<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></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		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
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																						

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		<table><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>		Has this value been verified?	N/A	Choice of data correctly justified?	N/A	Measurement method correctly described?	N/A														
Has this value been verified?	N/A																						
Choice of data correctly justified?	N/A																						
Measurement method correctly described?	N/A																						
B.6.2.5. Parameter Title P16: Eff <sub>ELEC</sub> Efficiency of methane destruction/oxidation in power plant  (Project emissions: Combustion emissions from use of captured methane)		<table><tr><th>Data 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?</td><td>No</td></tr><tr><td>Has this value been verified?</td><td>No</td></tr><tr><td>Choice of data correctly justified?</td><td>No</td></tr><tr><td>Measurement method correctly described?</td><td>No</td></tr></table>		Data 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?	No	Has this value been verified?	No	Choice of data correctly justified?	No	Measurement method correctly described?	No	See CAR 10	<input checked="" type="checkbox"/>
Data 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?	No																						
Has this value been verified?	No																						
Choice of data correctly justified?	No																						
Measurement method correctly described?	No																						
B.6.2.6. Parameter Title P19: Eff <sub>HEAT</sub> Efficiency of methane destruction/oxidation in heat plant  (Project emissions: Combustion emissions from use of captured methane)		<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	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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.6.2.7. Parameter Title P22: Eff <sub>GAS</sub> Overall efficiency of methane destruction/oxidation through gas grid  (Project emissions: Combustion emissions from use of captured methane)		<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	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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.6.2.8. Parameter Title P23 and B10: CEF <sub>CH4</sub> Carbon emission factor (2,75 tCO <sub>2</sub> e/tCH <sub>4</sub> )		<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>	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	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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 P24:			See	<input checked="" type="checkbox"/>																		

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CEF <sub>NMHC</sub> Carbon emission factor for combusted non methane hydrocarbons (various)  (Project emissions: Combustion emissions from use of captured methane)		Data Checklist	Yes / No	CAR 10	
		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		
B.6.2.10. Parameter Title P28 and B18: GWP <sub>CH4</sub> Global warming potential of methane (21 tCO <sub>2</sub> e/tCH <sub>4</sub> )		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.6.2.11. Parameter Title P30: Eff <sub>i</sub> Efficiency of methane destruction / oxidation through use i (power generation, heat generation, supply to gas grid to various combustion end uses)  (Project emissions: Un-combusted meth-		Data Checklist	Yes / No	See CAR 10	☑
		Title in line with methodology?	No		
		Data unit correctly expressed?	No		
		Appropriate description of parameter?	No		
		Source clearly referenced?	No		
		Correct value provided?	No		



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ane from flaring and end uses)		Has this value been verified?	No		
		Choice of data correctly justified?	No		
		Measurement method correctly described?	No		
B.6.2.12. Parameter Title P31: PE <sub>flare</sub> Project emissions from flaring of the residual gas stream  (Project emissions: Un-combusted methane from flaring and end uses)		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.6.2.13. Parameter Title B5: CBM <sub>BL,i,y</sub> CBM that would have been captured, used and destroyed by use i in the baseline scenario in year y  (Baseline emissions: Methane destruction due to thermal demand in the baseline)		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.6.2.14. Parameter Title B6: CMM <sub>BL,i</sub> CMM that would have been captured, used and destroyed by use i in the base-line scenario in year y  (Baseline emissions: Methane destruction due to thermal demand in the baseline)		<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	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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.6.2.15. Parameter Title B7: PMM <sub>BL,i</sub> PMM that would have been captured, used and destroyed by use i in the base-line scenario in year y  (Baseline emissions: Methane destruction due to thermal demand in the baseline)		<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	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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. Parameter Title B9:			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																		

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TH <sub>BL,y</sub> Projected annual baseline CMM / CBM demand for thermal energy uses  (Baseline emissions: Methane destruction due to thermal demand in the baseline)		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.6.2.17. Parameter Title B10: CEF <sub>CH4</sub> Carbon emission factor for methane (2,75 tCO <sub>2</sub> e/tCH <sub>4</sub> ) (Baseline emissions: Methane destruction due to thermal demand in the baseline)		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.6.2.18. Parameter Title B11: d <sub>k</sub> <sup>max</sup> scalar adjustment factor for day k, based on the seasonal load shape (Σ d <sub>k</sub> <sup>max</sup> > 365)		Data Checklist	Yes / No	☑	☑
		Title in line with methodology?	N/A		
		Data unit correctly expressed?	N/A		
		Appropriate description of parameter?	N/A		

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		PDD in GSP	Final PDD
(Baseline emissions: Methane destruction due to thermal demand in the baseline)		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.6.2.19. Parameter Title B13: CBM <sub>BL,i,y</sub> CBM that would have been captured , sent to and destroyed by use i in the baseline scenario  (Baseline emissions from methane re-leased into the atmosphere)		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.6.2.20. Parameter Title B15: CMM <sub>BL,i,y</sub> Pre-mining CMM that would have been captured , sent to and destroyed by use i in the baseline scenario in year y  (Baseline emissions from methane re-leased into the atmosphere)		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		

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		PDD in GSP	Final PDD																		
		<table><tr><td>Measurement method correctly described?</td><td>N/A</td></tr></table>		Measurement method correctly described?	N/A																		
Measurement method correctly described?	N/A																						
B.6.2.21. Parameter Title B17: PMM <sub>BL,i,y</sub> Post-mining CMM that would have been captured, sent to and destroyed by use i in the baseline scenario in year y  (Baseline emissions from methane re-leased into the atmosphere)		<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	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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.6.2.22. Parameter Title B36: AO <sub>w</sub> area of overlap with longwall panel  (Baseline emissions: Estimation of eligible CBM)		<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	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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.6.2.23. Parameter Title B49: EF <sub>ELEC</sub> CO <sub>2</sub> emission factor of grid Use the latest approved version of ACM0002 to calculate the grid emission factor.  (Baseline emissions from power/heat generation and vehicle replaced by project)		<table><tr><th>Data 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?</td><td>No</td></tr><tr><td>Has this value been verified?</td><td>No</td></tr><tr><td>Choice of data correctly justified?</td><td>No</td></tr><tr><td>Measurement method correctly described?</td><td>No</td></tr></table>	Data 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?	No	Has this value been verified?	No	Choice of data correctly justified?	No	Measurement method correctly described?	No	See CAR 9 See CAR 10	<input checked="" type="checkbox"/>
Data 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?	No																					
Has this value been verified?	No																					
Choice of data correctly justified?	No																					
Measurement method correctly described?	No																					
B.6.2.24. Parameter Title B50: EF <sub>OM, y</sub> CO <sub>2</sub> operating margin emission factor of grid Use the latest approved version of ACM0002 to calculate the grid emission factor.  (Baseline emissions from power/heat generation and vehicle replaced by project)		<table><tr><th>Data 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?</td><td>No</td></tr><tr><td>Has this value been verified?</td><td>No</td></tr><tr><td>Choice of data correctly justified?</td><td>No</td></tr><tr><td>Measurement method correctly described?</td><td>No</td></tr></table>	Data 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?	No	Has this value been verified?	No	Choice of data correctly justified?	No	Measurement method correctly described?	No	See CAR 10	<input checked="" type="checkbox"/>
Data 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?	No																					
Has this value been verified?	No																					
Choice of data correctly justified?	No																					
Measurement method correctly described?	No																					
B.6.2.25. Parameter Title B51: EF <sub>BM, y</sub> CO <sub>2</sub> build margin emission factor of grid Use the latest approved version of		<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>No</td></tr></table>	Data Checklist	Yes / No	Title in line with methodology?	No	See CAR 10	<input checked="" type="checkbox"/>														
Data Checklist	Yes / No																					
Title in line with methodology?	No																					

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ACM0002 to calculate the grid emission factor.  (Baseline emissions from power/heat generation and vehicle replaced by project)		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		
B.6.2.26. Parameter Title B52: F <sub>i,j,y</sub> Amount of each fuel consumed by each power source/plant  (Baseline emissions from power/heat generation and vehicle replaced by project)		Data Checklist	Yes / No	See CAR 10	☑
		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		
B.6.2.27. Parameter Title B53: COEF <sub>i,k</sub> CO <sub>2</sub> emission coefficient of each fuel type and each power source/plant  (Baseline emissions from power/heat generation and vehicle replaced by project)		Data Checklist	Yes / No	See CAR 10	☑
		Title in line with methodology?	No		
		Data unit correctly expressed?	No		
		Appropriate description of parameter?	No		
		Source clearly referenced?	No		
		Correct value provided?	No		



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ject)		Has this value been verified?	No		
		Choice of data correctly justified?	No		
		Measurement method correctly described?	No		
B.6.2.28. Parameter Title B54: GEN <sub>j, y</sub> Electricity generation of each power source/plant  (Baseline emissions from power/heat generation and vehicle replaced by project)		Data Checklist	Yes / No	See CAR 10	☑
		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		
B.6.2.29. Parameter Title B55: EF <sub>CO<sub>2</sub>, i</sub> CO <sub>2</sub> emission factor of fuel used for captive power or heat  (Baseline emissions from power/heat generation and vehicle replaced by project)		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>B.6.3. Ex-ante calculation of emission reductions</b>				
B.6.3.1. Is the projection based on the same procedures as used for future monitoring?	1,25	Yes, the procedures are the same that will be used in the future.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.3.2. Are the GHG calculations documented in a complete and transparent manner?	1,27	<p>The description of the calculation is more narrative than using formulae like common in technical calculations. Hence it's not clear structured and only difficult to trace.</p> <p><u>Corrective Action Request No.11</u></p> <p>Please develop the chapter B.6.3. in a more transparent and technical manner. The formulae transferred from the methodology and developed on a project specific basis in chapter 6.1. should be filled here with figures.</p>	CAR 11	<input checked="" type="checkbox"/>
B.6.3.3. Is the data provided in this section consistent with data as presented in other chapters of the PDD?	1,27	In general yes, but see CAR 9	See CAR 9	<input checked="" type="checkbox"/>
<b>B.6.4. Summary of the ex-ante estimation of emission reductions</b>				
B.6.4.1. Will the project result in fewer GHG emissions than the baseline scenario?	1,25	<p>Yes, the calculation provided was checked by the DOE. All further data used for input for the estimations of the emissions reductions will be verified on-site. The Excel-files used for this purpose have been checked during the document review process. The correctness of its application will be confirmed on site.</p> <p>The estimated emission reduction within 10 years is 3,612,766 tCO<sub>2</sub>e in total.</p>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.4.2. Is the form/table required for the indication of projected emission reductions correctly	1,25, 27	In general yes, but see CAR 9	See CAR 9	<input checked="" type="checkbox"/>

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applied?																
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	Yes, the projection is in line with the envisioned time schedule.	☑	☑												
B.6.4.4. Is the data provided in this section in consistency with data as presented in other chapters of the PDD?	1,27	<u>Corrective Action Request No.12</u> No, the figures in the table are not consistent with the figures presented in chapter B.5.	CAR 12	☑												
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?	1,25, 28	<u>Corrective Action Request No.13</u> The calculation presented for the parameter P <sub>Ey</sub> is not traceable. Please clarify the used values. In addition the calculation of the project emission should be described in chapter B.6.3 based on the values listed in chapter B.6.2 and B.7.1.  <u>Corrective Action Request No.14</u> Please add all parameter to the section B.7.1 of the PDD, which are referenced in the following section to this CAR 14.	CAR 13  CAR 14	☑												
Integrate the required amount of sub-checklists for monitoring parameter and comment on any line answered with “No”																
B.7.1.2. Parameter Title P5: CONS <sub>ELEC-PJ</sub> Additional electricity consumption by project  (Project emissions: Combustion emissions from additional energy required for CBM/CMM capture and use)		<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></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	See CAR 14	☑
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															

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		PDD in GSP	Final PDD																								
		<table><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>	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															
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																												
		After clarification, this is not applicable to the project.																											
B.7.1.3. Parameter Title P6: CONS <sub>HEAT-PJ</sub> Additional heat consumption by project  (Project emissions: Combustion emissions from additional energy required for CBM/CMM capture and use)		<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		☑	☑
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																												
B.7.1.4. Parameter Title P7: CONS <sub>FF-PJ</sub> Additional fossil fuel consumption by project		<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></table>	Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A		☑	☑																
Monitoring Checklist	Yes / No																												
Title in line with methodology?	N/A																												
Data unit correctly expressed?	N/A																												
Appropriate description of parameter?	N/A																												

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(Project emissions: Combustion emissions from additional energy required for CBM/CMM capture and use)		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																										
B.7.1.5. Parameter Title P12: MM <sub>FL</sub> Methane sent to flare  (Project emissions: Combustion emissions from use of captured methane)		<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>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>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>YES</td></tr></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?	YES	Indication of accuracy provided?	YES	QA/QC procedures described?	YES	QA/QC procedures appropriate?	YES	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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?	YES																												
Indication of accuracy provided?	YES																												
QA/QC procedures described?	YES																												
QA/QC procedures appropriate?	YES																												
B.7.1.6. Parameter Title P13: PE <sub>flare</sub> Project emissions from flaring of the re-		<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>YES</td></tr></table>		Monitoring Checklist	Yes / No	Title in line with methodology?	YES	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																				
Monitoring Checklist	Yes / No																												
Title in line with methodology?	YES																												

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sidual gas stream due to “Tool to determine project emissions from flaring gases containing Methane”  (Project emissions: Combustion emissions from use of captured methane)		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?	YES			
		Indication of accuracy provided?	YES			
		QA/QC procedures described?	YES			
		QA/QC procedures appropriate?	YES			
B.7.1.7. Parameter Title P15: MM <sub>ELEC</sub> Methane sent to power plant  (Project emissions: Combustion emissions from use of captured methane)				See CAR 14	☑	
		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			
B.7.1.8. Parameter Title P18:				☑	☑	

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MM <sub>HEAT</sub> Methane sent to boiler  (Project emissions: Combustion emissions from use of captured methane)		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		
		B.7.1.9. Parameter Title P21: MM <sub>GAS</sub> Methane sent to gas grid for end users  (Project emissions: Combustion emissions from use of captured methane)			
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.7.1.10. Parameter Title P24: CEF <sub>NMHC</sub> Carbon emission factor for combusted non methane hydrocarbons (various)		<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>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>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>Yes</td></tr></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?	Yes	Indication of accuracy provided?	Yes	QA/QC procedures described?	Yes	QA/QC procedures appropriate?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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?	Yes																											
Indication of accuracy provided?	Yes																											
QA/QC procedures described?	Yes																											
QA/QC procedures appropriate?	Yes																											
B.7.1.11. Parameter Title P25: PC <sub>CH4</sub> Concentration of methane in extracted gas measured on a wet basis  (Project emissions: Combustion emissions from use of captured methane)	26,27	<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>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>Yes</td></tr><tr><td>Indication of accuracy provided?</td><td>No</td></tr><tr><td>QA/QC procedures described?</td><td>Yes</td></tr></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?	No	Correct reference to standards?	Yes	Indication of accuracy provided?	No	QA/QC procedures described?	Yes	CAR 15	<input checked="" type="checkbox"/>		
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?	Yes																											
Indication of accuracy provided?	No																											
QA/QC procedures described?	Yes																											

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		<table><tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr></table> <u>Corrective Action Request No.15</u> Please state in the PDD if the analyzer measures the concentration on a wet basis like required by the methodology. Please indicate the accuracy in the PDD.		QA/QC procedures appropriate?	Yes																								
QA/QC procedures appropriate?	Yes																												
B.7.1.12. Parameter Title P26: PC <sub>NMHC</sub> NMHC concentration in coal mine gas  (Project emissions: Combustion emissions from use of captured methane)		<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>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>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>Yes</td></tr></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?	Yes	Indication of accuracy provided?	Yes	QA/QC procedures described?	Yes	QA/QC procedures appropriate?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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?	Yes																												
Indication of accuracy provided?	Yes																												
QA/QC procedures described?	Yes																												
QA/QC procedures appropriate?	Yes																												
B.7.1.13. Parameter Title P27: r Relative proportion of NMHC compared to methane  (Project emissions: Combustion emissions from use of captured methane)		<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>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></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	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>												
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																												

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		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?	Yes																										
B.7.1.14. Parameter Title P29: MM <sub>i</sub> Methane measured to sent to use i  (Project emissions: Un-combusted methane from flaring and end uses)		<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>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>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>YES</td></tr></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?	YES	Indication of accuracy provided?	YES	QA/QC procedures described?	YES	QA/QC procedures appropriate?	YES	☑	☑
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?	YES																												
Indication of accuracy provided?	YES																												
QA/QC procedures described?	YES																												
QA/QC procedures appropriate?	YES																												
B.7.1.15. Parameter Title B14: CMM <sub>PJ,i,y</sub> Pre-mining CMM captured , sent to and destroyed by use i in the baseline scenario in year y		<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></table>		Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	☑	☑																
Monitoring Checklist	Yes / No																												
Title in line with methodology?	N/A																												
Data unit correctly expressed?	N/A																												
Appropriate description of parameter?	N/A																												

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(Baseline emissions from methane re- leased into the atmosphere)		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			
B.7.1.16. Parameter Title B16: PMM <sub>PJ,i,y</sub> Post-mining CMM captured, sent to and destroyed by use i in the project activity in year y  (Baseline emissions from methane re- leased into the atmosphere)				See CAR 14	☑	
		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			
B.7.1.17. Parameter Title B20: R Cumulative radius of zone of influence		Monitoring Checklist		Yes / No	☑	☑
		Title in line with methodology?	N/A			

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(Baseline emissions: Estimation of eligible CBM)		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																										
B.7.1.18. Parameter Title B21: V <sub>w</sub> Cumulative flow at well  (Baseline emissions: Estimation of eligible CBM)		<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	☑	☑
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																												
B.7.1.19. Parameter Title B22:				☑	☑																								

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T Thickness of all coal accessed by wells  (Baseline emissions: Estimation of eligible CBM)		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		
		B.7.1.20. Parameter Title B23:  $\rho_{\text{coal}}$ density of locally mined coal  (Baseline emissions: Estimation of eligible CBM)			
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.7.1.21. Parameter Title B24: $g_{\text{coal}}$ gas content of coal  (Baseline emissions: Estimation of eligible CBM)		<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	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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																											
B.7.1.22. Parameter Title B25: $n$ number of days the selected well is operational  (Baseline emissions: Estimation of eligible CBM)		<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></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	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Monitoring Checklist	Yes / No																											
Title in line with methodology?	N/A																											
Data unit correctly expressed?	N/A																											
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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																											



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		<table><tr><td>QA/QC procedures appropriate?</td><td>N/A</td></tr></table>		QA/QC procedures appropriate?	N/A																								
QA/QC procedures appropriate?	N/A																												
B.7.1.23. Parameter Title B26: V <sub>a</sub> Average flow per day  (Baseline emissions: Estimation of eligible CBM)		<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	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Monitoring Checklist	Yes / No																												
Title in line with methodology?	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.7.1.24. Parameter Title B27: V <sub>c</sub> Cumulative flow from all wells (per day)  (Baseline emissions: Estimation of eligible CBM)		<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></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	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
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		<table><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>		Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A																				
Indication of accuracy provided?	N/A																												
QA/QC procedures described?	N/A																												
QA/QC procedures appropriate?	N/A																												
B.7.1.25. Parameter Title B28: N sum of days all wells operational		<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	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Monitoring Checklist	Yes / No																												
Title in line with methodology?	N/A																												
Data unit correctly expressed?	N/A																												
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Indication of accuracy provided?	N/A																												
QA/QC procedures described?	N/A																												
QA/QC procedures appropriate?	N/A																												
B.7.1.26. Parameter Title B29: - Position of wells relative to mining plan  (Baseline emissions: Estimation of eligible CBM)		<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	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
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Correct value provided for estimation?	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.7.1.27. Parameter Title B30: - well profile  (Baseline emissions: Estimation of eligible CBM)		<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	☑	☑
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Indication of accuracy provided?	N/A																												
QA/QC procedures described?	N/A																												
QA/QC procedures appropriate?	N/A																												
B.7.1.28. Parameter Title B31: - well depth  (Baseline emissions: Estimation of eligible CBM)		<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	☑	☑														
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QA/QC procedures described?	N/A																												
QA/QC procedures appropriate?	N/A																												
B.7.1.29. Parameter Title B32: t total thickness of coal in longwall emission zone  (Baseline emissions: Estimation of eligible CBM)		<table><tr><td>Monitoring Checklist</td><td>Yes / No</td></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		☑	☑
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Title in line with methodology?	N/A																												
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Indication of accuracy provided?	N/A																												
QA/QC procedures described?	N/A																												
QA/QC procedures appropriate?	N/A																												
B.7.1.30. Parameter Title B37: AT <sub>w</sub> total zone of influence		<table><tr><td>Monitoring Checklist</td><td>Yes / No</td></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></table>	Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A		☑	☑																		
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Indication of accuracy provided?	N/A																												
QA/QC procedures described?	N/A																												
QA/QC procedures appropriate?	N/A																												
B.7.1.31. Parameter Title B42: CBM <sub>w,y</sub> CBM captured from well intersected in year y  (Baseline emissions from power/heat generation and vehicle replaced by project)		<table><tr><td>Monitoring Checklist</td><td>Yes / No</td></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		☑	☑
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																												
B.7.1.32. Parameter Title B43: CBM <sub>z,y</sub>		<table><tr><td>Monitoring Checklist</td><td>Yes / No</td></tr></table>	Monitoring Checklist	Yes / No		☑	☑																						
Monitoring Checklist	Yes / No																												

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CBM captured from well intersected before year y  (Baseline emissions from power/heat generation and vehicle replaced by project)		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			
B.7.1.33. Parameter Title B44: CBM <sub>x,y</sub> CBM captured from well not yet intersected in year y  (Baseline emissions from power/heat generation and vehicle replaced by project)				☑	☑	
		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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<p>B.7.1.34. Parameter Title B46: GEN<sub>y</sub> Electricity generation by project</p> <p>(Baseline emissions from power/heat generation and vehicle replaced by project)</p>	26,27	<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>Yes</td> </tr> <tr> <td>Source clearly referenced?</td> <td>Yes</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> <p><u>Corrective Action Request No.16</u></p> <p>Please describe in the PDD the missing information like mentioned in the table above. The QA/QC procedures should describe the specific procedures to assure the quality of this specific meter.</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?	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	CAR 16	<input checked="" type="checkbox"/>
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?	Yes																											
QA/QC procedures appropriate?	No																											
<p>B.7.1.35. Parameter Title B47: HEAT<sub>y</sub> Heat generation by project</p> <p>(Baseline emissions from power/heat generation and vehicle replaced by project)</p>		<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>No</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>Yes</td> </tr> <tr> <td>Source clearly referenced?</td> <td>No</td> </tr> <tr> <td>Correct value provided for estimation?</td> <td>See CAR9</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> </table>	Monitoring Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	No	Appropriate description of parameter?	Yes	Source clearly referenced?	No	Correct value provided for estimation?	See CAR9	Has this value been verified?	No	Measurement method correctly described?	No	See CAR 16	<input checked="" type="checkbox"/>								
Monitoring Checklist	Yes / No																											
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Data unit correctly expressed?	No																											
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		QA/QC procedures described?	Yes																										
		QA/QC procedures appropriate?	No																										
B.7.1.36. Parameter Title B48: VFUEL <sub>y</sub> Vehicle power supplied by project  (Baseline emissions from power/heat generation and vehicle replaced by project)		<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	☑	☑
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QA/QC procedures described?	N/A																												
QA/QC procedures appropriate?	N/A																												
B.7.1.37. Parameter Title B56: EFF <sub>captive</sub> Energy efficiency of captive power plant  (Baseline emissions from power/heat generation and vehicle replaced by project)		<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></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	☑	☑								
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		QA/QC procedures described?	N/A																										
		QA/QC procedures appropriate?	N/A																										
B.7.1.38. Parameter Title B57: EFF <sub>heat</sub> Energy efficiency of heat plant  (Baseline emissions from power/heat generation and vehicle replaced by project)		<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	☑	☑
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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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																												
B.7.1.39. Parameter Title B58: EFF <sub>v</sub> Energy efficiency of vehicle engine  (Baseline emissions from power/heat generation and vehicle replaced by project)		<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></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	☑	☑												
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																												

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		PDD in GSP	Final PDD																								
		<table><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>	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															
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																												
B.7.1.40. Parameter Title L1: ME <sub>k</sub> Methane extracted on day k  (Leakage: Emissions from displacement of baseline thermal energy use)		<table><tr><td>Monitoring Checklist</td><td>Yes / No</td></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		☑	☑
Monitoring Checklist	Yes / No																												
Title in line with methodology?	N/A																												
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Correct value provided for estimation?	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.7.1.41. Parameter Title L2: MM <sub>ELEC,k</sub> Methane measured for power generation on day k		<table><tr><td>Monitoring Checklist</td><td>Yes / No</td></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></table>	Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A		☑	☑																
Monitoring Checklist	Yes / No																												
Title in line with methodology?	N/A																												
Data unit correctly expressed?	N/A																												
Appropriate description of parameter?	N/A																												

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(Leakage: Emissions from displacement of baseline thermal energy use)		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			
B.7.1.42. Parameter Title L3: MM <sub>HEAT,k</sub> Methane measured for new heat generation on day k  (Leakage: Emissions from displacement of baseline thermal energy use)				☑	☑	
		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			
B.7.1.43. Parameter Title L4: MM <sub>FI,k</sub> Methane measured sent flare on day k		Monitoring Checklist		☑	☑	
		Title in line with methodology?				
		N/A				

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(Leakage: Emissions from displacement of baseline thermal energy use)		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		
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?	1,5,26	The operational and management structure is clearly described and in compliance with the envisaged situation.		☑	☑
B.7.2.2. Are responsibilities and institutional arrangements for data collection and archiving clearly provided?	1,5,26	Yes, the project management structure chart as well as additional information is shown in chapter B.7.2 within the PDD.		☑	☑
B.7.2.3. Does the monitoring plan provide current good monitoring practice?	1,26	Yes, in general. After resolving the CARs mentioned in chapter 7.1 it is consistent with the requirement of the monitoring methodology.		☑	☑
B.7.2.4. If applicable: Does annex 4 provide useful information enabling a better understanding of the envisioned monitoring provisions?	1,26,	The scheme provides useful information about the locations of the most important installations. Annex 4 refers to the CDM monitoring manual, which provides more detailed information. A draft was provided to the assessment team.		☑	☑

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<b>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>				
B.8.1.1. Is there any indication of a date when the baseline was determined?	1	Yes, it is dated on 20/08/2006 indicated in the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.8.1.2. Is this consistent with the time line of the PDD history?	1	Yes, it is consistent with the PDD history showed within the PDD A.1.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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?	1,5	Yes, the entity is the project developer; this is consistent with the actual situation.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.8.1.4. Is information provided whether this person / entity is also considered a project participant?	1	The person - Gareth Philips- is an employed as the Chief Climate Change Officer of SINDICATUM CARBON CAPITAL LTD, which is one of the project participants. Personally he is not a project participant.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>C. Duration of the project activity / crediting period</b>				
<b>C.1. Duration of the project activity</b>				
C.1.1. Are the project's starting date and operational lifetime clearly defined and reasonable?	1,27	<u>Corrective Action Request No.17</u> The project starting date is incorrect.	CAR 17	<input checked="" type="checkbox"/>
<b>C.2. Choice of the crediting period and related information</b>				
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	The crediting period is defined. The fixed period of 10 years is selected.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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<b>D. Environmental impacts</b>				
<b>D.1. Documentation on the analysis of the environmental impacts, including transboundary impacts</b>				
D.1.1. Has the analysis of the environmental impacts of the project activity been sufficiently described?	1,5,6,7	The original feasibility study as well the approval was checked during the on-site visit. There were no environmental impacts stated. <u>Clarification Request No.4</u> The revised feasibility study and the approval of the local government should be provided to the validation team.	CR 4	<input checked="" type="checkbox"/>
D.1.2. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, has an EIA been approved?		See D.1.1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.1.3. Will the project create any adverse environmental effects?	1,6	No, the EIA report described this in details. The additional heat replacement is not expected to create adverse environmental affects.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.1.4. Were transboundary environmental impacts identified in the analysis?	1,6	No, transboundary effects are not expected.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>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</b>				
D.2.1. Have the identified environmental impacts been addressed in the project design sufficiently?		See D.1.1.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.2.2. Does the project comply with environmental legislation in the host country?	1,5,6,7	Yes, the official approval of the EIA by environmental protection authority was checked on-site	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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<b>E. Stakeholders' comments</b>					
<b>E.1. Brief description how comments by local stakeholders have been invited and compiled</b>					
E.1.1.	Have relevant stakeholders been consulted?	1,15	A local stakeholder process was performed. Remote location and representatives of nearest villages were involved together with relevant officials.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.1.2.	Have appropriate media been used to invite comments by local stakeholders?	1,5	The meeting was announced by a local notification.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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	Yes, the process is in consistency with the regulations/laws in the host country.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.1.4.	Is the undertaken stakeholder process that was carried out described in a complete and transparent manner?	1,15	Yes, the description is in a complete and transparent manner.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>E.2. Summary of the comments received</b>					
E.2.1.	Is a summary of the received stakeholder comments provided?	1,15	Yes, the summary and the list of attendees is described in a complete and transparent manner.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>E.3. Report on how due account was taken of any comments received</b>					
E.3.1.	Has due account been taken of any stakeholder comments received?	1,15	Yes, but there were no negative comments on the project. Some concerns were stated about additional noise and waste of land. The project participants take due account to ensure the no land is wasted.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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<b>F. Annexes 1 – 4</b>					
<b>F.1. Annex 1: Contact Information</b>					
F.1.1.	Is the information provided consistent with the one given under section A.3?	1	Yes, the information provided both in Annex 1 and A.3 are the same.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.1.2.	Is the information on all private participants and directly involved Parties presented?	1	Yes, the necessary information is presented.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>F.2. Annex 2: Information regarding public funding</b>					
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?	1,5	Yes, all the funding is from the bank and the owner of the project, it was checked by the DOE during the validation.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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?		Not applicable	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>F.3. Annex 3: Baseline information</b>					
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?	1,27	<u>Corrective Action Request No.18</u> There is an inconsistency of coal production related to data given in chapter A.2.	CAR 18	<input checked="" type="checkbox"/>
F.3.2.	Is the data provided verifiable? Has sufficient evidence been provided to the validation team?	1,24	Yes, the data provided is verifiable and sufficient.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.3.3.	Does the additional information substantiate / support statements given in other	1,24	Yes, the additional information supports statements in other sections of the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



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sections of the PDD?					
<b>F.4. Annex 4: Monitoring information</b>					
F.4.1.	If additional background information on monitoring is provided: Is this information consistent with data presented in other sections of the PDD?	1,26	Yes, it is consistent. The locations of methane flow monitoring to the CMM utilisation plant are shown in the Schematic at Annex 4 within the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.4.2.	Is the information provided verifiable? Has sufficient evidence been provided to the validation team?	1,5,26	Yes, the draft of the CDM monitoring manual was provided to the validation team.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.4.3.	Do the additional information and / or documented procedures substantiate / support statements given in other sections of the PDD?	1,26	The additional information substantiates and supports the statements within the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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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
<u>Corrective Action Request No.1</u> The right participation entities should be listed.	A.3.1	The right entities of Shanxi Coking Coal Group Ltd and Sindicatum Carbon Capital Ltd have been listed.	<input checked="" type="checkbox"/> The final PDD indicates the correct participation entities.
<u>Corrective Action Request No.2</u> The applied version of the Tool for the Demonstration and Assessment of Additionality is not the mentioned in the PDD. Obviously not the latest version is used. Please indicate and use the Tool for the demonstration and assessment of additionality (Version 03)	B.1.1.2.	<b>First response from PP:</b> Confirmed that Version 3 of additionality tool is applied and removed Step 5. <b>Second response from PP:</b> Revised.	<input checked="" type="checkbox"/> <b>Follow-up request:</b> The PDD should refer to the latest additionality tool, i.e. version 04. This should be revised. <b>Final conclusion:</b> The latest PDD refers to the latest additionality tool.
<u>Corrective Action Request No.3</u> Please choose the options according to the requirements of the additionality tool and follow the idea of this tool in a transparent way.	B.5.2.	The "Tools for the demonstration and assessment of additionality (version 03)" recommends three analysis methods, and only Option III, benchmark analysis is applicable after analysis under a transparent way.	<input checked="" type="checkbox"/> The options for demonstrating the additionality of this project activity are explained and discussed correctly in the latest PDD.
<u>Corrective Action Request No.4</u> The benchmark evidence as well as the source documents for the IRR calculation needs to submit to the DOE.	B.5.7.	<b>First response from PP:</b> The evidence documents have been provided to the DOE. <b>Second response from PP:</b> A revised IRR sheet was submitted. Page and source	<input checked="" type="checkbox"/> The documents were submitted to the DOE for further validation (IRL 25, 31). <b>Follow-up request from</b>

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Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
		reference of specific inputs can be found at the bottom of the Excel sheet.	<p><b>DOE:</b></p> <p>The IRR calculation sheet does contain a Chinese character on the sheet “IRR without CDM”, cell C4 (i.e. it refers to some Chinese characters, and therefore the calculation can’t be performed.</p> <p>In addition, the calculations should be presented in a clear manner, i.e. for all calculations, where a fixed number is used for a calculation, this number should be listed in another cell and the value, unit and its source should be explained (e.g. for cell D5 on the same sheet mentioned above, the power supply is calculated by multiplying the capacity with a number of other factors (i.e. 6000 and 1-0.023. These factors should be listed in a separate table and explained and the source of reference should be indicated, i.e. either FSR or other if applicable).</p> <p><b>Final conclusion:</b></p>

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Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response				Validation team conclusion
						The new IRR calculations were reviewed and found to be correct.
<u>Corrective Action Request No.5</u> Please include more parameters (e.g. operational costs) and demonstrate the variations of the single parameters in a range of assumptions.	B.5.8.	More parameters have been included in the PDD and IRR calculation sheets.				<input checked="" type="checkbox"/> Sensitivity analyses were performed for the annual power output, for the O&M costs and the total investment. A variation of 10% was taken into account for all these parameters, but the benchmark was never overcome.
<u>Corrective Action Request No.6</u> The analysis and detailed data for other similar activities occurring in the host country / region should be provided in a comprehensive list of projects in order to follow the argumentation and make it available to the DOE.	B.5.12	The similar activities have been Included in the PDD				<input checked="" type="checkbox"/> The list of similar project activities was compared with the list provided on the methane to markets webpage and can be considered as complete.
		Project name	Installation Capacity(MW)	Status	CDM (Y/N)	
		Yangquan Coal Mine Methane (CMM) Utilization for Power Generation Project, Shanxi Province, China	90	Registered	Y	
		Shanxi Coal Transport Market Ltd., Co. Yangquan Branch CMM Utilization Project	30	Registered	Y	
		Shanxi Liulin Coal	12	Registered	Y	

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		Mine Methane Utilization Project				
		China Jincheng Sihe 120 MW Coal Mine Methane Power Generation Project	120	Registered	Y	
		Shanxi Yangcheng Coal Mine Methane Utilization Project	16.5	Registered	Y	
<u>Corrective Action Request No.7</u> Please provide an evidence to ensure that the equipment would not have been ordered without the prospect of registration.	B.5.14	Duerping Mine has been open for numerous years and has never ordered any flaring or power generating equipment. The tender of the power generating equipment was opened on March 6 <sup>th</sup> 2007 after the PDD was completed and posted for GSP (Nov 20 <sup>th</sup> 2006) clearly showing the involvement of CDM.				<input checked="" type="checkbox"/> TÜV SÜD received the order for the validation of this project prior to the project's start. Thus, the equipment would not have been purchased without the prospect of registration.
<u>Corrective Action Request No.8</u> To determine the emission factor for heat generation there is no option mentioned in the methodology to use the IPCC 1996 revised guidelines for boiler efficiency like stated in the PDD page 18. Please revise this due to options delivered by the methodology.	B.6.1.2.	It has been amended in the PDD				<input checked="" type="checkbox"/> The highest value for the boiler efficiency was assumed for the calculation (i.e. 100%). This can be considered as highly conservative.
<u>Corrective Action Request No.9</u> : The figures of calculating the emission reductions of the replaced coal fired boilers are not	B.6.1.9.	Carbon emission factor for displaced heating has been changed to 0.094 following a typing error. This increases CERs from displaced heat to 5188 tonnes per				<input checked="" type="checkbox"/> Carbon emission factors are similar to the values provided

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Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
consistent in the PDD (page 23 and Annex III). In addition the calculation of the baseline emission factor due to ACM0002 is not based on the recent data. Please actualize these calculations or us the latest available data published by NDRC		year, with consequent changes throughout the PDD.  CERs recalculated according to NDRC 2006 grid efficiency factors	by the NDRC, published in August 2007 and can therefore be considered as correct.
<u>Corrective Action Request No.10</u> Please add all parameter to the section B.6.2 of the PDD, which are referenced in the following section to this CAR 10.	B.6.2.1.	Missing parameters added to section B.6.2 as per validation protocol checklist.	<input checked="" type="checkbox"/> The table can be considered as complete.
<u>Corrective Action Request No.11</u> Please develop the chapter B.6.3 in a more transparent and technical manner. The formulae transferred from the methodology and developed on a project specific basis in chapter 6.1 should be filled here with figures	B.6.3.2.	Section B.6.3 has been revised	<input checked="" type="checkbox"/> The calculation process is described in a detailed and clear manner.
<u>Corrective Action Request No.12</u> No, the figures in the table are not consistent with the figures presented in chapter B.5. Please clarify this and revise the PDD.	B.6.4.4.	CER Changed according to the months left in 2008	<input checked="" type="checkbox"/> CER figures are consistent throughout the latest PDD.
<u>Corrective Action Request No.13</u> The calculation presented for the parameter PEy is not traceable. Please clarify the used values. In addition the calculation of the project emission should be described in chapter B.6.3 based on the values listed in chapter B.6.2 and B.7.1.	B.7.1.1.	Now it is traceable in PDD and ER excel.	<input checked="" type="checkbox"/> PDD and Excel calculation sheet were revised accordingly.

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<u>Corrective Action Request No.14</u> Please add all parameter to the section B.7.1 of the PDD, which are referenced in the following section to this CAR 14.	B.7.1.1.	Updated for: CONSelec-pj EFF heat MMelec is already included in the PDD. MMi = MMelec and there are no other uses of gas under the project activity. It is difficult to distinguish between pre- and post-mining CMM, therefore PMM and CMM variables are all captured under MMi and MMelec. Annual variation is explained in the updated text of the PDD.	<input checked="" type="checkbox"/> The table can be considered as complete.
<u>Corrective Action Request No.15</u> Please state in the PDD if the analyzer measures the concentration on a wet basis like required by the methodology. Please indicate the accuracy in the PDD.	B.7.1.11.	Yes, the concentration is measured on wet basis. PDD wording clarified.	<input checked="" type="checkbox"/> The methane is measured as the percentage of pure methane (wet basis) in drained gas (by volume). The accuracy is indicated with +/-2.5% FSD.
<u>Corrective Action Request No.16</u> Please describe in the PDD the missing information like mentioned in the table above. The QA/QC procedures should describe the specific procedures to assure the quality of this specific meter.	B.7.1.34.	Estimated electricity generation data have been updated in Section B.7 parameter GENy	<input checked="" type="checkbox"/> The monitoring device is described in detail in the latest PDD.
<u>Corrective Action Request No.17</u> The project starting date is incorrect.	C.1.1	The first date of the implementation of the project is 6 March 2007 as in update PDD. (tendering of the power generation equipment).	<input checked="" type="checkbox"/> The project started in March 2007, with the signing of the

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			equipment purchase contract (IRL 13). This date is in line with the first real action of the project and therefore appropriate.
<u>Corrective Action Request No.18</u> There is an inconsistency of coal production related to data given in chapter A.2.	F.3.1.	Corrected 4.2 million tonnes to 4.5 million in previous version	<input checked="" type="checkbox"/> The coal production data is consistent now.
<u>Clarification Request No.01</u> The PDD states: "Generated power must be sold to the grid and the tariff paid is low – 26 Chinese cents per kWh. Or approximately 3 US cents." Please provide evidence of this statement to the validation team.	B.4.1	<b>First response from PP:</b> Tariff price approved by Chinese authority has been provided to DOE. <b>Second response from PP:</b> IRR calculations are based on a power tariff of 0.364RMB/kWh assigned by the grid and reported in the latest FSR document.	<input checked="" type="checkbox"/> The document was provided to the DOE (IRL 32). <b>Follow-up request:</b> The tariff provided in the document is indicated as 0.2754 RMB/kWh. The tariff provided in the PDD and the IRR is different. Please clarify and indicate clearly which tariff is used for the IRR calculation. <b>Final conclusion:</b> The evidence was submitted (IRL 35).
<u>Clarification Request No.02</u> The PDD states that a minimum concentration of 30% CH <sub>4</sub> to operate the generators is	B.4.3	Coalmine Safety Regulation (11/2005) item 148.1). This was also emphasized in the Coalmine Methane Treatment and Utilization Macro Plan published by National Development and Reform Committee	<input checked="" type="checkbox"/> The document has been submitted to the DOE (IRL



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required. Please provide evidence for this statement.		(NDRC) in June 2005. Included in the PDD	21).
<u>Clarification Request No.03</u> In the PDD there is stated, that surface CBM extraction from conventional, vertical, hydro fractured wells is not an option due to the low permeability of the coal seams at Duerping. Please provide evidence following the methodology of the low permeability in this region.	B.4.6	The project does not involve surface CBM. The mine does not practice surface gas drainage because gas does not flow until the strata have been disturbed by mining. This is the normal situation. Gas flows in underground coal headings are low which confirms low permeability. There is no surface CBM prospecting.	<input checked="" type="checkbox"/> No CBM needs to be considered for this project.
<u>Clarification Request No.04</u> The revised feasibility study and the approval of the local government should be provided to the validation team.	D.1.1	<b>First response by PP:</b> They are submitted.	<input checked="" type="checkbox"/> The FSR was submitted to the DOE (IRL 8, 32). The consistency with the data used in the IRR calculation and the data indicated in the FSR will be checked once the IRR calculation file was revised. The revised IRR file was submitted.

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

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




## **Annex 2: Information Reference List**

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Reference No.	Document or Type of Information
1.	PDD version 01 at the date of 20/11/2006.
2.	ACM0008 - Consolidated baseline methodology for coal bed methane and coal mine methane capture and use for power (electrical and motive) and hear and/or destruction by flaring- version 03
3.	ACM0002 – Consolicated baseline methodology for grid-connected electricity generation from renewable sources – version 06
4.	Tool for the demonstration and assessment of additionality version 04
5.	<p>On-site interviews at the offices and the project site of the “Duerping Coal Mine Methane Utilization Project” in Shanxi Province, China by auditing team of TÜV SÜD, performed from 31 Jan to 01 Feb, 2007:</p> <p><b>Validation team on site:</b></p> <p>Mr. Konrad Tausche    TÜV SÜD Industrie Service GmbH.  Mr. Yutaka Yoshida    TÜV SÜD Product Service Ltd., Japan  Mr Zhang Jiming        TÜV SÜD Product Service Ltd. Beijing Branch</p> <p><b>Interviewed persons:</b></p> <p>Ms. Liu Aixiang        Staff of Sindicatum Carbon Capital Ltd Beijing  Mr. David Creedy        CMM Director of Sindicatum Carbon Capital Ltd Beijing  Mr. Zhang Yunwen       Staff of Shanxi Coking Coal Group Ltd.  Mr. Qu Shulin           Staff of Shanxi Coking Coal Group Ltd.  Mr. Yu Jianrong        Staff of Shanxi Coking Coal Group Ltd.  Mr. Qiao Zhigang       Staff of Shanxi Coking Coal Group Ltd.  Mr. Wang Baoping       Staff of Shanxi Coking Coal Group Ltd.</p>
6.	Environment Impact Assessment (EIA in short) report made by Coal Industry Taiyuan Design & Research Institute in July., 2006

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Reference No.	Document or Type of Information
7.	The approval of EIA report from Shanxi Province Environment Protection Bureau on 30/09/2006 with No. (2006) 396.
8.	Feasibility study report made by Shanxi Electric Power Exploration & Design Institute at number F2171K02-A-01 in Dec., 2006
9.	UK LoA
10.	China LoA
11.	The “Emission Reduction Purchase Contract” signed between project developer and CERs buyer in year 2007
12.	Statement to the Modalities for Communicating with the EB and UNFCCC Secretariat on 10/08/2007
13.	The equipments purchase contracts o on 19 <sup>th</sup> March, 2007.
14.	The grid price document issued by local authority on 15 <sup>th</sup> Dec., 2006
15.	Stakeholders information including meeting advice, name list of stakeholders and questionnaires feedback of stakeholders
16.	The document considering CDM before construction dated on 15 <sup>th</sup> Dec., 2006
17.	UNFCCC homepage <a href="http://www.unfccc.int">http://www.unfccc.int</a>
18.	Standard of noise at boundary of industrial enterprises (GB 12348-90)
19.	Standard of environmental noise of urban area (GB 3096-93)
20.	Integrated wastewater discharge standard (GB 8978-1996)
21.	National Coalmine Safety Regulation effected on Jan. 1st, 2005
22.	“Notice on Strictly Prohibiting the Installation of Fuel-fired Generators with Capacity of 135 MW or below issued by the General Office of the State Council”, decree no. 2002-6. .

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Reference No.	Document or Type of Information
23.	“Temporary regulation of small scale coal fired units construction management”(Aug, 1997)
24.	China Energy Statistical Yearbooks & China Electric Power Yearbooks
25.	IRR and ER calculations
26.	CDM Monitoring and Quality Control Manual made on 25 <sup>th</sup> March, 2007
27.	Revised PDD version 04.08 dated 01/09/2008
28.	Supporting documents of Common Practice Analysis with highlight mark from below websites: <a href="http://cdm.unfccc.int/methodologies/PAmethodologies/publicview.html?cases=A&amp;single=1&amp;OpenNM=NM0075">http://cdm.unfccc.int/methodologies/PAmethodologies/publicview.html?cases=A&amp;single=1&amp;OpenNM=NM0075</a> <a href="http://www.coalinfo.net.cn/coalbed/meeting/2203/papers/coal-mining/001.pdf">http://www.coalinfo.net.cn/coalbed/meeting/2203/papers/coal-mining/001.pdf</a> <a href="http://www.coalinfo.net.cn/coalbed/meeting/2203/papers/coal-mining/005.pdf">http://www.coalinfo.net.cn/coalbed/meeting/2203/papers/coal-mining/005.pdf</a>
29.	Project Financial Assessment Methods and Indicators (3 <sup>rd</sup> Edition), China Planning Press, 2006, ISBN 7-80058-286-8.
30.	Similar CMM power generation and utilization projects in the same province are implemented with CDM consideration as examples of common practice.
31.	Economic Evaluation Codes and Parameters for Construction Projects, Chinese NDRC and the Chinese Ministry of Construction, 2006.
32.	Approval of FSR by local EPB, dated 26/01/2007.
33.	Power sale and off take prices, 30/06/2006.
34.	Appendix II of FSR, Peak to Valley, Power Tariff of Shanxi Power Grid.
35.	Equipment Purchase Receipts, December 14, 2007.

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Reference No.	Document or Type of Information
36.	DEUTZ Power Systems, Maintenance Costs for Overhauling and Refurbishment.
37.	<a href="http://www.methanetomarkets.org/index.htm">http://www.methanetomarkets.org/index.htm</a>
38.	World Bank studies on coal prices, Price of coal for boilers at Beishigou, June 2004 and June 2008.
39.	Technical agreement hot blast furnace of 1.8 million calories for improvement of ventilation in Duerping Coalmine Xishan Coal Electricity Group Co., Ltd. Taiyuan, Shanxi Party; May 10, 2005.
40.	Excel sheet for emission reduction calculations submitted 1 September 2008.
41.	Purchase Power Parity theory and its application in the estimation of spot exchange rates at a future point in time; Ernst & Young LLP; 15 December 2008
42.	Deutz Power Systems: E70 Maintenance cost for TCG2020V20; December 3 <sup>rd</sup> , 2008
43.	Explanation of Exchange Rates Used in “Duerping Coal Mine Methane Utilization Project (1900)”; Sindicatum Carbon Capital; December 11, 2008
44.	Factors relating to project equipment maintenance, refurbishment costs and service life; Sindicatum Carbon Capital; December 11, 2008
45.	Deutz Power Systems Maintenance Schedule TCG2020; 10/2006
46.	Deutz Power Systems: TCG2020 V20 Parts List; 03/2007.
47.	Final PDD; Duerping Coal Mine Methane Utilization Project; Version 04.09; 18/02/2009