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Determination Report

Emissions-Trader ET GmbH

DETERMINATION OF THE JI-PROJECT:

"CMM UTILISATION FOR THE HEAT GENERATION AND FLARING – "PIVDENNODONBASKA NO 3""

REPORT NO. 1192977

2009, June 19th

TÜV SÜD Industrie Service GmbH

Carbon Management Service
Westendstr. 199 - 80686 Munich – GERMANY

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Subject: Validation of a CDM Project

Accredited TÜV SÜD Unit:	**TÜV SÜD Contract Partner:**
TÜV SÜD Industrie Service GmbH Certification Body "climate and energy" Westendstr. 199 80686 Munich Germany	TÜV SÜD Industrie Service GmbH Carbon Management Service Westendstr. 199 80686 Munich Germany
Client:	**Project Site(s):**
Emissons-Trader ET GmbH Schulstrasse 11 46519 Alpen Germany	Pivdennodonbaska No 3, Vugledar, Donetsk oblast, Ukraine

Project Title: "CMM utilisation for heat generation and flaring – "Pivdennodonbaska No 3"

Applied Methodology / Version:	**Scope(s):**	**TA(s)**:
ACM0008 / Version 05	8, 10	8.1, 10.3

First PDD Version:		**Final PDD version:**	
Date of issuance:	2008-06-23	Date of issuance:	2009-05-11
Version No.:	01	Version No.:	06
Starting Date of GSP	2008-07-10		

Estimated Annual Emission Reduction: 146,658 tCO_2e

Assessment Team Leader:	**Further Assessment Team Members:**
Mr. Thomas Kleiser	Dr. Albert Geiger Mr. Andrey Atyakshev Ms. Olena Maslova

Summary of the Validation Opinion:

☒ 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.

☐ The review of the project design documentation and the subsequent follow-up interviews have not provided TÜV SÜD with sufficient evidence to determine the fulfilment of all stated criteria. Hence TÜV SÜD will not recommend the project for registration by the CDM Executive Board and will inform the project participants and the CDM Executive Board on this decision.

Abbreviations

ACM	Approved Consolidated Methodology
AM	Approved Methodology
BM	Build Margin
CAR	Corrective Action Request
CM	Combined Margin
CR	Clarification Request
DNA	Designated National Authority
DOE	Designated Operational Entity
EF	Emission Factor
EIA / EA	Environmental Impact Assessment / Environmental Assessment
ER	Emission reduction
ERU	Emission reduction unit
FSR	Feasibility Study Report
GHG	Greenhouse gas(es)
IRL	Information Reference List
IRR	Internal Rate of Return
KP	Kyoto Protocol
MP	Monitoring Plan
NDRC	National Development and Reform Commission
NGO	Non Governmental Organisation
OM	Operational Margin
PDD	Project Design Document
PP	Project Participant
TÜV SÜD	TÜV SÜD Industrie Service GmbH
UNFCCC	United Nations Framework Convention on Climate Change
VVM	Validation and Verification Manual

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1 INTRODUCTION

1.1 Objective

The validation objective is an independent assessment by a Third Party (Accredited Independent Entity = AIE) of a proposed project activity against all defined criteria set for the registration under the Joint Implementation Mechanism (JI). Determination is part of the JI project cycle and will finally result in a conclusion by the executing AIE whether a project activity is valid and should be submitted for registration to the JI-SC. The ultimate decision on the registration of a proposed project activity rests at the JI Supervisory Committee and the Parties involved.

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

”CMM ustilisation for heat generation and flaring – ”Pivdennodonbaska No 3”

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 JI project activities the scope is set by:

- The Kyoto Protocol, in particular § 6
- Decisions 3/CMP.3, Decision 2/CMP.2 and Decision 3/CMP.2, Decision 9/CMP.1 and 10/CMP.1
- Furthermore relevant aspects of Decision 12/CMP.1 and Decision 13/CMP.1
- Decisions by the JI-SC published under http://ji.unfccc.int
- Specific guidance by the JI published under http://ji.unfccc.int
- Guidelines for Completing the Project Design Document (JI-PDD), and the Proposed Baseline and Monitoring Methodology, also with reference to CDM – 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 JI-webpages for starting a 30 day global stakeholder consultation process. In case of any request a PDD might be revised 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 JI project cycle. Hence, TÜV SÜD cannot 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 initially 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 JI project is expected to meet;
- It ensures a transparent validation process where the validator will document how a particular requirement has been validated and the result of the validation.

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

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

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

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

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

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

2.1 Appointment of the Assessment Team

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

- 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 TA	Host country experience
Mr. Thomas Kleiser	**ATL**	☑	☑	
Dr. Albert Geiger	GHG-A	☑	☑	
Mr. Andrey Atyakshev	GHG-A			☑
Mrs. Olena Maslova	GHG-A			☑

Thomas Kleiser is the Assessment Team Leader of the project with a background in physics and meteorology. Till 31th of December 2008 he was head of the division CDM and JI at TÜV SÜD Industrie Service GmbH conducting more than 90 validations and verifications of CDM and JI projects. In this position he was responsible for validation, verification and certifications processes for GHG mitigation projects as well as trainings for internal auditors. Since 1st of January he is head of the “Certification Body” of TÜV SÜD.

Dr. Albert Geiger is a GHG auditor for CO_2-emission reduction projects of the scopes 8, 10 and 13 at the department “Environmental Service” of TÜV SÜD. He has done more than 15 CDM and JI projects and holds a PHD in geological sciences and does environmental consulting at TÜV SÜD since 1999.

Andrey Atyakshev is responsible for the carbon business of TÜV SÜD in Russia and has a background in metal forming and mechanical engineering. He has received extensive training as GHG auditor and on all aspects of flexible mechanisms of the Kyoto protocol. Also he is appointed ISO 9001 auditor. For this specific project he was responsible for the communication with the Ukrainian project participants and assistance in reviewing of submitted documents.

Olena Maslova is an auditor of the "Carbon Management Service" department of TÜV SÜD Industrie Service GmbH in Munich, Germany. She is chemical engineer and host country expert for projects in the Ukraine and in the Commonwealth of Independent States. She was project manager for this particular project.

The audit team covers the above mentioned requirements as follows:

- Knowledge of Kyoto Protocol and the Marrakech Accords (ALL)
- Environmental and Social Impact Assessment (ALL)
- Knowledge of recent decisions by JI supervisory committee (ALL)
- Quality assurance (KLEISER)
- Technical aspects of coal mine methane capture and utilization in CHP plants and as fuel (KLEISER)
- Monitoring technologies and concepts (ALL)
- Political, economical and technical conditions in host country (all)

2.2 Review of Documents

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

2.3 Follow-up Interviews

On July 24th and 25th , 2008 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
Avtonomov K. V., Director	State-run Enterprise "Centre of alternative fuels"
Martemyanov A. P., Technical Director	State-run Enterprise "Donetska Vugilna Energetichna Kompanya"
Polyakov E. V., Director of capital construction and degasification	State-run Enterprise "Donetska Vugilna Energetichna Kompanya"
Chernikov A. N., Chief engineer of capital construction	State-run Enterprise "Donetska Vugilna Energetichna Kompanya"
Maksimenko N. G., Deputy of chief engineer of technology	State-run Enterprise "Donetska Vugilna Energetichna Kompanya"
Adam Hadulla, Project manager	Emission-Trader ET GmbH

Olga Samus, Engineer of monitoring	Eco-Alliance LLC
Grabovsky A. V., Engineer of monitoring	Eco-Alliance LLC
Alexander Didenko, Head of service department	Eco-Alliance LLC
Nikolay Vakulenko, Chief engineer	Mine Pivdennodonbasska No. 3
Yuri Zvyachintsev, VTB Section Foreman	Mine Pivdennodonbasska No. 3
Rostislav Ponomarenko, "PRpoTB" Section Foreman	Mine Pivdennodonbasska No. 3
Traychel V. N., Principal engineer	Mine Pivdennodonbasska No. 3
Khokhlov V. A., Mechanic	Mine Pivdennodonbasska No. 3
Slizko S. G., Section Foreman of heat equipment	Mine Pivdennodonbasska No. 3

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

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

3 SUMMARY OF FINDINGS

The 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.

3.1 Project Design

3.1.1 General Findings

The PDD correctly applies the current valid format for JI projects. The project design fulfils all current valid requirements for JI projects.

The planned technology reflects current good practice for the coal mine sector. The project itself has to be considered as an innovative project in the Ukrainian mine industry. The project uses and applies technologies that goes beyond the state of the art in the host country. Moreover it is very unlikely that the foreseen project technology or parts of it will be substituted during the indicated crediting period 2008 – 2012 by a still more efficient technology.

The participating parties are clearly described in the PDD. Two parties are involved in the project - Ukraine as host country and The Netherlands as sponsor (buyer) country.

Ukraine is a Party to the Kyoto Protocol since April 12th, 2004 and The Netherlands have already installed national procedures for the approval of JI projects. A Letter of Approval (LoA) for this project by Ukraine as host country has been issued the 25th of March 2008.

The letter of approval of The Netherlands has not been submitted with the first PDD but has been provided in the meantime (see CAR 1 below).

For the future transfer of ERUs – the projects starts to produce ERUs with the End of 2008 - Ukraine needs to have implemented its National Registry. Currently this registry is in the final stage of development. The approval of the registry itself is not a basic requirement for the approval of the project as JI track 2 project.

The project participants (State-run Coal Mine Association "Donetska Vugilna Energetichna Kompaniya" from Ukraine and Carbon-TF B. from The Netherlands) are clearly and correctly described in the PDD.

The boundaries, the measures and the systems used in the project are described transparently and re-traceably. The inclusion of post mining activities into the project boundary has been addressed by a CR (see below).

The time-schedule in the project and the responsibilities in the project have been plausibly and detailed elaborated.

According to the PDD there is no public funding. However, no evidence has been presented during the audit. Hence, documents have been requested by the DOE (see CAR below).

Besides the mentioned points the project description is clear, transparent, extensive and re-traceable and fulfils all the requirements for a well-developed JI-Project.

General Information:

In total the assessment team expressed 14 Corrective Action Requests and 4 Clarification Requests. The raised CARs/CRs are described in the following in a summarized form, for more details see the attached protocol.

3.1.2 Issued CARs/CRs and Outstanding Issues

Corrective Action Request No. 1:

The letter of Approval of the Netherlands has to be submitted to the auditor.

Answer: The LoA has been submitted to the auditor.

Conclusion: The LoA of the Netherlands has been submitted the 22th of August 2008.

Corrective Action Request No. 2:

Please provide a letter concerning public funding.

Answer: The letters have been submitted to the auditor.

Conclusion. The Letters concerning public funding has been submitted by the project participants (Carbon-TF, Donetska Vugilna Energetichna). According to these letters there is no public funding.

Corrective Action Request No. 15:

The only language accepted by the UNFCCC is English.

Please remove all kyrillic letters in headers, underlines and maps.

Answer: The kyrillic letters have been removed.

Conclusion: CAR 15 is solved.

Clarification Request No. 1:

The description does not include the former activities. Please describe the activities before TÜV SÜD.

Answer: The former activities have been described in the latest version of the PDD.

Conclusion: The former activities have been included into the PDD.

Clarification Request No. 2 .

The postmining activities are included in the boundary chart of the PDD. These activities are not part of the project.

Answer: The activities have been removed from the chart.

Conclusion: The post mining activities have been removed from the boundary chart. The chart of the last version of the PDD fully complies with the project activity.

3.1.3 Conclusion

According to the done checks the project design complies fully with the guidelines of the UNFCCC.

Hence, TÜV SÜD confirms that the project complies with the JI requirements.

3.2 Baseline

3.2.1 Findings

The baseline has been determined according to the approved CDM-baseline methodology - ACM0008. All applicability criteria for ACM0008 have been worked out in detail and have been fully assessed and applied in the final PDD. All (various) possible baseline alternatives have been plausibly and re-traceably elaborated and have been transparently discussed in the PDD. The PDD shows clearly that the final baseline scenario is the continuation of the current situation (venting of CMM into the atmosphere). Incompletion have been addressed by several requests (see findings below).

The additionality of the project has been clearly and transparently demonstrated using the additionality tool under CDM (as required by ACM0008). The additionality is demonstrated using the Investment analysis as well as the barrier analysis.

3.2.2 Issued CARs/CRs

Corrective Active Request No. 3

A complete list of all barriers has to be inserted into the PDD (see methodology) and evidence should be given on the existence and significance of these barriers.

Answer: The list of barriers has been included into the PDD.

Conclusion: In accordance with the methodology a list of the barriers has been included into the PDD.

Corrective Action Request No. 4:

Please give evidence that the JI project was seriously taken into account for the decision to start the project.

Answer: The evidence has been submitted to the auditor.

Conclusion: The history of the project is described in detail in the last version of the PDD (p. 9). This description complies fully with the submitted documents. According to these documents the JI aspect was substantial for the project from the beginning.

Corrective Action Request No. 5:

The step 1 of the tool for the demonstration of additionality was ignored when assessing additionality of this particular project. Please justify why this step has been ignored.

Answer: The step 1 of the tool for the demonstration and assessment of additionality can be ignored, because of the similarity to the selection of the baseline scenario (see section B.1. of the PDD). This is stated in the ACM0008 methodology, pg. 9 – Additionality.

Conclusion: The decision to ignore step 1 of the tool is fully justified by the methodology. CAR 5 is therefore fully answered.

Corrective Action Request No. 6:

Please give evidence that the chosen benchmark complies with the tool for the demonstration and assessment of additionality. Evidence for the risk fraction of the benchmark has to be given. Please show that the analysis has been done at the beginning of the CDM project activity and that the chosen values comply with the economic properties of this date.

Answer: According to the "Guidance on the Assessment of Investment Analysis (EB39, Annex 35, Selection and Validation of Appropriate Benchmarks,10. Guidance) local commercial lending rates or weighted average costs of capital (WACC) are appropriate benchmarks for a project IRR. In case of the project the official average interest rate of banks on credits, published by the National Bank of Ukraine http://www.bank.gov.ua has been taken into account as the benchmark.

Conclusion: The chosen benchmark of 15 % is derived from the average interest rates of the Ukraine. The benchmark therefore complies with the tool.

Corrective Action Request No. 7:

Please give evidence that the venting of the captured methane is the common practice in the coal sector of the Ukraine.

Answer: Evidence has been submitted to the auditor.

Conclusion: According to the provided report "Opportunities for production and investment in the Donetsk Coal Basin" from January 2001, the venting of the captured methane is the common practice in the Ukraine.

Corrective Action Request No. 16:

Please give evidence that the alternative iv, a is economically not attractive

Answer: The PDD has been extended: "The specific invest for a steam power plant in the 5 MW_{el} power class is about 4,000,000 EUR/MW_{el}, while the specific invest of a cogeneration unit is about 1,000,000 EUR/MW_{el}."The evidence has been handed over to TÜV Süd.

Conclusion: Evidence has been delivered in form of an investment assessment.

Corrective Action Request No. 17:

Alternative v: Please give evidence that the realisable sale price for power is to low.

Answer: The PDD has been extended: "The operation costs of a cogeneration unit are about 25 EUR/MWh. Assuming a power price of 30 EUR/MWh a net outcome of 5 EUR/MWh results. Assuming a specific invest of 1.000.000 EUR/MW_{el} and a very high number of operation hours of

8.000 h/a a payback time of 25 years results. On the other hand for a more realistic scenario with 5,600 h/a operation hours per annum, a minimum price of about 45 EUR/MWh is needed for the payback of the invest within 10 years (without interest, inflation rate, benefits etc., NPV(0))". This alternative is not economically viable, because the required revenues for the power feed-in into the grid are not realisable. The power purchase price in Ukraine was about 30 EUR/MWh at the time of PDD preparation in 2006. (See also data in comparable PDD JI-0105 Krasnoarmeyskaya-Zapadnaya Nr.1). There is no law in Ukraine which supports power feed-in from renewable energy sources or CMM and the power feed-in requires a special legalisation from the authorities. The realisable sale price for power will be much lower than the sale price, maybe 10-25% of the sale price. For comparison in Germany the power sale price is about 150-400 EUR/MWh, while power feed-in price is about 25-50 EUR/MWh (http://www.eex.com/de). The ratio is about 12-16.7%.

Conclusion: It is clearly demonstrated by an Investment assessment that the realizable sale price for power is too low. Hence, CAR 17 can be closed.

Corrective Action Request No. 18:

Step 4: Common Practice analysis: Please list the minor examples.

Answer: The PDD has been extended: „Some CMM-fired boilers have been installed at Bazhanova Mine, Kirova Mine, Holodnaya Balka Mine and Chaikino Mine (Town of Makeyevka)."

Conclusion: CAR 18 is solved.

Clarification Request No. 3:

Please describe in the PDD whether ET GmbH is also a project participant or not.

Answer: Emissions-Trader ET GmbH is not Project Participant. This has been stated in the PDD in the Chapters B.4 and D.4.

Conclusion: It is clearly stated in the last version of the PDD that the project developer Emissions-Trader ET GmbH is no project participant (see B.4. and D.4. of the PDD).

Clarification Request No. 6:

Alternative vi of the baseline alternatives according to ACM008: please specify how far the next district heating system away is.

Answer: About 5.5 km bee-line (about 7 km on streets).

Conclusion: CR 6 is solved.

Clarification Request No. 7:

With regard to the suitable financial indicator used please explain the figures (0) and (15) in table B-1, chapter B.2.

Answer: NPV (0) is the "net present value" of the invested capital without interest and yield.NPV (15) includes the "net present value" of the invested capital less the internal benchmark of the company (here 15%) - the true yield of a project.

Conclusion: Both values are explained in the latest version of the PDD.

3.2.3 Conclusion

The identification of the baseline and the proof of the additionality were done correctly and in a transparent and plausible manner.

Hence, TÜV SÜD confirms that the project complies with the JI requirements.

3.3 Duration of the Project

3.3.1 Findings

The project starting date (14.02.2006) is defined as the date of the meeting of the Ukrainian Ministry of Coal Industry, Se Donetsk Coal and Power Company and MakNII-Institut, in which the start of a JI project based on the contract between LLC Eco alliance and Se Donetsk Coal and Power Company has been manifested.

The crediting period starts the 1st of January 2008 and runs five years (2008-2012), corresponding with the first commitment period under the Kyoto protocol.

The operational lifetime of the planned technology will be longer than the crediting period.

In the first PDD the dates were not written according to the UNFCCC guideline causing the below mentioned CAR.

3.3.2 Issued CARs/CRs

Corrective Action Request No. 8:

The starting date has to be described according to UNFCCC requirements (DD/MM/YY). All dates have to be written in this format. It has to be shown that the chosen date is the date on which the implementation or construction or real action of the project begins (according to the Glossary of JI Terms, JISC 13).

Answer: All dates have been reformatted.

Conclusion: All dates have been adjusted according to the UNFCCC requirements.

3.3.3 Conclusion

The crediting period is in line with the JI regulations.

Hence, TÜV SÜD confirms that the project complies with the JI requirements.

3.4 Monitoring Plan

3.4.1 Findings

The project uses the approved CDM methodology for this type of projects, ACM0008 in the latest version. There are no technical deviations from the guidance on monitoring under ACM0008.

A detailed and transparent Monitoring Plan has been presented in accordance with the applied methodology. However, some issues have not fully been addressed and have been defined in the CARs and CRs described below.

The monitoring methodology does reflect current good practice and is supported by the monitored and recorded data. The monitoring provisions are in line with the project boundaries.

Leakage emissions are not monitored according to the monitoring plan as there are no emissions to be expected.

The used default values are listed up in Annex 2. The list is complete and all values have been justified.

The procedures to collect and archive the gained monitoring data are clearly described in the chapters D.2. and D.3. of the PDD. The positions of the meters are shown in an installation scheme in Annex 3.

The management structure is clearly defined including emergency procedures. Trained personnel are already available. Nevertheless additional trainings are planned.

The entity which established the baseline is clearly described and identified as “not project participant”.

3.4.2 Issued CARs/CRs

Corrective Action Request No. 9

The table D.1.1.1 of the PDD contains Parameters that are not monitored like PE_y, PE_{MD}, PE_{UM}, $PE_{flare,}$ $MD_{fl,,}$ MD_{heat} etc.. On the other side not all Parameters to be monitored are mentioned in the table (e.g. not the Parameters of the flare tool like Eff_{flare}, T_{flare}). Please revise the table inserting all monitored Parameters. For all measured parameters the accuracy of the monitoring meters and the calibration intervalls should be described.

Answer: The table D.1.1.1 has been extended. Parameters which are not monitored have been listed in Annex 3. The exact accuracy and calibration intervals will be known when the facilities are installed and the monitoring equipment can be specified. It is planned to install measurement with high accuracy and low maintenance – viz. long calibration intervals. The meters will be calibrated according to the ukrainian standards.

Conclusion: The table has been revised. All monitored parameters are listed up in the latest version of the PDD.

Corrective Action Request No. 10:

Please set the default value for Flare efficiency according to the methodology ACM0008.

Answer: The value has been set to 99.5%.

Conclusion: The value has been set according to the methodology. The request is therefore considered to be solved.

Corrective Action Request No. 11:

For all measured parameters the accuracy of the monitoring meters and the calibration intervalls have to be described.

Answer: The exact accuracy and calibration intervals will be known when the facilities are installed and the monitoring equipment can be specified. It is planned to install measurement with high accuracy and low maintenance – viz. long calibration intervals. The meters will be calibrated according to the ukrainian standards.

Conclusion: The meters are described according to the actual state of planning (see also CAR9). Hence, the CAR is considered to be solved.

Corrective Action Request No. 12:

Please explain in detail how the efficiency EFF_{heat} of methane destruction/oxidation in the heat plant of the will be determined.

Answer: The efficiency will be determined by the Ukrainian Centre for Standardization and Metrology using the Ukrainian regulations.

Conclusion: The determination of the efficiency will be done according to the Ukrainian regulations.

Corrective Action Request No. 13:

Please explain in detail the deplacement of baseline thermal energy and how it is considered in the calculation.

Answer: The explanation in Annex 2 has been extended.

Conclusion: The displacement of baseline thermal energy is described in detail in annex 2. Therefore the request is considered to be answered.

Clarification Request No. 5:

Please describe which of the 3 methods a, b, c mentioned in ACM0008 is used to project thermal energy demand.

Answer: Method b) is used. The ex ante projection of the thermal energy demand of the coal mine is based on statistics provided by the coal mine. The coal mine is the only one end user. Recorded data sheets for the actually heat demand for the last years are available and are the most efficient way to project the heat demand for the next five years. Because the produced heat displaces only a part of the heat demanded by the coal mine, the coal mine is the only one end user and no external users should be connected, method a) is not applicable in a good manner and method b) is the better choice.

Conclusion: Method b) has been used and justified.

3.4.3 Conclusion

The discussed issues can be considered to be resolved. The monitoring plan of the latest version of the PDD fulfils the requirements for such type of projects. However, in the first Monitoring Report the monitoring equipment has to be described in more detail.

Hence, TÜV SÜD confirms that the project complies with the JI requirements.

3.5 Calculation of GHG Emissions

3.5.1 Findings

The project’s spatial boundaries are correctly described.

All necessary parameters to monitor project emissions have been defined. The most relevant and likely operational characteristics and indicators to calculate project emissions and baseline emissions have been chosen. Default values are taken from IPCC or local, but substantiated sources.

Uncertainties in the GHG emissions estimates are addressed in the documentation. Additionally the calculation uses a conservative approach whenever possible.

Leakage has been ruled out.

The project will result in fewer GHG emissions than the baseline scenario.

3.5.2 Issued CARs/CRs

Clarification request No. 4:

Please present the formula for the determination of PE_{flare}.

Answer: The formula has been included in the PDD.

Conclusion: The formula has been included (see table D.1.2.1. of the PDD). The request is considered to be solved

3.5.3 Conclusion

The GHG calculations are documented in a complete and transparent manner. Conservative assumptions have been used when calculating baseline emissions. Furthermore possible uncertainties in the GHG emission estimates are properly addressed in the documentation.

The given responses to the indicated CRs are resolving all open issues. The project thus does completely fulfil all the requirements for JI projects.

Hence, TÜV SÜD confirms that the project complies with the JI requirements.

3.6 Local stakeholder process

3.6.1 Findings

There are no project-specific requirements how to conduct a Local Stakeholder Process for this project. Nevertheless, a local stakeholder process has been carried out but has not been described in detail in the first PDD (see CAR below).

3.6.2 Issued CARs/CRs

Corrective action request No. 14:

Please describe the stakeholder process and the results in detail.

Answer: The project has been introduced to the Ukrainian Government and local authorities with a Project Idea Note (PIN). The authorities appreciated the project and a Letter of Endorsement, dated 18/09/2006 and finally a Letter of Approval, dated 26/03/2008 have been issued by the Ukrainian Ministry of Environmental Protection.

All comments received by the coal mine were positive towards implementation of the project. It was especially noted that utilisation of coal mine methane will increase the safety of the work at the coal mine and create some new working places.

The first PDD has been published for global stakeholder comments on 28/08/2006 on the TUEV-Nord website http://www.global-warming.de. After the installation of the Track 2 procedure by the JISC, the project participants decided to follow the Track 2 procedure, so that the PDD has been transcribed to the new JI-PDD form and republished by the JISC on the UNFCCC website for the Global Stakeholding Process from 10/07/2008 to 08/08/2008.

There was no private stakeholder consultation. The local stakeholder process is not needed, neither to the JI procedures nor to the Ukrainian laws.

Conclusion: The results of the stakeholder process are described sufficiently in the latest version of the PDD.

3.6.3 Conclusion

The relevant authorities have been consulted in this project. Only positive comments have been received.

The stakeholder consultation process in this project fits all Ukrainian requirements for local stakeholder consultation and thus meets also the basic requirements of stakeholder consultation under the Kyoto Protocol and the Marrakech Accords.

Hence, TÜV SÜD confirms that the project complies with the JI requirements.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

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

The following table presents all key information on this process:

webpage: http://www.netinform.de/KE/Wegweiser/Guide2_1.aspx?ID=5089&Ebene1_ID=26&Ebene2_ID=1597&mode=1	
Starting date of the global stakeholder consultation process: 2008-07-10	
Comment submitted by: none	**Issues raised:** -
Response by TÜV SÜD: -	

5 VALIDATION OPINION

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

CMM utilisation for heat generation and flaring – ”Pivdennodonbaska No. 3”

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, 2009-06-19

Rachel Zhang

Certification Body “climate and energy”
TÜV SÜD Industrie Service GmbH

Munich, 2009-06-19

Thomas Kleiser

Assessment Team Leader

Annex 1: Determination Protocol

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
A. General description of project activity				
A.1. Title of the project activity				
A.1.1.1. Does the used project title clearly enable to identify the unique JI activity?	1,2,8	Yes, the project title "CMM utilization for heat generation and flaring – "Pivdennodonbaska Nr. 3" "enables to identify the unique JI activity clearly.	☑	☑
A.1.1.2. Are there any indication concerning the revision number and the date of the revision?	1,2,8	Yes, the revision number and the date of the revision are clearly indicated in the current PDD. The version number is 03 and the date of this version is 23/06/2008.	☑	☑
A.1.1.3. Is this consistent with the time line of the project's history?	1,2,8	Yes, this is consistent with the timeline of the project history.	☑	☑
A.2. Description of the project activity				
A.2.1.1. Is the description delivering a transparent overview of the project activities?	1,2,8	Clarification Request No. 1: The description does not include the former activities. Please describe the activities before TÜV SÜD.	CR 1	☑
A.2.1.2. What proofs are available demonstrating that the project description is in compliance with the actual situation or planning?	1,2,8	The license of the mine and the draft contract between the project participants have been shown on site. Also the planning of the degassing system and the new boilers have been presented. The actual mining plan shows the mining activities till 2015. Hence, the project description complies with the actual situation or planning.	☑	☑
A.2.1.3. Is the information provided by these proofs consistent with the information provided by the PDD?	1,2,8	The actual planning shows the installation of a degassing system and the installation of two new boilers. This planning is consistent with the informations provided.	☑	☑
A.2.1.4. Is all information presented consistent with details provided by further chapters of the PDD?	1,2,8	Yes, it is consistent.	☑	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
A.3. Project participants				
A.3.1.1. Is the form required for the indication of project participants correctly applied?	1,2,8	Yes it is. The form is correctly applied by the project developer, the Carbon-TF B.V..	☑	☑
A.3.1.2. Is the participation of the listed entities or Parties confirmed by each one of them?	1,2,8	Yes, the participation of the listed entities has been confirmed on site. The participants are the "Donetska Vugilna Energetichna Kompanya" and "Carbon-TF B.V." A contract between the two companies will be signed soon.	☑	☑
A.3.1.3. Is all information on participants / Parties provided in consistency with details provided by further chapters of the PDD (in particular annex 1)?	1,2,8	Yes, it is. The given informations on the participants is consistenc with the details provided in the further chapters of the PDD. The contact informations are given in annex 1. Important Issue The letter of approval of the Ukrainian government has already been submitted to the project participants. The letter of approval of the Netherlands has still to be submitted.	☑	☑
A.4. Technical description of the project activity				
A.4.1. Location of the project activity				
A.4.1.1. Does the information provided on the location of the project activity allow for a clear identification of the site(s)?	1,2,8	The site is clearly shown on the map. The longitude and the latitude of the site are given.	☑	☑
A.4.1.2. How is it ensured and/or demonstrated, that the project proponents can implement the project at this site (ownership, licenses, contracts etc.)?	1,2,8	A contract between both project participants has been worked out and will probably be signed within the next few weeks. The installations have been planned already. The mine has a valid operating licence till 2018. This sufficiently demonstrates that	☑	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PPD in GSP	Final PDD
			the project proponents can implement the project at this site.		
A.4.2.	*Technology(ies) to be employed, or measures, operations or actions to be implemented by the project activity*				
A.4.2.1.	Does the technical design of the project activity reflect current good practices?	1,2,5,8,11	Yes, the project design reflects the state of the art used in western countries. A modern flare equipment and a new boiler will be used.	☑	☑
A.4.2.2.	Does the description of the technology to be applied provide sufficient and transparent input/ information to evaluate its impact on the greenhouse gas balance?	1,2,5,8,11	Yes, the project activity comprises the use of methane for heat generation, substituting the heat production by coal, and the flaring of methane. There is no doubt that this technology will reduce the GHG emissions significantly and effectively.	☑	☑
A.4.2.3.	Does the implementation of the project activity require any technology transfer from annex-I-countries to the host country(ies)?	1,2,5,8,11	Yes, it needs the technology transfers including Training and maintenance besides of proposed equipments to be purchased..	☑	☑
A.4.2.4.	Is the technology implemented by the project activity environmentally safe?	1,2,5,8,11	The planned technology has been tested at various sites in Western Europe and is regarded as environmentally safe. Further more it will increase the safety of the coal mine.	☑	☑
A.4.2.5.	Is the information provided in compliance with actual situation or planning?	1,2,5,8,11	Yes, the information provided in the PDD is in compliance with the actual situation and planning as validated on site.	☑	☑
A.4.2.6.	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?	1,2,5,8,11	The use of state of the art technology for the burners, one boiler and the flare has been confirmed in the discussion with the project manager during the audit. The common practice for heat generation is still coal-fired power plants and boilers. Hence, the project definitely would result in a better performance than the common practice.	☑	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
A.4.2.7. Is the project technology likely to be substituted by other or more efficient technologies within the project period?	1,2,5,8,11	We do not expect that there will be a substitution because the first batch equipments will be installed in October 2008. The life time of the project under normal circumstances is longer than the crediting period.	☑	☑
A.4.2.8. Does the project require extensive initial training and maintenance efforts in order to be carried out as scheduled during the project period?	1,2,5,8,11	No, because the project is carried out by experts or experienced companies.	☑	☑
A.4.2.9. Is information available on the demand and requirements for training and maintenance?	1,2,8,11	See A.4.3.8.	☑	☑
A.4.2.10. Is a schedule available for the implementation of the project and are there any risks for delays?	1,2,5,8,11	The implementation schedule of the project is available within the PDD. This schedule complies with the schedule seen on site.	☑	☑
A.4.3. Brief Explanation of how the anthropogenic emissions of greenhouse gases by sources are to be reduced by the proposed JI project, including why the emission reduction would not occur in the absence of the proposed project, taking into account national and/or sectoral policies and circumstances				
A.4.3.1. Is there a brief explanation of how the anthropogenic emissions of greenhouse gases by sources are to be reduced by the proposed JI project, including why the emission reduction would not occur in the absence of the proposed project, taking into account national and/or sectoral policies and circumstances?	1,2,8	The brief explanation explanation is given under A.4.3. The crediting period is clearly described (2008-2012) and the total as well as the annual emission reductions are given. The Information is provided in the required tabular.	☑	☑
A.4.3.2. Is the explanation transparent, feasible and – if based on calculations – mathematical correct calculated?	1,2,8	Yes, the explanation is transparent and feasible.	☑	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PPD in GSP	Final PDD
A.4.4.	*Estimated amount of emission reductions over the chosen crediting period*				
A.4.4.1.	Is the form required for the indication of projected emission reductions correctly applied?	1,2,8	See A.4.3.1	☑	☑
A.4.4.2.	Are the figures provided consistent with other data presented in the PDD?	1,2,8	Yes, the figures are consistent with the other chapters in the PDD.	☑	☑
A.4.5.	*Project approval by the participants*				
A.4.5.1.	Is the state of endorsement or approval by the host party clearly defined and a Letter of Endorsement (LoE), Letter of Approval (LoA) or any alternative statement of authorization available?	1,2,8,28,29	Yes, a Letter of Approval has been submitted by the Ukraine the 26/03/2008.	☑	☑
A.4.5.2.	Is the state of endorsement or approval by any other parties e.g. investing parties clearly defined and a Letter of Endorsement (LoE), Letter of Approval (LoA) or any alternative statement of authorization available?	1,2,8,28,29	The acceptance of the project by the investor party, Kingdom of the Netherlands, is expected. <u>Corrective Action Request No. 1:</u> The letter of Approval of the Netherlands has to be submitted to the auditor.	CAR 1	☑
A.4.6.	*Public funding of the project activity (not required in JI; here: just additional information)*				
A.4.6.1.	Is the information provided on public funding provided in compliance with the actual situation or planning as available by the project participants?	1,2,5,8,19	<u>Corrective Action request No. 2:</u> Please provide a letter concerning public funding..	CAR 2	☑
A.4.6.2.	Is all information provided consistent with the details given in remaining chapters of the PDD (in particular annex 2)?	1,2,5,8,19	All information provided are consistent with the details given in the remaining chapters of the PDD.	☑	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
B. Baseline				
B.1. Description and justification of the baseline chosen				
B.1.1.1. Are reference number, version number, and title of the baseline and monitoring methodology clearly indicated?	1,2,5,8	The methodology approved (ACM0008 version 5) is used and clearly indicated in the PDD.	☑	☑
B.1.1.2. Is the applied version the most recent one and / or is this version still applicable?	1,2,5,8	Yes, the applied version is still applicable.	☑	☑
Justification of the choice of the methodology and why it is applicable to the project activity				
B.1.1.3. Is the applied methodology considered the most appropriate one?	1,2,5,8	Yes, the baseline methodology is applicable for this project and is justified. All applicability criteria as specified by the methodology are met.	☑	☑
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";				
B.1.1.4. 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 air methane, that would normally be vented	1,2,5,8	The gas will be captured by boreholes and gas drainage galleries in the mine. Applicability checklist / Yes / No Criterion discussed in the PDD? Yes Compliance provable? Yes Compliance verified? Yes	☑	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
B.1.1.5. Criterion 2: Does the baseline include a partial or total atmospheric release of the methane?	1,2,5,8	The shown base line is the total atmospheric release of the methane. This complies with the current situation seen on site. Applicability checklist / Yes / No Criterion discussed in the PDD? Yes Compliance provable? Yes Compliance verified? Yes	☑	☑
B.1.1.6. Criterion 3: Is the gas captured treated by one of the following methods? - destroying through flaring and/or destroying through catalytic oxidation and/or - utilization to produce electricity, motive power and/or thermal energy	1,2,5,8	According to the given planning the captured gas will be destroyed through flaring and the utilization to produce thermal energy. Applicability checklist / Yes / No Criterion discussed in the PDD? Yes Compliance provable? Yes Compliance verified? Yes	☑	☑
B.1.1.7. 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)	1,2,5,8	See B.2.4 Applicability checklist / Yes / No Criterion discussed in the PDD? Yes Compliance provable? Yes Compliance verified? Yes	☑	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
B.1.1.8. Criterion 5: Is it ensured, that the project activity does *not* 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	1,2,5,8	Yes, the project does not include the described features.	☑	☑
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, coal mine methane and ventilation air methane capture and use for power (electrical or motive) and heat and/or destruction by flaring or catalytic oxidation" version 04..				
B.1.1.9. Have all technically options for capturing and /or using CBM or CMM or VAM (Step 1) to the project activity been identified and discussed by the PDD? Why can this list be considered as being complete?	1,2,5,8	Yes, all options of the methodology have been identified and discussed in the PDD. Hence, the list is considered to be complete.	☑	☑
B.1.1.10. Does the project identify correctly and excludes those options not in line with regulatory or legal requirements (Step 2)?	1,2,5,8	There are no regulations or legal requirements. Therefore none of the alternatives has been eliminated during step 2.	☑	☑
B.1.1.11. Have all baseline scenario alternatives due to the listed options (Step 1) and complying with the requirements of Step 2 in ACM0008, vers.4 been identified, discussed and clearly described (regarding share of volume of CBM/CMM/VAM treated, end-uses, source of power used)	1,2,5,8	All baseline scenario alternatives have been discussed in detail. The discussion follows strictly the methodology and complies with our findings on-site. Hence, the discussion is considered to be complete. <u>Clarification Request No. 6:</u> Alternative vi of the baseline alternatives according to ACM008: please specify how far the next district heating system away is.	CR6	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
by the PDD? Why can this list be considered as being complete? (Step 3)				
B.1.1.12. Is a complete list of barriers developed that prevent alternatives to occur (step 4)?	1,2,5,8	A complete list of all the barriers is missing in the PDD. <u>Corrective Active Request No. 3</u> A complete list of all barriers has to be inserted into the PDD (see methodology) and evidence should be given on the existence and significance of these barriers.	CAR 3	☑
B.1.1.13. Is transparent and documented evidence provided on the existence and significance of these barriers?	1,2,5,8	See above		☑
B.1.1.14. 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)?	1,2,5,8	See above		☑
B.1.1.15. Is a sensitivity analysis (step 5c) performed for all baseline scenarios that have not eliminated in step 4?	1,2,5,8	Yes, a sensitivity analysis has been performed.	☑	☑
B.1.1.16. 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?	1,2,5,8	Not applicable	☑	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
B.2. Description of how the anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the JI project (assessment and demonstration of additionality):				
B.2.1.1. In case the project activity started before the validation activity, how is it demonstrated that the CDM was seriously taken into account for the decision to start the project?	1,2,5,8	Corrective Action Request No. 4: Please give evidence that the CDM was seriously taken into account for the decision to start the project.	CAR 4	☑
Step 1				
B.2.1.2. Are alternative scenarios defined that provide outputs or services comparable with the proposed CDM project activity?	1,2,5,8	Corrective Action Request No. 5: The step 1 of the tool for the demonstration of additionality was ignored when assessing additionality of this particular project. Please justify why this step has been ignored.	CAR 5	☑
B.2.1.3. Can the list of alternatives considered to be complete, why? Is the scenario project activity without being registered as CDM project included?	1,2,5,8	See above		☑
B.2.1.4. In case of several different facilities, technologies, outputs or services are present in the project, are separately alternative scenarios for each of them included? Have realistic combinations been considered as a project scenario?	1,2,5,8	See above		☑
B.2.1.5. Describe why the alternative scenarios are credible and realistic?	1,2,5,8	See above		☑
B.2.1.6. Do the alternative scenarios comply with mandatory laws and regulations?	1,2,5,8	See above		☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
B.2.1.7. If a scenario does not comply with the mandatory laws and regulations, is it clearly demonstrated that the law and/or regulation is systematically not enforced in the country?	1,2,5,8	See above		☑
Step 2 (could be optional if step 3 is used)				
B.2.1.8. Is the analysis method identified appropriately?	1,2,5,8	Yes, the investment analysis has been identified appropriately. Because an investment comparison analysis cannot be performed the benchmark analysis is used.	☑	☑
B.2.1.9. In case of Option I (simple cost analysis): Is it demonstrated that the activity produces no economic benefits other than CDM income?	1,2,5,8	Not applicable	☑	☑
B.2.1.10. In case of Option II (investment comparison analysis): Is the most suitable financial indicator clearly identified (IRR, NPV, cost benefit ratio, or (levelized) unit cost)?	1,2,5,8	Not applicable	☑	☑
B.2.1.11. In case of use of IRR, it is clearly demonstrated why is equity of project IRR used?	1,2,5,8	In the investment analysis the project IRR is used.	☑	☑
B.2.1.12. In case of Option III (benchmark analysis): Is the most suitable financial indicator clearly identified (IRR, NPV, cost benefit ratio, or (levelized) unit cost)?	1,2,5,8	Yes the financial indicator (IRR) has been clearly identified. Clarification Request No. 7: With regard to the suitable financial indicator used please explain the figures (0) and (15) in table B-1, chapter B.2.	CR7	☑
B.2.1.13. How is it demonstrated that the benchmark represents standard returns in the market, considering the specific risks of the project type, but not linked to the sub-	1,2,5,8	Corrective Action Request No. 6: Please give evidence that the chosen benchmark complies with the tool for the demonstration and assessment of additionality. Evidence for the risk fraction of the benchmark has to be given.	CAR 6	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
jective profitability The benchmark is to represent standard returns in the market, considering the specific risk of the project type, but not linked to the subjective profitability expectation or risk profile of a particular project developer?		Please show that the analysis has been done at the beginning of the CDM project activity and that the chosen values comply with the economic properties of this date.		
B.2.1.14. In case of company internal benchmark, is it clearly demonstrate that there is only one potential project developer and that the benchmark has been consistently used in the past?	1,2,5,8	Not applicable	☑	☑
B.2.1.15. In case of Option II or Option III: Is the calculation of financial figures for this indicator correctly done for all alternatives and the project activity?	1,2,5,8	See B.2.1.13		☑
B.2.1.16. In case of Option II or Option III: Is the analysis presented in a transparent manner including publicly available proofs for the utilized data?	1,2,5,8	Yes, the analysis is done in a transparent manner including publicly available data.	☑	☑
B.2.1.17. Are all assumptions and input data clearly presented, documented, evidenced and consistent with the rest of the PDD?	1,2,5,8	The investment analysis is shown in detail on an additional document. In this document all assumptions and input data are clearly defined and consistent with the PDD.	☑	☑
B.2.1.18. Does the sensitivity analysis show that the conclusion is robust to reasonable variations in the critical assumptions?	1,2,5,8	Yes the done sensivity analysis show that the investment is rather robust to changes of the investment and the operating costs as well as changes of the internal rate of return. The development of the coal price at the first half of the decade has been taken into account.	☑	☑
B.2.1.19. How is it demonstrated that these variations have been adequately taken (range	1,2,5,8	See B.2.1.18	☑	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
is adequate)?				
Step 3 (is mandatory if step 2 is not used or does not shows additionality)				
B.2.1.20. Is a complete list of barriers developed that prevent the different alternatives to occur?	1,2,5,8	Additional to the investment analysis a barrier analysis have been carried out. Some financial as well as technological barriers have been identified. The only viable alternative to the proposed JI activity is the existing situation (release of the methane into the air.	☑	☑
B.2.1.21. Is transparent and documented evidence provided on the existence and significance of these barriers?	1,2,5,8	See above	☑	☑
B.2.1.22. Is it transparently shown that the execution of at least one of the alternatives is not prevented by the identified barriers?	1,2,5,8,30	See above	☑	☑
B.2.1.23. How is confirmed that the CDM does alleviate the barriers presented?	1,2,5,8,30	See above	☑	☑
Step 4				
B.2.1.24. Have other activities in the host country / region similar to the project activity been identified and are these activities appropriately analyzed by the PDD?	1,2,5,8,30	Corrective Action Request No. 7: Please give evidence that the venting of the captured methane is the common practice in the coal sector of the Ukraine.	CAR 7	☑
B.2.1.25. 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?	1,2,5,8,30	See above		☑
B.3. Description of how the definition of the project boundary is applied to the project				
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"				

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
B.3.1.1. Source: Emission of methane as a result of venting Gas: CH4 Type: Baseline Emissions	1,2,5,8	This is the considered to be the main emission source. 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.3.1.2. Source: Emission from destruction of methane in the baseline Gas: CO2 Type: Baseline Emissions	1,2,5,8	There is no flaring and no use for heat and power in the applicable baseline scenario. 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? n/a	☑	☑
B.3.1.3. Source: Grid electricity generation (electricity provided to the grid) Gas: CO2 Type: Baseline Emissions	1,2,5,8	There is no electricity provided to the grid. 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? n/a	☑	☑

<table>
<tr><th>CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PPD in GSP</th><th>Final PDD</th></tr>
<tr><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>B.3.1.4. Source:
Captive power and/or heat, and vehicle fuel use
Gas: CO2
Type: Baseline Emissions</td><td>1,2,5,8</td><td>In the baseline scenario heat is generated by the on site coal boilers.

<table><tr><th>Boundary checklist</th><th>Yes / No</th></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>n/a</td></tr></table></td><td>☑</td><td>☑</td></tr>
<tr><td>B.3.1.5. Source:
Emission from methane destruction
Gas: CO2
Type: Project Emissions</td><td>1,2,5,8</td><td>The emissions from the combustion of methane in the flare and burners are considered.

<table><tr><th>Boundary checklist</th><th>Yes / No</th></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></td><td>☑</td><td>☑</td></tr>
<tr><td>B.3.1.6. Source:
Emission from NMHC destruction
Gas: CO2
Type: Project Emissions</td><td>1,2,5,8</td><td>According to the given analysis there are no concentrations of NMHC over 1 %. However the NMHC will be monitored on a regular basis and the emissions will be included if the NMHC concentration exceeds 1 %.

<table><tr><th>Boundary checklist</th><th>Yes / No</th></tr></table></td><td>☑</td><td>☑</td></tr>
</table>

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
		Source and gas(es) discussed in the PDD? Yes Inclusion / exclusion justified? Yes Explanation / Justification sufficient? Yes Consistency with monitoring plan? Yes		
B.3.1.7. Source: Fugitive emission of unburned methane Gas: CH4 Type: Project Emissions	1,2,5,8	In accordance with ACM0008 an amount of uncombusted methane of 0.5 % is accounted to be conservative. 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.3.1.8. Do the spatial and technological boundaries as verified on-site comply with the discussion provided by / indication included to the PDD?	1,2,5,8	The degassing system, the boilerhouse and the flare will installed on the actual coal mine. Hence, the spatial and technical boundaries comply with the boundaries in the PDD. <u>Clarification Request No. 2.</u> The postmining activities are included in the boundary chart of the PDD. These activities are not part of the project. Hence, these activities should be removed from the chart.	CR 2	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
B.4. Further baseline information, including the date of baseline setting and the name(s) of the person(s)/entity(ies) setting the baseline:				
B.4.1.1. Are the name(s) of the person(s)/entity(ies) whom setting the baseline available?	1,2,5,8	The date of the baseline setting is given (23/06/2008) and the name of the entity is given (Emissions-Trader ET GmbH).	☑	☑
B.4.1.2. Is the date of baseline setting available?	1,2,5,8	See above	☑	☑
C. Duration of the project activity / crediting period				
C.1. Starting date of the project:				
C.1.1. Is the project's starting date clearly defined and reasonable?	1,2,5,8	Corrective Action Request No. 8: The starting date has to be described according to UNFCCC requirements (DD/MM/YY). All dates have to be written in this format. It has to be shown that the chosen date is the date on which the implementation or construction or real action of the project begins (according to the Glossary of JI Terms, JISC 13).	CAR 8	☑
C.2. Expected operational lifetime of the project:				
C.2.1. Is the expected operational lifetime of the project clearly defined and reasonable?	1,2,5,8	The expected operational lifetime is clearly defined (at least 10 years). The lifetime complies with the current mining authorization and the lifetime of the used equipment. Hence, it is considered to be reasonable.	☑	☑
C.3. Length of the crediting period:				
C.3.1. Is the assumed crediting period clearly defined and reasonable?	1,2,5,8	The assumed crediting period is 5 years. Hence, the crediting period is clearly defined and complies with the given project data.	☑	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PPD in GSP	Final PDD
D. Monitoring plan					
D.1. Description of monitoring plan chosen:					
D.1.1.	Is it explained how the procedures provided in the methodology are applied by the proposed project activity?	1,2,5,8	Yes, the applied procedures are clearly described.	☑	☑
D.1.2.	Is every selection of options offered by the methodology correctly justified and is this justification in line with the situation verified on-site?	1,2,5,8	The chosen methods and default values are clearly described	☑	☑
D.1.3.	Is the operational and management structure clearly described and in compliance with the envisioned situation?	1,2,5,8	Yes, the operational and management structure is clearly described (see D.3. in the PDD).	☑	☑
D.1.4.	Are responsibilities and institutional arrangements for data collection and archiving clearly provided?	1,2,5,8	Yes, the responsibilities and institutional arrangements are clearly described (see D.3. in the PDD).	☑	☑
D.1.5.	Does the monitoring plan provide current good monitoring practice?	1,2,5,8	An operational journal has been worked out.	☑	☑
D.1.6.	Are the specific performance characteristics of the monitoring system chosen by the project listed in the PDD?	1,2,5,8	The foreseen project facilities have not been installed yet. Hence the information concerning the monitoring system are still rather general and have to be specified when the monitoring equipment has been chosen (incl. calibration frequency and accuracy).	☑	☑
D.1.7.	Is information on the margins of errors and the cumulative error for the complete measurement system provided in the PDD?	1,2,5,8	See above	FAR 1	
D.1.8.	Is the inclusion of external accredited services providers for calibration and function	1,2,5,8	See above	FAR 1	

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PPD in GSP	Final PDD
	tests foreseen in the planning of the project?				
D.1.9.	Are the requirements on the treatment of downtime of the AMS clearly reflected in the envisioned calculation routines?	1,2,5,8	See above	FAR 1	
D.1.10.	If applicable: Does Annex 3 provide useful information enabling a better understanding of the envisioned monitoring provisions?	1,2,5,8	See above	FAR 1	
Date of completion of the application of the baseline study and monitoring methodology and the name of the responsible person(s)/entity(ies)					
D.1.11.	Is there any indication of a date when the baseline was determined?	1,2,5,8	Yes (see above)	☑	☑
D.1.12.	Is this consistent with the time line of the PDD history?	1,2,5,8	Yes, the given date of baseline is in time line with the PDD history	☑	☑
D.1.13.	Is the information on the person(s) / entity (ies) responsible for the application of the baseline and monitoring methodology provided consistent with the actual situation?	1,2,5,8	Yes, the given informations are consistent with the actual situation.	☑	☑
D.1.14.	Is information provided whether this person / entity is also considered a project participant?	1,2,5,8	Clarification Request No. 3: Please describe in the PDD whether ET GmbH is also a project participant or not.	CR 3	☑
Option 1 – Monitoring of the emissions in the project scenario and the baseline scenario:					
D.1.1.	**Data to be collected in order to monitor emissions from the project and how these datas will be archived:**				
D.1.1.1.	Is the list of parameters collected in order	1,2,5	Corrective Action Request No. 9	CAR 9	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
to monitor emissions from the project in chapter D.1.1. considered to be complete with regard to the requirements of the applied methodology?	,8	The table D.1.1.1 of the PDD contains Parameters that are not monitored like PE_y, PE_{MD}, PE_{UM}, $PE_{flare,}$ $MD_{fl,,}$ MD_{heat} etc.. On the other side not all Parameters to be monitored are mentioned in the table (e.g. not the Parameters of the flare tool like Eff_{flare}, T_{flare}). Please revise the table inserting all monitored Parameters: For all measured parameters the accuracy of the monitoring meters and the calibration intervals should be described.		
D.1.1.2. Parameter Title: MM_{FL} Methane measured sent to flare (Project emissions: Continuous)	1,2,5,8	Used Parameter, see D.1.1.1 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? n/a Measurement method correctly described? Yes Correct reference to standards? Yes Indication of accuracy provided? No QA/QC procedures described? Yes QA/QC procedures appropriate? Yes		☑
D.1.1.3. Parameter Title: T_{flare} Temperature in the exhaust gas of the flare (Project emissions: Combustion emissions from use of captured methane	1,2,5,8	See D.1.1.1 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	☑	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
		Has this value been verified? Yes Measurement method correctly described? Yes Correct reference to standards? Yes Indication of accuracy provided? Yes QA/QC procedures appropriate? Yes QA/QC procedures described? Yes		
D.1.1.4. Parameter Title: MM_{HEAT} Methane sent to boiler (Project emissions: Combustion emissions from use of captured methane)	1,2,5,8	Used parameter, see D.1.1.1. 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? No QA/QC procedures described? Yes QA/QC procedures appropriate? Yes		☑
D.1.1.5. Parameter Title: PC_{CH4} Concentration (in mass) of methane in extracted gas (%) measured on wet basis (Project emissions: Combustion emissions from use of captured methane)	1,2,5,8	Used parameter, see D.1.1.1. Data Checklist / Yes / No Title in line with methodology? Data unit correctly expressed? Appropriate description of parameter?		☑

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<table>
<tr><th>CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PPD in GSP</th><th>Final PDD</th></tr>
<tr><td></td><td></td><td><table>
<tr><td>Source clearly referenced?</td><td></td></tr>
<tr><td>Correct value provided?</td><td></td></tr>
<tr><td>Has this value been verified?</td><td></td></tr>
<tr><td>Measurement method correctly described?</td><td></td></tr>
<tr><td>Correct reference to standards?</td><td></td></tr>
<tr><td>Indication of accuracy provided?</td><td></td></tr>
<tr><td>QA/QC procedures appropriate?</td><td></td></tr>
<tr><td>QA/QC procedures described?</td><td></td></tr>
</table></td><td></td><td></td></tr>
<tr><td>D.1.1.6. Parameter Title:
CEF_{NMHC}
Carbon emission factor for combusted non methane hydrocarbons (various)

(Periodical analysis)</td><td>1,2,5,8</td><td>Calculated, if applicable, based on the lab analysis, see D.1.1.1.

<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>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>No</td></tr>
<tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr>
<tr><td>QA/QC procedures described?</td><td>Yes</td></tr>
</table></td><td>☑</td><td>☑</td></tr>
<tr><td>D.1.1.7. Parameter Title:
PC_{NMHC}
NMHC concentration (in mass) in extracted gas

(Project emissions: Combustion emissions from use of captured methane)</td><td>1,2,5,8</td><td>Used parameter, see D.1.1.1.

<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>
</table></td><td>☑</td><td>☑</td></tr>
</table>

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
		Correct value provided? Yes Has this value been verified? Yes Measurement method correctly described? Yes Correct reference to standards? Yes Indication of accuracy provided? No QA/QC procedures appropriate? Yes QA/QC procedures described? Yes		
Data and parameters not monitored Integrate the required amount of sub-checklists for monitoring parameter and comment on any line answered with "No"				
D.1.1.8. Parameter Title: Eff_{flare} Flare efficiency due to *"Tool to determine project emissions from flaring gases containing Methane"* (Project emissions: Combustion emissions from use of captured methane)	1,2,5,8	The default value of 90 % has been chosen according to the flare tool. 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	☑	☑
D.1.1.9. Parameter Title: Eff_{heat} Flare efficiency due to *"Tool to determine project emissions from flaring gases containing Methane"* (Project emissions: Combustion emissions	1,2,5,8	<u>Corrective action request No. 10:</u> Please set the default value according to the methodology ACM0008. Data Checklist / Yes / No Title in line with methodology? Yes		☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
from use of captured methane)		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		
D.1.1.10. Parameter Title: CEF_{CH4} Carbon emission factor for combusted methane (Project emissions: Combustion emissions from use of captured methane)	1,2,5,8	The default value of 2.75 t has been chosen. 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	☑	☑
D.1.1.11. Parameter Title: GWP_{CH4} Global warming potential of methane (Project emissions: Un-combusted methane from flaring and end uses)	1,2,5,8	The default value of 21 has been chosen. Data Checklist — Yes / No Title in line with methodology? — Yes Data unit correctly expressed? — Yes	☑	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
		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		
D.1.2. **Description of formulae used to estimate project emissions (for each gas, source etc.; emissions in units of CO_2 equivalent**				
D.1.2.1. Are the formulae required for the determination of project emissions correctly presented, enabling a complete identification of parameter to be used and / or monitored?	1,2,5,8	Yes, the formulae to calculate the project emissions have been presented in a transperent way. However, the calculation of PE_{flare} has not been described in detail. Clarification Request No. 4: Please present the formula for the determination of PE_{flare}.	CR 4	☑
D.1.2.2. Are the formulae required for the derivation of a moving average emission factor correctly presented, enabling a complete identification of parameter to be used and / or monitored?	1,2,5,8	Yes, the formula for CEFNMHC has been presented. In the case of CEF_{CH4} the default value of 2.75 t CH_4 has been chosen.	☑	☑
D.1.2.3. Are the formulae required for the determination of leakage emissions correctly presented, enabling a complete identification of parameter to be used and / or monitored?	1,2,5,8	Because there is no leakage no leakage formula has to be considered.	☑	☑
D.1.3. **Relevant data necessary for determining the baseline of anthropogenic emissions of greenhouse gases by sources within the project boundary, and how such data will be collected and achieved:**				
D.1.3.1. Is the list of parameters monitored considered to be complete with regard to the	1,2,5,8	Yes, the given list is complete according to methodology ACM008, but	CAR 11	☑

<table>
<tr><th>CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PPD in GSP</th><th>Final PDD</th></tr>
<tr><td>requirements of the applied methodology?</td><td></td><td><u>Corrective Action Request No. 11:</u>
For all measured parameters the accuracy of the monitoring meters and the calibration intervalls have to be described.</td><td></td><td></td></tr>
<tr><td>D.1.3.2. Is the data provided in this section in consistency with data as presented in other chapters of the PDD?</td><td>1,2,5,8</td><td>Yes, the given data are consistent with the data presented in the other chapters of the PDD.</td><td>☑</td><td>☑</td></tr>
<tr><td>D.1.3.1. Parameter Title:
$CMM_{PJ,i,y}$
Pre-mining CMM captured , sent to and destroyed by use i in the project activity in year y

(Baseline emissions from methane released into the atmosphere)</td><td>1,2,5,8</td><td>Used Parameter, see D.1.3.1

<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>Measurement method correctly described?</td><td>Yes</td></tr><tr><td>Correct reference to standards?</td><td>n/a</td></tr><tr><td>Indication of accuracy provided?</td><td>No</td></tr><tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr><tr><td>QA/QC procedures described?</td><td>Yes</td></tr></table></td><td></td><td>☑</td></tr>
<tr><td>D.1.3.2. Parameter Title:
$Heat_{,y}$
Heat generation by the project in year y

(Baseline emissions from methane released into the atmosphere)</td><td>1,2,5,8</td><td>Used Parameter, see D.1.3.1

<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></table></td><td></td><td>☑</td></tr>
</table>

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<table>
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<tr><td></td><td></td><td><table>
<tr><td>Correct value provided?</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>n/a</td></tr>
<tr><td>Indication of accuracy provided?</td><td>No</td></tr>
<tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr>
<tr><td>QA/QC procedures described?</td><td>Yes</td></tr>
</table></td><td></td><td></td></tr>
<tr><td>D.1.3.3. Parameter Title:
EFF_{heat}
Efficiency of methane destruction/oxidation in heat plant

(Baseline emissions from methane released into the atmosphere)</td><td>1,2,5,8</td><td>Used Parameter, see D.1.3.1

<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>Measurement method correctly described?</td><td>Yes</td></tr>
<tr><td>Correct reference to standards?</td><td>n/a</td></tr>
<tr><td>Indication of accuracy provided?</td><td>No</td></tr>
<tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr>
<tr><td>QA/QC procedures described?</td><td>Yes</td></tr>
</table>
<u>Corrective Action Request No. 12:</u>
Please explain in detail how the efficiency will be determined.</td><td>CAR 12</td><td>☑</td></tr>
<tr><td colspan="5">Data and Parameters not monitored</td></tr>
</table>

<table>
<tr><th>CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PPD in GSP</th><th>Final PDD</th></tr>
<tr><td colspan="5">Integrate the required amount of sub-checklists for monitoring parameter and comment on any line answered with "No"</td></tr>
<tr><td>D.1.3.4. Parameter Title:
CEF_{CH4}
Carbon emission factor for combusted methane

(basline emissions: Combustion emissions from use of captured methane)</td><td>1,2,5,8</td><td>The default value of 2.75 t has been chosen.

<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></td><td>☑</td><td>☑</td></tr>
<tr><td>D.1.3.5. Parameter Title:
GWP_{CH4}
Global warming potential of methane

(baseline emissions: Un-combusted methane from flaring and end uses)</td><td>1,2,5,8</td><td>The default value of 21 has been chosen.

<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></td><td>☑</td><td>☑</td></tr>
<tr><td>D.1.3.6. Parameter Title:
$EF_{CO2,Coal}$
CO2 emission factor for Coal

(baseline emissions: Un-combusted methane from flaring and end uses)</td><td>1,2,5,8</td><td>The default values of IPCC 2006 has been chosen.

<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></table></td><td>☑</td><td>☑</td></tr>
</table>

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
		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		
D.1.4. **Description of formulae used to estimate <u>baseline</u> emissions (for each gas, source etc.; emissions in units of CO_2 equivalent)**				
D.1.4.1. Are the formulae required for the determination of baseline emissions correctly presented, enabling a complete identification of parameter to be used and / or monitored?	1,2,5,8	Yes, the formula required for the determination of the baseline emissions are correctly presented. In detail: $BE_y = BE_{MR,y} + BE_{Use,y}$ With: $BE_{MR,y} = CMM_{PL,y} \times GWP_{CH4}$ $BE_{Use,y} = (HEAT_y / Eff_{HEAT)}) * CEF_{Heat}$	☑	☑
D.1.4.2. Are the formulae required for the determination of leakage emissions correctly presented, enabling a complete identification of parameter to be used and / or monitored?	1,2,5,8	No leakage emissions	☑	☑
D.1.4.3. Are the formulae required for the determination of emission reductions correctly presented?	1,2,5,8	Yes, all formulae are correctly presented.	☑	☑
Explanation of the calculation of baseline, project and leakage emissions				
D.1.4.4. <u>Combustion emissions from additional energy required for CBM / CMM / VAM capture and use:</u>	1,2,5,8	According to the given analysis the NMHC are less than 1%. However, the NMHC will be measured during the project activity. In case of an amount of more than 1 % the NMHC will be	☑	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PPD in GSP	Final PDD
	Is the additional energy for the capture, transport, compression and use or destruction considered and is the same electricity and heat generation emission factor used as in the calculation of baseline emissions?		considered in the calculations.		
D.1.4.5.	<u>Combustion emissions from use of captured methane:</u> Are the combustion emissions of Non Methane Hydro Carbons (NMHC) included if they account for more than 1% by volume of extracted CMM/CBM or more than 0,1% by volume of the extracted VAM?	1,2,5,8	Not applicable	☑	☑
D.1.4.6.	<u>Combustion emissions from use of captured methane</u> : Are the project emissions from flaring the residual gas stream calculated following the procedures described in the "*Tool to determine project emissions from flaring gases containing Methane*" ?	1,2,5,8	Yes, the emissions of flaring have been considered in the fromulae.	☑	☑
D.1.4.7.	<u>Combustion emissions (CO2) from use of captured methane</u>: Are the IPCC default values applied to fix the efficiency for power generation, heat generation and/or combustion of methane at end user?	1,2,5,8	See above	☑	☑
D.1.4.8.	Is the un-combusted methane from flaring, catalytic oxidation or end usages included into the project emission calculation by us-	1,2,5,8	Yes, the uncombusted methane from flaring has been considered in the calculation (see above)	☑	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PPD in GSP	Final PDD
	ing the "*Tool to determine project emissions from flaring gases containing Methane"?*				
D.1.4.9.	Are the formulae required for the determination of baseline emissions correctly presented, enabling a complete identification of parameter to be used and / or monitored?	1,2,5,8	Yes, see above	☑	☑
D.1.4.10.	Is there any methane destroyed in the baseline and are the CO2 emissions resulting from this destruction calculated properly?	1,2,5,8	Yes, the calculatio has been done properly according to the chosen default values and formulae.	☑	☑
D.1.4.11.	Is the calculation of the mean annual demand (Thy) for each year of the crediting period existent and comprehensible?	1,2,5,8	Yes, the calculatins have been done anually. The results can be traced on a deliverd excell sheet and are considered to be allright.	☑	☑
D.1.4.12.	Are real measured data on a daily base available for estimating the scalar factor for each of the last five years before the starting date of the proposed project activity?	1,2,5,8	Yes, there is already the sucking system working in order to fulfill the safty conditions for the miners. Based on these data MakNII Institute made a prognoses for the next 5 Years.	☑	☑
D.1.4.13.	Which of the 3 methods a, b, c mentioned in ACM0008 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?	1,2,5,8	<u>Clarification Request No. 5:</u> Please describe which of the 3 methods a, b, c mentioned in ACM0008 is used to project thermal energy demand.	CR 4	☑
D.1.4.14.	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	1,2,5,8	Yes, the methane release into the atmosphere has been described calculated properly. Only the methane from the sucking system has been considered. Hence the calculation has to be considered allright.	☑	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
methane still vented in the project activity?				
D.1.4.15. In order to quantify the eligible CBM, are the relevant wells identified (step 1)?	1,2,5,8	Not applicable	☑	☑
D.1.4.16. In order to quantify the eligible CBM, are the project specific values for the zone of influence elaborated in the PDD (step 2)?	1,2,5,8	Not applicable	☑	☑
D.1.4.17. Are the relevant project specific data provided by the PDD consistent to calculate the project emissions of methane and CO2 resulting from CBM due to the requirements (step 2)?	1,2,5,8	Not applicable	☑	☑
D.1.4.18. Is there any temporal adjustment for baseline emissions (in case of CBM utilization and or destruction) within a defined crediting period? (step 3)	1,2,5,8	Not applicable	☑	☑
D.1.4.19. Is the amount of pre-mining and post-mining CMM and VAM 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?	1,2,5,8	Not applicable	☑	☑
D.1.4.20. Are there any emissions from power/heat generation and vehicle fuel replaced by the project?	1,2,5,8	No, the project only comprises the heat generation and flaring.	☑	☑
D.1.4.21. If both CMM and CBM are used for replacing the emissions, is the distinction between CMM and CBM considered?	1,2,5,8	Not applicable	☑	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
D.1.4.22. Is the emission factor for grid power and or captive power calculated correctly, using the "Tool for calculation of emission factor for electricity systems"?	1,2,5,8	Not applicable	☑	☑
D.1.4.23. Is the emission factor for heat generation calculated with the boiler efficiency due to option A or option B?	1,2,5,8	See above	☑	☑
D.1.4.24. Is the emission factor for vehicle fuel use calculated due to the conservative approach?	1,2,5,8	Not applicable	☑	☑
D.1.4.25. Are the formulae required for the determination of leakage emissions correctly presented, enabling a complete identification of parameter to be used and / or monitored?	1,2,5,8	Not applicable	☑	☑
D.1.4.26. Is there any displacement of baseline thermal energy uses to be considered?	1,2,5,8	Corrective Action Request No. 13: Please explain in detail the deplacement of baseline energy and how it is considered in the calculation.	CAR 13	☑
D.1.4.27. Is there any CBM drainage from outside the de-stressed zone to be considered?	1,2,5,8	Not applicable	☑	☑
D.1.4.28. Does the JI project activity impact the coal production (if baseline scenario is ventilation only) and how is it taken into account to determine the leakage?	1,2,5,8	No, the JI project does not impact the coal production.	☑	☑
E. Estimation of greenhouse gas emission reduction				
E.1. Estimate project emissions:				
E.1.1. Are the GHG calculations documented in	1,2,5	Yes, all the GHG calculations are documented	☑	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PPD in GSP	Final PDD
	a complete and transparent manner?	,8			
E.1.2.	Is the data provided in this section consistent with data as presented in other chapters of the PDD?	1,2,5,8	Yes, all the data are consistent.	☑	☑
E.1.3.	Are the estimated project emissions transparent, feasible and mathematical correct calculated?	1,2,5,8	Yes, the estimated project emissions are transparent and mathematical correct calculated. All the calculation can be traced in detail with the help of the deliverd excel sheet.	☑	☑
E.1.4.	Is the projection of estimated project emissions based on the same procedures as used for future monitoring?	1,2,5,8	Yes the estimations/calculations are based on the same procedures.	☑	☑
E.2. Estimated leakage:					
E.2.1.1.	Is the estimated leakage transparent, feasible and mathematical correct calculated?	1,2,5,8	No Leakage	☑	☑
E.2.2.	Is the projection of estimated leakage based on the same procedures as used for future monitoring?	1,2,5,8	No Leakage	☑	☑
E.3. The sum of E.1. and E.2.:					
E.3.1.	Is the sum of E.1. and E.2. mathematical correct calculated?	1,2,5,8	Yes, the sum of E.1 and E.2 are mathematical correct calculated.	☑	☑
E.4. Estimated baseline emissions:					
E.4.1.	Are the estimated baseline emissions transparent, feasible and mathematical correct calculated?	1,2,5,8	The estimated baseline emissions are transparent, feasible (based on data) and mathematical correct calculated using the excel program.	☑	☑
E.4.2.	Is the projection based on the same procedures as used for future monitoring?	1,2,5,8	Yes	☑	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
E.5. Difference between E.4. and E.3. representing the emissions reductions of the project:				
E.5.1. Is the difference between E.4. and E.3. mathematical correct calculated?	1,2,5,8	Yes, the difference is mathematical correct calculated.	☑	☑
E.6. Table providing values obtained when applying formulae above				
E.6.1. Will the project result in fewer GHG emissions than the baseline scenario?	1,2,5,8	Yes, the project results in fewer GHG emissions.	☑	☑
E.6.2. Is the form/table required for the indication of projected emission reductions correctly applied?	1,2,5,8	Yes, the form has been correctly applied	☑	☑
E.6.3. Is the projection in line with the envisioned time schedule for the project's implementation and the indicated crediting period?	1,2,5,8	Yes, the project is in line with the envisioned time schedule.	☑	☑
E.6.4. Is the data provided in this section in consistency with data as presented in other chapters of the PDD?	1,2,5,8	Yes (see above)	☑	☑
E.6.5. Are the obtained values for estimated project emissions, estimated leakage, estimated baseline emissions and estimated emissions reductions provided in the table of E.6. transparent, feasible and mathematical correct calculated when applying formulae submitted in section E.?	1,2,5,8	Yes, all delivered data are transparent, feasible and mathematical correct	☑	☑
F. Environmental impacts				
F.1. Documentation on the analysis of the environmental impacts, including transboundary impacts				
F.1.1. Has the analysis of the environmental impacts of the project activity been suffi-	1,2,5,8	Yes, an analysis concerning the environmental impacts has been done. No environmental impacts have been expected.	☑	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PPD in GSP	Final PDD
	ciently described?				
F.1.2.	Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, has an EIA been approved?	1,2,5,8	The combustion units require an environmental impact study. Corrective action request Please demonstrate how the environmental impact study will be performed.	☑	☑
F.1.3.	Will the project create any adverse environmental effects?	1,2,5,8	No, according to the done analysis there will be no adverse environmental effects.	☑	☑
F.1.4.	Were transboundary environmental impacts identified in the analysis?	1,2,5,8	There are no transboundary environmental impacts.	☑	☑
F.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					
F.2.1.	Have the identified environmental impacts been addressed in the project design sufficiently?	1,2,5,8,12	Yes, the identified environmental impacts are considered to be sufficient.	☑	☑
F.2.2.	Does the project comply with environmental legislation in the host country?	1,2,5,8,12	Yes, the project complies with the environmental legislation in the Ukraine.	☑	☑
G. Stakeholders' comments					
G.1. Brief description how comments by local stakeholders have been invited and compiled					
G.1.1.	Have relevant stakeholders been consulted?	1,2,5,8	Yes, the relevante stakeholders have been consulted.	☑	☑
G.1.2.	Have appropriate media been used to invite comments by local stakeholders?	1,2,5,8	Yes, the Ukrainian Government and the local authorities have been informed by PIN.	☑	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
G.1.3. If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws?	1,2,5,8	No, no the stakeholder process is not mandatory.	☑	☑
G.1.4. Is the undertaken stakeholder process that was carried out described in a complete and transparent manner?	1,2,5,8	Corrective Action Request No. 14: Please describe the stakeholder process and the results in detail.	CAR 14	☑
G.2. Summary of the comments received				
G.2.1. Is a summary of the received stakeholder comments provided?	1,2,5,8	See G.1.4.	☑	☑
G.3. Report on how due account was taken of any comments received				
G.3.1. Has due account been taken of any stakeholder comments received?	1,2,5,8	See G.1.4	☑	☑
H. Annexes 1 - 3				
H.1. Annex 1: Contact Information				
H.1.1. Is the information provided consistent with the one given under section A.3?	1,2,5,8	Yes, the given information is consistent.	☑	☑
H.1.2. Is the information on all private participants and directly involved Parties presented?	1,2,5,8	Yes, the all contact information are given.	☑	☑
H.2. Annex 2: Baseline information				
H.2.1. If additional background information on baseline data is provided: Is this information consistent with data presented by	1,2,5,8	Yes, additional information concerning the applied methodology and the taken default values is given,	☑	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PPD in GSP	Final PDD
	other sections of the PDD?				
H.2.2.	Is the data provided verifiable? Has sufficient evidence been provided to the validation team?	1,2,5,8	Yes, the given data have been verified.	☑	☑
H.2.3.	Does the additional information substantiate / support statements given in other sections of the PDD?	1,2,5,8	Yes, the given data make the calculations more transparent.	☑	☑
H.2.4.	Is a table of key elements of the baseline (incl. variables, parameters and data sources) presented in chapter Annex 2 considered to be complete with regard to the requirements of the applied methodology?	1,2,5,8	Yes, the given data are considered to be complete.	☑	☑
H.3. Annex 3: Monitoring information					
H.3.1.	If additional background information on monitoring is provided: Is this information consistent with data presented in other sections of the PDD?	1,2,5,8	Yes, the given information are consistent with the other chapters of the PDD.	☑	☑
H.3.2.	Is the information provided verifiable? Has sufficient evidence been provided to the validation team?	1,2,5,8	The given information complies with the applied methodology and the applied tools.	☑	☑
H.3.3.	Do the additional information and / or documented procedures substantiate / support statements given in other sections of the PDD?	1,2,5,8	Yes, the given information clarifies the treatment of the flare.	☑	☑

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
Corrective Action Request No. 1: The letter of Approval of the Netherlands has to be submitted to the auditor.	A.4.5.2.	The LoA has been submitted to the auditor.	The LoA of the Netherlands has been provided. ☑
Corrective Action Request No. 2: Please provide a letter concerning public funding.	A.4.6.1.	The letters have been submitted to the auditor.	Letters concerning public funding has been submitted by the project participants (Carbon-TF, Donetska Vugilna Energetichna). According to these letters there is no public funding. ☑
Corrective Action Request No. 3 A complete list of all barriers has to be inserted into the PDD (see methodology) and evidence should be given on the existence and significance of these barriers.	B.1.1.13.	The list of barriers has been included into the PDD.	☑
Corrective Action Request No. 4: Please give evidence that the JI project was seriously taken into account for the decision to start the project.	B.2.1.1.	The evidence has been submitted to the auditor.	The history of the project is described in detail in the last version of the PDD (p. 9). This description complies fully with the submitted documents. According to these documents the JI aspect was substantial for the project from

Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
			the beginning. ☑
<u>Corrective Action Request No. 5:</u> The step 1 of the tool for the demonstration of additionality was ignored when assessing additionality of this particular project. Please justify why this step has been ignored.	B.2.1.2.	The step 1 of the tool for the demonstration and assessment of additionality can be ignored, because of the similarity to the selection of the baseline scenario (see section B.1. of the PDD). This is stated in the ACM0008 methodology, pg. 9 – Additionality.	The decision to ignore step 1 of the tool is fully justified by the methodology. CAR 5 is therefore fully answered. ☑
<u>Corrective Action Request No. 6:</u> Please give evidence that the chosen benchmark complies with the tool for the demonstration and assessment of additionality. Evidence for the risk fraction of the benchmark has to be given. Please show that the analysis has been done at the beginning of the CDM project activity and that the chosen values comply with the economic properties of this date.	B.2.1.13	According to the "Guidance on the Assessment of Investment Analysis (EB39, Annex 35, Selection and Validation of Appropriate Benchmarks,10. Guidance) local commercial lending rates or weighted average costs of capital (WACC) are appropriate benchmarks for a project IRR. In case of the project the official average interest rate of banks on credits, published by the National Bank of Ukraine http://www.bank.gov.ua has been taken into account as the benchmark.	The chosen benchmark of 15 % is derived from the average interest rates of the Ukraine. The benchmark therefore complies with the tool. ☑
<u>Corrective Action Request No. 7:</u> Please give evidence that the venting of the captured methane is the common practice in the coal sector of the Ukraine.	B.2.1.24	Evidence has been submitted to the auditor.	According to the provided report "Opportunities for production and investment in the Donetsk Coal Basin" from January 2001, the venting of the captured methane is the common practice in the

Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
			Ukraine. ☑
Corrective Action Request No. 8: The starting date has to be described according to UNFCCC requirements (DD/MM/YY). All dates have to be written in this format. It has to be shown that the chosen date is the date on which the implementation or construction or real action of the project begins (according to the Glossary of JI Terms, JISC 13).	C.1.1	All dates have been reformatted.	All dates have been adjusted according to the UNFCCC requirements. ☑
Corrective Action Request No. 9 The table D.1.1.1 of the PDD contains Parameters that are not monitored like PE_y, PE_{MD}, PE_{UM}, $PE_{flare,}$ $MD_{fl,,}$ MD_{heat} etc.. On the other side not all Parameters to be monitored are mentioned in the table (e.g. not the Parameters of the flare tool like Eff_{flare}, T_{flare}). Please revise the table inserting all monitored Parameters: For all measured parameters the accuracy of the monitoring meters and the calibration intervalls should be described.	D.1.1.1.	The table D.1.1.1 has been extended. Parameters which are not monitored have been listed in Annex 3. The exact accuracy and calibration intervals will be known when the facilities are installed and the monitoring equipment can be specified. It is planned to install measurement with high accuracy and low maintenance – viz. long calibration intervals. We suggest to cummulate this part of CAR 9 together with CAR 11 with FAR 1.	The table has been revised. All monitored parameters are listed up in the latest version of the PDD. Concerning accuracy and maintenance see FAR 1 ☑
Corrective Action Request No. 10: Please set the default value for Flare efficiency according to the methodology	D.1.1.10.	The value has been set to 99.5%.	The value has been set according to the methodology. The request is therefore con-

Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
ACM0008.			sidered to be solved. ☑
Corrective Action Request No. 11: For all measured parameters the accuracy of the monitoring meters and the calibration intervalls have to be described.	D.1.3.1.	The exact accuracy and calibration intervals will be known when the facilities are installed and the monitoring equipment can be specified. It is planned to install measurement with high accuracy and low maintenance – viz. long calibration intervals. We suggest to cumulate CAR 11 and corresponding parts of CAR 9 with FAR 1.	See FAR 1
Corrective Action Request No. 12: Please explain in detail how the efficiency EFF_{heat} of methane destruction/oxidation in the heat plant of the will be determined.	D.1.3.3.	The efficiency will be determined by the Ukrainian Centre for Standardization and Metrology using the Ukrainian regulations.	The determination of the efficiency will be done according to the Ukrainian regulations. ☑
Corrective Action Request No. 13: Please explain in detail the deplacement of baseline thermal energy and how it is considered in the calculation.	D.1.4.26.	The explanation in Annex 2 has been extended.	The displacement of baseline thermal energy is described in detail in annex 2. Therefore the request is considered to be answered. ☑
Corrective Action Request No. 14: Please describe the stakeholder process and the results in detail.	G.1.4.	The project has been introduced to the Ukrainian Government and local authorities with a Project Idea Note (PIN). The authorities appreciated the project and a Letter of Endorsement, dated 18/09/2006 and finally a Letter of Approval, dated 26/03/2008 have been issued	The results of the stakeholder process are described sufficiently. ☑

Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
		by the Ukrainian Ministry of Environmental Protection. All comments received by the coal mine were positive towards implementation of the project. It was especially noted that utilisation of coal mine methane will increase the safety of the work at the coal mine and create some new working places. The first PDD has been published for global stakeholder comments on 28/08/2006 on the TUEV-Nord website http://www.global-warming.de. After the installation of the Track 2 procedure by the JISC, the project participants decided to follow the Track 2 procedure, so that the PDD has been transcribed to the new JI-PDD form and republished by the JISC on the UNFCCC website for the Global Stakeholding Process from 10/07/2008 to 08/08/2008. There was no private stakeholder consultation. The local stakeholder process is not needed, neither to the JI procedures nor to the Ukrainian laws.	
Corrective Action Request No. 15: The only language accepted by the UNFCCC is English. Please remove all kyrillic letters in headers, underlines and maps	all	The kyrillic letters have been removed.	The kyrillic letters have been removed. ☑
Corrective Action Request No. 16: Please give evidence that the alternative iv, a is economically not attractive	B.1.	The PDD has been extended: "The specific invest for a steam power plant in the 5 MW_{el} power class is about 4,000,000 EUR/MW_{el}, while the specific	Evidence has been delivered in form of an investment assessment.

Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
		invest of a cogeneration unit is about 1,000,000 EUR/MW_{el}." The evidence has been handed over to TÜV Süd.	☑
<u>Corrective Action Request No. 17:</u> Alternative v: Please give evidence that the realisable sale price for power is to low?	B.1.	The PDD has been extended: "The operation costs of a cogeneration unit are about 25 EUR/MWh. Assuming a power price of 30 EUR/MWh a net outcome of 5 EUR/MWh results. Assuming a specific invest of 1.000.000 EUR/MW_{el} and a very high number of operation hours of 8.000 h/a a payback time of 25 years results. On the other hand for a more realistic scenario with 5,600 h/a operation hours per annum, a minimum price of about 45 EUR/MWh is needed for the payback of the invest within 10 years (without interest, inflation rate, benefits etc., NPV(0))" This alternative is not economically viable, because the required revenues for the power feed-in into the grid are not realisable. The power purchase price in Ukraine was about 30 EUR/MWh at the time of PDD preparation in 2006. (See also data in comparable PDD JI-0105 Krasnoarmeyskaya-Zapadnaya Nr.1). There is no law in Ukraine which supports power feed-in from renewable energy sources or CMM and the power feed-in requires a special legalisation from the authorities. The realisable sale price for power will be much lower than the sale price, maybe 10-25% of the sale price. For comparison in Germany the power sale price is	It is clearly demonstrated by an Investment assessment that the realizable sale price for power is to low. Hence, CAR 17 can be closed. ☑

Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
		about 150-400 EUR/MWh, while power feed-in price is about 25-50 EUR/MWh (http://www.eex.com/de). The ratio is about 12-16.7%.	
Corrective Action Request No. 18: Step 4: Common Practice analysis: Please list the minor examples.	B.2.	The PDD has been extended: „Some CMM-fired boilers have been installed at Bazhanova Mine, Kirova Mine, Holodnaya Balka Mine and Chaikino Mine (Town of Makeyevka)."	CAR 18 has been answered. ☑
Clarification Request No. 1: The description does not include the former activities. Please describe the activities before TÜV SÜD.	A.2.1.1.	The former activities have been described in the latest version of the PDD.	The former activities have been included into the PDD. ☑
Clarification Request No. 2 . The postmining activities are included in the boundary chart of the PDD. These activities are not part of the project.	B.3.1.9	The activities have been removed from the chart.	The post mining activities have been removed from the boundary chart. The chart of the last version of the PDD fully complies with the project activity. ☑
Clarification Request No. 3: Please describe in the PDD whether ET GmbH is also a project participant or not.	D.1.14	Emissions-Trader ET GmbH is not Project Participant. This has been stated in the PDD in the Chapters B.4 and D.4.	It is clearly stated in the last version of the PDD that the project developer Emissions-Trader ET GmbH is no project participant (see D.4. of the PDD). ☑

Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
Clarification Request No. 4: Please present the formula for the determination of PE_{flare}.	D.1.2.1.	The formula has been included in the PDD.	The formula has been included (see table D.1.2.1. of the PDD). The request is considered to be solved. ☑
Clarification Request No. 5: Please describe which of the 3 methods a, b, c mentioned in ACM0008 is used to project thermal energy demand.	D.1.4.13.	Method b) is used. The ex ante projection of the thermal energy demand of the coal mine is based on statistics provided by the coal mine. The coal mine is the only one end user. Recorded data sheets for the actually heat demand for the last years are available and are the most efficient way to project the heat demand for the next five years. Because the produced heat displaces only a part of the heat demanded by the coal mine, the coal mine is the only one end user and no external users should be connected, method a) is not applicable in a good manner and method b) is the better choice.	Method b) has been used and justified. ☑
Clarification Request No. 6: Alternative vi of the baseline alternatives according to ACM008: please specify how far the next district heating system away is.	B.1.1.12	About 5.5 km bee-line (about 7 km on streets).	The distance has been inserted. ☑
Clarification Request No. 7: With regard to the suitable financial indicator used please explain the figures (0) and (15) in table B-1, chapter B.2.	B.2.1.12	NPV (0) is the "net present value" of the invested capital without interest and yield. NPV (15) includes the "net present value" of the invested capital less the internal benchmark of the company (here 15%) - the true yield of a project.	Both values are explained in the latest version of the PDD. ☑

Annex 2: Information Reference List

Ref. No.	Issuance and/or submission date(dd/mm/yyyy)	Title/Type of Document	Author / Editor / Issuer	Additional Information (Relevance in CDM Context)
1	23/06/2008	PDD “CMM utilisation for heat generation and flaring – “Pivdennodonbaska No 3”, Version 03	Emissions-Trader ET GmbH	PDD for GSP
2	11/05/2009	PDD “CMM utilisation for heat generation and flaring – “Pivdennodonbaska No 3”, Version 06	Emissions-Trader ET GmbH	Final PDD
3	05/03/09	Excel sheet of the emission reductions calculations	Emissions-Trader ET GmbH	Final calculation of the ERUs
4	2006	Excel sheet of the investment analysis (file: Econ Donbasskaya2006.xls)	Emissions-Trader ET GmbH	Investmentanalysis
5	26/09/2008	Approved consolidated baseline methodology ACM0008 “Consolidated baseline methodology for coal bed methane, coal mine methane and ventilation air methane capture and use for power (electrical or motive) and heat and/or destruction by flaring or catalytic oxidation”, ACM0008 – Version 05	UNFCCC	
6	16/05/2008	Tool for the demonstration and assessment of additionality, Version 05	UNFCCC	
7	24-25/07/2008	Participant list of on-site interviews	TÜV SÜD	

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8	24-25/07/2008	On-site interviews conducted by TÜV SÜD. **Determination Team:** Dr. Albert Geiger TÜV SÜD Industrie Service GmbH Andrey Atyakshev TÜV SÜD Russland GmbH **State-run Enterprise “Donetska Vugilna Energetichna Kom-panya”:** Martemyanov A. P., Technical Director Polyakov E. V., Director of capital construction and degasification Chernikov A. N., Chief engineer of capital construction Avtonomov K. V., Director Maksimenko N. G., Deputy of chief engineer of technology **Mine Pivdennodonbasska No. 3:** Nikolay Vakulenko, Chief engineer Yuri Zvyachintsev, VTB Section Foreman Rostislav Ponomarenko, “PRpoTB” Section Foreman Traychel V. N., Principal engineer Khokhlov V. A., Mechanic Slizko S. G., Section Foreman of heat equipment **State-run Enterprise “Centre of alternative fuels”:** Avtonomov K. V., Director **Eco-Alliance LLC:** Alexander Didenko, Head of service department Grabovsky A. V., Engineer of monitoring Olga Samus, Engineer of monitoring **Emission-Trader ET GmbH:** Adam Hadulla, Project manager	TÜV SÜD	

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9	09/12/2005	“Pivdennodonbaska No 3” mine’s permission for use subsoil, Registration No. 3675	Ministry of Environment Protection of Ukraine	Valid until 09.12.2018.
10	25/07/2008	Plan of mining of coal bed C11.	Pivdennodonbaska No 3	
11	2008	Presentation “Outlook for using degasification activities at “Pivdennodonbaska No 3” mine”	State-run Coal Mine Asscociation “Donetska Vugilna Energetichna Kompanya”	
12	2008	Impact of contaminants on environment from the stationary sources of “Pivdennodonbaska No 3” mine.	State-run Coal Mine Asscociation “Donetska Vugilna Energetichna Kompanya”	
13	06/2008	Electricity consumption of “Pivdennodonbaska No 3” mine from the beginner of 2008 and comparative analysis with 2007.	State-run Coal Mine Asscociation “Donetska Vugilna Energetichna Kompanya”	
14	2008	Plan of heat consumption by “Pivdennodonbaska No 3” mine in 2008.	“Pivdennodonbaska No 3” mine	
15	24/07/2008	Scheme of heat network of “Pivdennodonbaska No 3” mine.	“Pivdennodonbaska No 3” mine	
16	24/07/2008	Scheme of electric supply of “Pivdennodonbaska No 3” mine.	“Pivdennodonbaska No 3” mine	
17	24/07/2008	Copies from the passports of boilers type KE-25-14C. Serial No. 45818, 46522, 45817.	“Pivdennodonbaska No 3” mine	
18	2006	Efficency of the coal boiler	Don Coal	

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19	30/07/2008	Letter addressed to TUV SUD concerning the public funds.	State-run Coal Mine Asscoc-iation “Donetska Vugilna Energetichna Kompanya”	
20	29/07/2008	Information about the average net cost of coal in 2005.	“Pivdennodonbaska No 3” mine	
21	26/04/2006	Protocol no. 2 of the meeting of the owners of eco alliance	Owners of eco allinance	
22	27/11/2008	Proof of the negligibility of additional power consumption	Emissions-Trader ET GmbH	
23	03/04/2006	Invoice flare für OOO “Neue Energetika”	A-TEC	
24	11/05/2009	Costs of Biomass Power Plants	Emissions-Trader ET GmbH	
25	11/05/2009	Investment assessment gas-fired steam power plant with cogeneration units	Emissions-Trader ET GmbH	
26	2007	Electricity bills of the Ukraine	Emissions-Trader ET GmbH	
27	11/05/2009	List of requests with answers from Emissins-Trader ET GmbH	Emissions-Trader ET GmbH	
28	26/03/2008	Letter of approval Ukraine	Ukraine	
29	22/08/2008	Letter of approval Netherlands	Netherlands	
30		E-Mails from Emissions-Trader ET	Emissions-Trader ET GmbH	

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31	18.06.2009	Reference list to PDD version 6	Emissions-Trader ET GmbH	